

# NC HEALTHCONNEX

## Health-Related Social Needs (HRSN) Screening Data

### USER GUIDE



NORTH CAROLINA  
HEALTH INFORMATION EXCHANGE AUTHORITY  
(NC HIEA)

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## I. Introduction & Version History

This user guide was developed jointly by the North Carolina Health Information Exchange Authority (NC HIEA) and SAS Institute to assist organizations planning to send Health-Related Social Needs (HRSN) data – aka Social Determinants of Health (SDOH) or Health-Related Resource Needs (HRRN) – to NC HealthConnex as part of the partnership between the NC HIEA and North Carolina Department of Health and Human Services (NCDHHS), Division of Health Benefits (DHB) to improve the collection and exchange of HRSN screening data.

The program’s goals are for all participating organizations to map their HRSN screening questions to the same standard questions as defined by Logical Observation Identifiers Names and Codes (LOINC) and provide the same standard answers (as defined by LOINC) for consistency in continuity of care and population health. Participants have the flexibility to use the HRSN screening instruments and questions/answers of their choosing, mapping those values to the standard LOINC codes in the assignment table in Section III.

Version	Date	Description
1.0	12/21/2023	Initial spec drafted for the Social Determinants of Health (SDOH) Pilot.
2.0	7/30/2025	Spec updated to include additional fields. Alt utilities code removed.

## II. How to Send HRSN Data

HRSN messages need to be sent in the ZPV segment of HL7 V2 ADT messages.

### Structure of ZPV Segments

Sequence	Length	Data Type	Use	Cardinality	Value	Name
1	1	ST	R	1..1	"1"	Record Sequence
2	4	ST	R	1..1	"SDOH"	Use Case Identifier
3	32000	ST	R	1..1		LOINC Question Code/ Text  OR Alt LOINC Question Code/Text
3.1	32000	ST	R	1..1		LOINC Question Code  OR Alt LOINC Question Code
3.2	32000	ST	R	1..1		LOINC Question Text  OR Alt LOINC Question Text
3.3	32000	ST	R	1..1		LOINC
3.4	32000	ST	R	1..1		LOINC Answer Code  OR Alt LOINC Answer Code
3.5	32000	ST	R	1..1		LOINC Answer text  OR Alt LOINC Answer Text
3.6	32000	ST	R	1..1		LOINC
3.7***	YYYYMMDDHHmmSS	TS	O***	0..1		Answer Timestamp
3.8	32000	ST	R	1..1		Performing Individual
3.8.1	32000	ST	R	1..1		PerformerID
3.8.2	32000	ST	RC	1..1		Last Name

3.8.3	32000	ST	RC	0..1		First Name
3.8.4	32000	ST	RC	0..1		Middle Name
3.8.5	32000	ST	RC	0..1		Prefix
3.8.6	32000	ST	RC	0..1		Suffix
3.8.7	32000	ST	RC	0..1		Degree
3.8.9	32000	ST	R	0..1		Assigning Authority for ID Sent in 3.8.1
3.9	32000	ST	R	1..1		Entering Individual
3.9.1	32000	ST	R	1..1		Entering Individual ID
3.9.2	32000	ST	RC	1..1		Last Name
3.9.3	32000	ST	RC	0..1		First Name
3.9.4	32000	ST	RC	0..1		Middle Name
3.9.5	32000	ST	RC	0..1		Prefix
3.9.6	32000	ST	RC	0..1		Suffix
3.9.7	32000	ST	RC	0..1		Degree
3.9.9	32000	ST	R	0..1		Assigning Authority for ID Sent in 3.9.1
3.10	32000	ST	R	1..1		Screening Tool Details
3.10.1	32000	ST	R	1..1		Screening Tool Code
3.10.2	32000	ST	R	1..1		Screening Tool Name
3.10.3	32000	ST	R	1..1		Screening Tool Description
4	32000	ST	R	1..1		Location Information
4.1	32000	ST	R	1..1		Place of Service
4.2	32000	ST	RC	1..1		Department
4.3	32000	ST	RC	1..1		Room
4.4	32000	ST	RC	1..1		Bed
5	32000	ST	R	1..1		Encounter #
6	32000	ST	R	1..1	2.0	ZPV Implementation Version

## ZPV Segment Table - Keys

The following table defines the various column details in the ZPV message segment tables.

Table Field Name	Definition
Use	'R' = Required by NC HIEA
Use	'RC' = Required if collected
Use	'O' = Optional
Data Type	'ST' = String
Data Type	'TS' = Timestamp
Sequence/Use ***	'***' = If the Answer Timestamp (3.7) is not populated in encounter-based ADT, then NC HealthConnex will use the encounter start date/time.
	'***' = The Answer Timestamp (3.7) is required in non-encounter-based ADT messages.

## Identifying Screening Tools

Within the ZPV segment, each HRSN screening question and answer should indicate the screening tool from which the question/answer pair originates. The tool may be a standardized screening instrument or an internally developed (homegrown) tool. Many standardized tools – including their names and associated codes – are published by the Gravity Project. For more details, see here: [Social Risk Terminology Value Sets - Gravity Project - Confluence](#).

### III. Questions and Answers

Transmission of HRSN screening questions and answers to NC HealthConnex should only include the six questions and answers below.

Participants can choose to send either the LOINC Question Code/Text and corresponding Answer Code/Text or the Alt LOINC Question Code/Text and corresponding Answer Code/Text.

No.	Domain	Short Question	NCDHHS Question	LOINC Question Code/Text	LOINC Answer Code/Text	Alt LOINC Question Code/Text	Alt LOINC Answer Code/Text
1	Food	Worry food	Within the past 12 months, did you worry that your food would run out before you got money to buy more?	95400-8  Within the past 12Mo we worried whether our food would run out before we got money to buy more	LA28397-0 Often true	88122-7  Within the past 12 months we worried whether our food would run out before we got money to buy more	LA28397-0 Often true
					LA6729-3 Sometimes true		LA6729-3 Sometimes true
					LA28398-8 Never true		LA28398-8 Never true
					LA15775-2 Don't know/refused		LA30968-4 Don't know/refused
2	Food	Run out food	Within the past 12 months, did the food you bought just not last, and you didn't have money to get more?	95399-2  Within the past 12Mo the food we bought just didn't last and we didn't have money to get more	LA28397-0 Often true	88123-5  Within the past 12Mo the food we bought just didn't last and we didn't have money to get more	LA28397-0 Often true
					LA6729-3 Sometimes true		LA6729-3 Sometimes true
					LA28398-8 Never true		LA28398-8 Never true
					LA15775-2 Don't know/refused		LA30968-4 Don't know/refused
3	Housing	Worry homeless	Are you worried about losing your housing?	93033-9  Are you worried about losing your housing	LA33-6 Yes	98976-4  Behind on rent or mortgage in past 12 months	LA33-6 Yes
					LA32-8 No		LA32-8 No
					LA30122-8 I choose not to answer this question		
4	Housing	Been homeless	Within the past 12 months, have you ever stayed: outside, in a car, in a tent, in	98978-0  Homeless in past 12Mo	LA33-6 Yes		

No.	Domain	Short Question	NCDHHS Question	LOINC Question Code/Text	LOINC Answer Code/Text	Alt LOINC Question Code/Text	Alt LOINC Answer Code/Text
			an overnight shelter, or temporarily in someone else's home (i.e. couch-surfing)?		LA32-8 No		
5	Utilities	No utilities	Within the past 12 months, have you been unable to get utilities (heat, electricity) when it was really needed?	96779-4 Has the electric, gas, oil, or water company threatened to shut off services in your home in past 12 months	LA33-6 Yes		
					LA32-8 No		
6	Transportation	Lack transport	Within the past 12 months, has a lack of transportation kept you from medical appointments or from doing things needed for daily living?	93030-5 Has lack of transportation kept you from medical appointments	LA33-6 Yes	99594-4 Delayed medical care due to distance or lack of transportation	LA33-6 Yes
					LA32-8 No		LA32-8 No



## IV. Implementation Steps

### Option 1 (Preferred)

1. Establish or confirm test connection between NC HealthConnex and the participant's system.
2. NC HealthConnex will require a sample set of test messages to analyze and ensure the messages meet the data target requirements.
3. If any data elements are missing or are not being sent in the correct format in the test messages, the NC HealthConnex technical team will work with the participant and/or their vendor on options to adjust the messages being sent. Several rounds of analysis may be required depending on the number of changes required.
4. Once validation of test messages is complete, NC HealthConnex will request that the participant send a larger volume of production-level messages to our test environment to perform analysis on those messages.
5. If any data elements are missing or are not being sent in the correct format in the production messages, the NC HealthConnex technical team will work with the participant and/or their vendor on options to adjust the messages being sent. Several rounds of analysis may be required depending on the number of changes required.
6. Once validation of production messages is completed and approved, the NC HealthConnex team will work with the participant and/or their vendor to schedule a date for go-live in production.

## V. Appendix A

### Sample

ZPV|1|SDOH|95400-8^Within the past 12Mo we worried whether our food would run out before we got money to buy more^LOINC^LA28397-0^Often true ^LOINC  
^20231222125000^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^NCHIEHRSN&ACH-HRSN Modified Screening Tool&The questionnaire represents the supported questions for the NCHIEA SDOH Elements|Good Health Hospital^ICU^1234^1234-A|E123456|2.0

~95399-2^Within the past 12Mo the food we bought just didn't last and we didn't have money to get more ^LOINC^LA28397-0^Often true^LOINC  
^20231222125000^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^NCHIEHRSN&ACH-HRSN Modified Screening Tool&The questionnaire represents the supported questions for the NCHIEA SDOH Elements|Good Health Hospital^ICU^1234^1234-A|E123456|2.0

~93033-9^Are you worried about losing your housing^LOINC^LA33-6 ^Yes^LOINC  
^20231222125000^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^NCHIEHRSN&ACH-HRSN Modified Screening Tool&The questionnaire represents the supported questions for the NCHIEA SDOH Elements|Good Health Hospital^ICU^1234^1234-A|E123456|2.0

~98978-0^Homeless in past 12Mo^ LOINC^LA32-8^LOINC^No^20231222125000^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^NCHIEHRSN&ACH-HRSN Modified Screening Tool&The questionnaire represents the supported questions for the NCHIEA SDOH Elements|Good Health Hospital^ICU^1234^1234-A|E123456|2.0

~96779-4^Has the electric, gas, oil, or water company threatened to shut off services in your home in past 12 months^LOINC^LA32-8^No^LOINC^20231222125000  
^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^NCHIEHRSN&ACH-HRSN Modified Screening Tool&The questionnaire represents the supported questions for the NCHIEA SDOH Elements|Good Health Hospital^ICU^1234^1234-A|E123456|2.0

~93030-5^Has lack of transportation kept you from medical appointments^LOINC^LA33-6^Yes^LOINC  
^20231222125000^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^1234567890&Levin&Henry&William&Dr&Jr&MD&&NPI^NCHIEHRSN&ACH-HRSN Modified Screening Tool&The questionnaire represents the supported questions for the NCHIEA SDOH Elements|Good Health Hospital^ICU^1234^1234-A|E123456|2.0