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HL7 Submission Guide

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Community Behavioral Health

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1. INTRODUCTION

As outlined in **CBH Provider Bulletin 25-26**, CBH is going to begin collecting data on screening tools as part of the **PA DHS OMHSAS** Performance Improvement Project requirements. This document is a comprehensive guide for healthcare providers and organizations involved in the standardized electronic clinical data exchange using the Health Level Seven (HL7) messaging standard. Its primary aim is to outline the methodology for transmitting clinical information, observations, and procedures to support various quality reporting initiatives. By adhering to the guidelines herein, organizations can ensure that critical clinical data, often involving standardized terminologies such as SNOMED CT (Systematized Nomenclature of Medicine - Clinical Terms), LOINC (Logical Observation Identifiers Names and Codes), and CPT (Current Procedural Terminology), is accurately captured and transmitted in an HL7 v2.x format. This standardized approach is crucial for enabling efficient data processing, ensuring compliance with reporting requirements, and ultimately improving patient care outcomes.

1.1. Purpose of This Document

The primary purpose of this guide is to standardize the process for healthcare providers and organizations to collect and submit clinical data electronically using the HL7 messaging standard. While applicable to a broad range of clinical data submissions, it focuses explicitly on the transmission of data related to:

- Social Needs Screening and Intervention (SNS-E)
- Depression Screening and Follow-up (DSF-E)
- Depression Remission or Response (DRR-E)
- Postpartum Depression Screening and Follow-up (PDS-E)

This document provides guidelines for HL7 message structure, data elements, and coding standards like SNOMED CT, LOINC, and CPT. It aims to facilitate accurate, efficient, and compliant data exchange, supporting quality improvement initiatives and patient care enhancement.

1.2. Target Audience

This guide is intended for:

- **Healthcare Providers:** Physicians, nurses, social workers, and other clinical staff who conduct screenings and interventions related to social needs and depression
- **EHR/EMR System Administrators:** Individuals responsible for configuring and managing Electronic Health Record (EHR) or Electronic Medical Record (EMR) systems to ensure proper data capture and HL7 export capabilities
- **IT/Technical Staff:** Developers and IT professionals responsible for implementing and maintaining HL7 interfaces
- **Data Managers:** Personnel involved in the collection, validation, and submission of healthcare data for quality reporting

- **Client Organization Staff:** The team responsible for receiving, processing, and forwarding the HL7 data for **HEDIS** (Healthcare Effectiveness Data and Information Set) measure compliance

1.3. Importance of Standardized Data Submission

Standardized data submission via HL7 offers several significant benefits:

- **Interoperability:** Facilitates seamless exchange of health information between disparate systems, reducing manual data entry and errors
- **Accuracy and Completeness:** Ensures that all required data elements for HEDIS measures are consistently captured and transmitted
- **Efficiency:** Automates data flow, saving time and resources for both providers and the receiving organization
- **HEDIS Compliance:** Enables accurate calculation and reporting of HEDIS measures, which are vital for quality improvement initiatives and regulatory compliance
- **Improved Patient Outcomes:** Reliable data supports better understanding of population health trends and informs targeted interventions

1.4. Overview of HEDIS Measures Covered

This document addresses explicitly the HL7 data submission requirements for the following HEDIS measures:

- **Social Needs Screening and Intervention (SNS-E)** focuses on identifying and addressing patients' social needs (e.g., food insecurity, housing instability, transportation barriers). It measures screening for food, housing, and transportation needs using tools like PRAPARE, with interventions within 30 days for positive screens.
- **Depression Screening and Follow-up (DSF-E)** measures the percentage of members aged 12 and older who were screened for depression and, if screened positive, received a follow-up plan. It tracks members aged 12 and older screened for depression (e.g., PHQ-9) with follow-up within 30 days.
- **Depression Remission or Response (DRR-E)** assesses the percentage of members with a diagnosis of depression who achieved remission or response to treatment. This measure requires an initial depression diagnosis and subsequent assessments. It assesses remission or response within 4-8 months for members aged 12 and older with positive depression screens.
- **Postpartum Depression Screening and Follow-up (PDS-E)** measures the percentage of pregnant and postpartum members who were screened for depression and, if screened positive, received a follow-up plan. This measure is specific to the perinatal period (pregnancy through 12 months postpartum). It evaluates depression screening during pregnancy/postpartum with follow-up for positive screens. Accurate data submission for these measures is critical for assessing the quality of care provided and identifying areas for improvement in addressing both social determinants of health and mental health needs.

2. CHANGE LOG

This section details the revisions made to this document. Providers will be notified of revisions via their Community Behavioral Health (CBH) representative.

Version	Date	Description
1.0	August 1, 2025	Initial release

3. DEFINITIONS AND ACRONYMS

Term	Acronym	Definition
Acknowledgment File	ACK	An output report acknowledging what was sent and processed
Batch Header Segment	BHS	Groups messages in a batch
Batch Trailer Segment	BTS	Closes a batch
Current Procedural Terminology	CPT	A medical code set maintained by the American Medical Association (AMA) that describes medical, surgical, and diagnostic services. CPT is used for procedures
Electronic Clinical Data Systems	ECDS	HEDIS reporting
Electronic Health Record	EHR	A digital version of a patient's paper chart. EHRs are real-time, patient-centered records that make information available instantly and securely to authorized users.
Electronic Medical Record	EMR	A digital version of the paper charts in the clinician's office. An EMR contains the medical and treatment history of patients in one practice.
File Header Segment	FHS	Starts an HL7 file
File Trailer Segment	FTS	Closes an HL7 file
Healthcare Effectiveness Data and Information Set	HEDIS	A widely used set of performance measures in the managed care industry, developed and maintained by NCQA
Health Level Seven	HL7	A set of international interoperability standards for transfer of clinical and administrative data between healthcare information systems
Logical Observation Identifiers Names and Codes	LOINC	A universal standard for identifying medical laboratory observations and other clinical observations
Message Header Segment	MSH	Starts a patient message

Term	Acronym	Definition
Minimal Lower Layer Protocol	MLLP	A standard protocol used for sending HL7 messages over a TCP/IP network
National Committee for Quality Assurance	NCQA	A private, non-profit organization dedicated to improving health care quality
National Provider Identifier	NPI	A unique identification number for covered health care providers
Observation Request Segment	OBR	For screening details
Observation/Result Segment	OBX	For screening results
Protected Health Information	PHI	Any health information about an individual that is created, received, or transmitted by a covered entity
Patient Identification Segment	PID	The PID segment is used by all applications as the primary means of communicating patient identification information.
Response	RES	HL7 response to each individual message processed.
Social Determinants of Health	SDOH	Non-medical factors affecting health, like socioeconomic status and geographic location
Secure File Transfer Protocol	SFTP	A network protocol that provides file access, file transfer, and file management over any reliable data stream
Systematized Nomenclature of Medicine – Clinical Terms	SNOMED CT	The most comprehensive, multilingual clinical health care terminology in the world
Transport Layer Security	TLS	A cryptographic protocol that provides secure communication over a computer network
Virtual Private Network	VPN	A technology that creates a safe and encrypted connection over a less secure network, such as the internet

4. UNDERSTANDING HL7

4.1. What is HL7?

HL7 is a set of international standards for transferring clinical and administrative data between healthcare information systems. The "Level Seven" refers to the highest level of the Open Systems Interconnection (OSI) model, the application layer responsible for direct communication between applications. HL7 standards define the format and content of healthcare data messages, enabling different healthcare applications (e.g., EHRs, lab systems, billing systems) to communicate and exchange information seamlessly. This interoperability is fundamental to modern healthcare, allowing for a more integrated and efficient healthcare ecosystem.

4.2. HL7 Version 2.x Basics

HL7 Version 2.x is a widely adopted messaging standard characterized by its pipe-delimited format. Messages are composed of segments, fields, components, and subcomponents, each carrying specific pieces of information.

4.2.1. Segments

A segment is a logical grouping of data fields. Each segment begins with a three-character segment ID (e.g., MSH for Message Header, PID for Patient Identification, OBX for Observation Result). A carriage return terminates segments.

Example:

```
PID|||12345^^^ABC^MRN||DOE^JOHN^A||19700101|M|||123 MAIN
ST^^ANYTOWN^MN^55123^USA||(555)123-4567|||M|
```

4.2.2. Fields

Fields are the basic units of information within a segment, separated by the field delimiter (typically a pipe |). Each field has a defined data type and meaning.

Example (from PID segment):

- PID.1: Set ID - PID (e.g., `1`)
- PID.3: Patient Identifier List (e.g., `12345^^^ABC^MRN`)
- PID.5: Patient Name (e.g., `DOE^JOHN^A`)

4.2.3. Components and Subcomponents

Some fields are complex and contain multiple pieces of information called components. Components are separated by the component delimiter (typically a caret ^). Subcomponents, if present, are separated by the subcomponent delimiter (typically an ampersand &).

Example (from PID.5 Patient Name):

```
DOE^JOHN^A
```

- DOE: Family Name (component 1)
- JOHN: Given Name (component 2)
- A: Middle Initial or Name (component 3)

4.2.4. Data Types

HL7 defines various data types for fields, such as:

- ST (String Data): Free text

- NM (Numeric): Numbers
- TS (Time Stamp): Date and time information (e.g., `YYYYMMDDHHMMSS`)
- CE (Coded Element): A coded value, often used for diagnoses, procedures, or observations, typically including code, text, and coding system (e.g., `CODE^TEXT^CODING_SYSTEM`), crucial for SNOMED CT and CPT
- XPN (Extended Person Name): Used for names with multiple components
- XAD (Extended Address): Used for addresses with multiple components
- XTN (Extended Telecommunication Number): Used for phone numbers

4.2.5. Repetitions

Some fields or segments can repeat within a message. Repetitions are separated by the repetition delimiter (typically a tilde ~). For example, a patient might have multiple identifiers or multiple observations.

Example (multiple identifiers in PID.3):

```
PID|||12345^^^ABC^MRN~67890^^^XYZ^SSN
```

4.3. Common HL7 Message Types for Clinical Data

While many HL7 message types exist, the ORU^R01 (Unsolicited Observation Message) is the most suitable and commonly used for transmitting clinical observation results, including screening outcomes and associated codes, which are precisely needed for HEDIS measure data submission.

- **ORU^R01 (Unsolicited Observation Message)** is used to send observations (results) from a producing system (e.g., a lab system, an EHR) to a consuming system (e.g., a clinical data repository, a quality reporting system). This message type contains segments like `OBR` (Observation Request) and `OBX` (Observation Result) to convey detailed clinical findings.
- **ADT (Admission, Discharge, Transfer) Messages** are used for patient demographic and encounter information (e.g., `ADT^A01` for admit, `ADT^A03` for discharge). While not the primary message for results, patient demographics from ADT messages are often linked to ORU messages.
- **ORM (Order) Messages** are used for ordering procedures or observations (e.g., `ORM^O01`). This document will focus on the ORU^R01 message type as the primary vehicle for transmitting the required HEDIS measure data.

5. HEDIS MEASURES: DEFINITIONS AND DATA REQUIREMENTS

This section overviews the specific HEDIS measures, their definitions, and the key data elements required for accurate reporting, including SNOMED CT and CPT codes.

Important Note on Codes: This document will provide examples of where SNOMED CT and CPT codes should be placed within the HL7 message structure. Providers and clients must use the most current and appropriate SNOMED CT, LOINC, and CPT codes defined by the **National Committee for Quality Assurance (NCQA)** and other authoritative sources for HEDIS reporting. The examples below use generic placeholders (e.g., [SNOMED_CODE_FOR_SCREENING]) that must be replaced with the actual, specific codes.

5.1. Social Needs Screening and Intervention (SNS-E)

5.1.1. Measure Description

The SNS-E measure assesses the percentage of members screened for social needs (e.g., food insecurity, housing instability, transportation barriers, interpersonal safety, utility needs) and, if identified with an unmet social need, received an intervention or referral. Providers have the option to submit results from the Accountable Health Communities Health-Related Social Needs (AHC HRSN) Screening tool or the Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE).

5.1.2. Required Data Elements

- Patient Demographics: Age, gender, date of birth
- Date of Screening: When the social needs screening was performed
- Screening Tool Used: Identification of the specific validated social needs screening tool (e.g., PRAPARE, Accountable Health Communities Health-Related Social Needs Screening Tool)
- Screening Results: Documentation of whether any social needs were identified as unmet
- Intervention/Referral: If an unmet need was identified, documentation of an intervention (e.g., direct assistance, education) or a referral to a community resource
- Date of Intervention/Referral: When the intervention or referral occurred

5.1.3. LOINC and SNOMED CT Codes for SNS-E

- SNOMED CT Codes (for Screening and Identified Needs):
  - Codes representing the administration of a social needs screening.
  - Codes representing specific identified social needs (e.g., [LOINC_CODE_FOR_FOOD_INSECURITY], [LOINC_CODE_FOR_HOUSING_INSTABILITY]).
  - Codes representing the overall outcome of the screening (e.g., "social needs identified," "no social needs identified").
- CPT Codes (for Services and Referrals):
  - Codes for the screening service (e.g., 96156/96160 for Social Determinants of Health Risk Assessment, or other applicable codes).

» Codes representing the intervention or referral service (e.g., [SNOMED_CT_CODE_FOR_REFERRAL_TO_FOOD_BANK], [SNOMED_CT_CODE_FOR_HOUSING_ASSISTANCE_REFERRAL]).

5.2. Depression Screening and Follow-up (DSF-E)

5.2.1. Measure Description

The DSF-E measure assesses the percentage of members aged 12 and older screened for depression using a validated screening tool and, if screened positive, received a follow-up plan. CBH has selected the PHQ-9 to be utilized by the provider network for depression screenings. A completed Edinburgh Postnatal Depression Scale (EPDS) will also count for this measure for those who are postpartum.

5.2.2. Required Data Elements

- Patient Demographics: Age, gender, date of birth
- Date of Screening: When the depression screening was performed
- Screening Tool Used: Identification of the specific validated depression screening tool (e.g., PHQ-9 or EPDS)
- Screening Score/Result: The numerical score from the screening tool and/or the qualitative result (e.g., “positive screen for depression,” “negative screen for depression”)
- Follow-up Plan: If screened positive, documentation of a follow-up plan (e.g., referral for mental health services, medication management, psychotherapy)
- Date of Follow-up Plan: When the follow-up plan was documented

5.2.3. SNOMED CT and CPT Codes for DSF-E

- SNOMED CT Codes (for Screening and Results):
  - Codes for the administration of the depression screening tool (e.g., [SNOMED_CODE_FOR_PHQ9_SCREENING]).
  - Codes indicating the screening result (e.g., [SNOMED_CODE_FOR_POSITIVE_DEPRESSION_SCREEN], [SNOMED_CODE_FOR_NEGATIVE_DEPRESSION_SCREEN]).
  - Codes for specific depression diagnoses, if applicable.
- CPT Codes (for Services and Follow-up):
  - Codes for the screening service (e.g., 99420 for administration and interpretation of health risk assessment, or other applicable codes).
  - Codes for follow-up services (e.g., [CPT_CODE_FOR_PSYCHOTHERAPY], [CPT_CODE_FOR_MEDICATION_MANAGEMENT], [CPT_CODE_FOR_REFERRAL_TO_MENTAL_HEALTH]).

5.3. Depression Remission or Response (DRR-E)

5.3.1. Measure Description

The DRR-E measure assesses the percentage of members 18 years and older with a diagnosis of depression who achieved remission or response to treatment within a specified timeframe. This measure requires an initial depression diagnosis and subsequent assessments. CBH has selected the PHQ-9 for the provider network to utilize for this measure.

5.3.2. Required Data Elements

- Patient Demographics: Age, gender, date of birth
- Initial Depression Diagnosis: Date and type of initial depression diagnosis
- Initial Depression Severity Score: Baseline score from a validated depression assessment tool (e.g., PHQ-9) at the time of diagnosis or treatment initiation
- Follow-up Assessment Dates: Dates of subsequent depression assessments
- Follow-up Assessment Scores: Scores from subsequent validated depression assessment tools
- Remission/Response Status: Documentation of whether remission or response criteria were met based on score changes

5.3.3. LOINC and CPT Codes for DRR-E

- LOINC and CPT Codes (for Diagnosis and Assessment):
  - Codes for specific depression diagnoses (e.g., [CPT_CODE_FOR_MAJOR_DEPRESSIVE_DISORDER])
  - Codes for the administration of depression assessment tools (e.g., [LOINC_CODE_FOR_PHQ9_ASSESSMENT])
  - Codes indicating remission or response status (e.g., [LOINC_CODE_FOR_DEPRESSION_REMISSION], [LOINC_CODE_FOR_DEPRESSION_RESPONSE])
- CPT Codes (for Services):
  - Codes for office visits, psychotherapy, medication management, or other services related to depression treatment and assessment

5.4. Postnatal Depression Screening and Follow-up (PDS-E)

5.4.1. Measure Description

The PDS-E measure assesses the percentage of pregnant and postpartum members who were screened for depression using a validated screening tool and, if screened positive, received a follow-up plan. This measure is specific to the perinatal period (pregnancy through 12 months postpartum). CBH has selected the Edinburgh Postnatal Depression Scale (EPDS) for this measure.

5.4.2. Required Data Elements

- Patient Demographics: Age, gender, date of birth, pregnancy status, delivery date
- Date of Screening: When the postnatal depression screening was performed
- Screening Tool Used: Identification of the specific validated postnatal depression screening tool (e.g., EPDS - Edinburgh Postnatal Depression Scale)
- Screening Score/Result: The numerical score from the screening tool and/or the qualitative result (e.g., "positive screen for perinatal depression")
- Follow-up Plan: If screened positive, documentation of a follow-up plan specific to perinatal depression (e.g., referral for mental health services, medication management, psychotherapy, support groups)
- Date of Follow-up Plan: When the follow-up plan was documented

5.4.3. LOINC and CPT Codes for PDS-E

- LOINC Codes (for Screening and Results):
  - Codes for the administration of the perinatal depression screening tool (e.g., [LOINC_CODE_FOR_EPDS_SCREENING])
  - Codes indicating the screening result (e.g., [LOINC_CODE_FOR_POSITIVE_POSTNATAL_DEPRESSION_SCREEN])
  - Codes for specific perinatal depression diagnoses, if applicable
- CPT Codes (for Services and Follow-up):
  - Codes for the screening service
  - Codes for follow-up services specific to perinatal mental health (e.g., [CPT_CODE_FOR_PERINATAL_COUNSELING], [CPT_CODE_FOR_REFERRAL_TO_PERINATAL_MENTAL_HEALTH])

6. HL7 MESSAGE STRUCTURE FOR HEDIS MEASURE DATA SUBMISSION

This section details the recommended HL7 message structure for submitting data for the HEDIS social needs and depression measures. We will focus on the ORU^R01 message type and the key segments that convey the necessary information, including SNOMED CT and CPT codes.

6.1. Recommended HL7 Message Type: ORU^R01 (Unsolicited Observation Message)

The ORU^R01 message is ideal for transmitting observation results, encompassing the outcomes of screenings, assessments, and the documentation of interventions or referrals. It allows for detailed reporting of clinical findings.

A typical ORU^R01 message structure for this purpose will include the following segments, in order:

- MSH: Message Header
- PID: Patient Identification
- [PD1]: Patient Demographic (Optional, for additional patient info)
- [PV1]: Patient Visit (Optional, for encounter details)
- [PV2]: Patient Visit - Additional Information (Optional)
- ORC: Common Order (Optional, if linked to an order)
- OBR: Observation Request (One per observation battery/group)
- OBX: Observation Result (One or more per OBR, for individual observations)
- [NTE]: Notes and Comments (Optional, for additional narrative)
- [DG1]: Diagnosis (Optional, for related diagnoses)
- [PR1]: Procedures (Optional, for related procedures)

6.2. Key Segments for HEDIS Data Submission

Let's break down the essential segments and their relevant fields for HEDIS measure data submission.

6.2.1. MSH (Message Header)

The MSH segment defines the message's origin, destination, type, and control information.

Field	Description	Example Value	Notes
MSH.1	Field Separator	`	`
MSH.2	Encoding Characters	^~\&	Standard HL7 delimiters
MSH.3	Sending Application	EHR_SYSTEM_NAME	Name of the sending system (e.g., "Epic", "Cerner")
MSH.4	Sending Facility	PROVIDER_FACILITY_ID	Identifier for the sending facility
MSH.5	Receiving Application	CLIENT_APPLICATION_NAME	Name of the receiving system (e.g., "HEDIS_Processor")

Field	Description	Example Value	Notes
MSH.6	Receiving Facility	CLIENT_FACILITY_ID	Identifier for the client's facility
MSH.7	Date/Time Of Message	YYYYMMDDHHMMSS	Message creation timestamp
MSH.9	Message Type	ORU^R01	Unsolicited Observation Message
MSH.10	Message Control ID	UNIQUE_MESSAGE_ID	Unique identifier for this message
MSH.11	Processing ID	P	P for Production, T for Training, D for Debugging
MSH.12	Version ID	2.5.1	HL7 version (e.g., 2.5.1)

6.2.2. PID (Patient Identification)

The PID segment contains demographic information about the patient.

Field	Description	Example Value	Notes
PID.1	Set ID - PID	1	Sequence number
PID.2	Patient ID	EXTERNAL_ID	External patient identifier (optional)
PID.3	Patient Identifier List	12345^^^EHR^MRN~67890^^^SSN^SSN	Mandatory. Patient's medical record number (MRN) and other identifiers. Use MRN as the identifier type.
PID.5	Patient Name	DOE^JOHN^A	Mandatory. Last Name^First Name^Middle Initial.
PID.7	Date/Time of Birth	YYYYMMDD	Mandatory. Patient's date of birth.
PID.8	Administrative Sex	M or F or U	Mandatory. M (Male), F (Female), U (Unknown).
PID.11	Patient Address	123 MAIN ST^^ANYTOWN^MN^55123^USA	Patient's current address.
PID.13	Phone Number - Home	(555)123-4567	Patient's home phone number.
PID.16	Marital Status	M or S or D	Marital status (e.g., M for Married).
PID.19	SSN Patient	XXX-XX-XXXX	Patient's Social Security Number (if available and permissible).

6.2.3. PV1 (Patient Visit)

The PV1 segment contains patient visit information, including encounter details. This is crucial for linking observations to specific encounters.

Field	Description	Example Value	Notes
PV1.1	Set ID - PV1	1	Sequence number
PV1.2	Patient Class	O or I	O for Outpatient, I for Inpatient
PV1.3	Assigned Patient Location	CLINIC_A^ROOM_101	Location of the patient during the encounter
PV1.7	Attending Doctor	SMITH^JANE^DR	Name of the attending physician
PV1.10	Hospital Service	MED or PSY	Service area (e.g., MED for Medical, PSY for Psychiatry)
PV1.18	Patient Type	REG	Patient type (e.g., REG for Regular)
PV1.19	Visit Number	VISIT_ID_123	Unique identifier for the patient's visit/encounter. Crucial for linking observations to an encounter.
PV1.44	Admit Date/Time	YYYYMMDDHHMMSS	Mandatory. Date and time of the patient's admission or start of encounter.
PV1.45	Discharge Date/Time	YYYYMMDDHHMMSS	Date and time of discharge or end of encounter (if applicable).

6.2.4. OBR (Observation Request)

The OBR segment describes an order for a battery of observations or a single observation. For HEDIS measures, each screening or assessment (e.g., a PHQ-9 screening, a social needs screening) would typically correspond to one OBR segment, followed by one or more OBX segments for the individual results.

Field	Description	Example Value	Notes
OBR.1	Set ID - OBR	1	Sequence number
OBR.2	Placer Order Number	ORDER_ID_456	Unique identifier for the order (optional)
OBR.3	Filler Order Number	FILLER_ORDER_ID_789	Unique identifier assigned by the performing system (optional)
OBR.4	Universal Service Identifier	[CODE]^SCREENING_TYPE^L	Mandatory. Identifies the type of observation or battery. Use LOINC or a local code

6.2.5. OBX (Observation Result)

The OBX segment carries the actual observation result for a single observation. This is where the specific outcomes of screenings, assessments, and details of interventions are reported.

Field	Description	Optionality/Comments
OBX.1	Set ID	Required: Sequential number (e.g., 1).
OBX.2	Value Type	Required: CE (Coded Entry) or TX (Text). NM (Numeric) can be used for scores.

Field	Description	Optionality/Comments
OBX.3	Observation Identifier	Required: SNOMED CT or LOINC (e.g., 88122-7^Food insecurity^LN).
OBX.5	Observation Value	Required: Result (e.g., Y for positive, numerical score, or coded value).
OBX.11	Result Status	Required: F (Final).
OBX.14	Date/Time of Observation	Required: YYYYMMDDHHMMSS (e.g., 20240520101500). When the observation was made.
OBX.15	Producer's ID	Recommended: Performing organization or provider.
OBX.16	Responsible Observer	Recommended: Provider NPI (e.g., 7583493848^Randolph^James^^^^NPI).

6.2.6. NTE (Notes and Comments)

The NTE segment allows for additional narrative comments related to a preceding segment, such as an OBX or OBR.

Field	Description	Optionality/Comments
NTE.1	Set ID - NTE	Optional: Sequential number.
NTE.3	Comment	Optional: Notes on OBX results (e.g., Referred to community food bank).

6.2.7. DG1 (Diagnosis)

The DG1 segment contains patient diagnosis information. This segment is useful for measures like DRR-E, where an initial depression diagnosis is required.

Field	Description	Optionality/Comments
DG1.1	Set ID - DG1	Required: Sequential number (e.g., 1).
DG1.2	Diagnosis Coding Method	Required: I9 for ICD-9-CM, I10 for ICD-10-CM.
DG1.3	Diagnosis Code	Required: The diagnosis code and description (e.g., F32.9^Major depressive disorder, single episode, unspecified^ICD10CM).
DG1.5	Diagnosing Date/Time	Required: YYYYMMDDHHMMSS. Date and time of the diagnosis.

6.2.8. PR1 (Procedures)

The PR1 segment contains information about procedures performed on the patient. While often captured in OBR/OBX for HEDIS, this segment can provide additional detail for complex procedures or interventions.

Field	Description	Optionality/Comments
PR1.1	Set ID - PR1	Required: Sequential number (e.g., 1).
PR1.2	Procedure Code Type	Required: C4 for CPT, ICD9 for ICD-9-CM procedure, ICD10 for ICD-10-PCS.
PR1.3	Procedure Code	Required: The procedure code and description (e.g., 90832^Psychotherapy, 30 min^C4).
PR1.5	Procedure Date/Time	Required: YYYYMMDDHHMMSS. Date and time the procedure was performed.

6.3. Encoding SNOMED CT and CPT Codes within HL7

Accurate encoding of SNOMED CT and CPT codes is paramount for HEDIS reporting. These codes are primarily conveyed within the OBX (Observation Result) and OBR (Observation Request) segments using the CE (Coded Element) data type. The CE data type typically follows the format CODE^TEXT^CODING_SYSTEM.

6.3.1. OBX Segment for Screening Results and SNOMED CT

- **OBX.3 (Observation Identifier):** This field identifies *what* was observed. For HEDIS screenings, this often contains a LOINC code for the screening tool itself, or a SNOMED CT code representing the specific social need or depression finding.

  - ***Example for Social Needs Screening Outcome:***

    ```
    OBX|1|CE|70868-8^Social Determinants of Health Assessment
    Outcome^LN||80242007^Food insecurity
    (finding)^SNOMEDCT|||||F|||20240520101500
    ```

    - Here, `70868-8^Social Determinants of Health Assessment Outcome^LN` identifies the type of observation (an SDOH assessment outcome), and `80242007^Food insecurity (finding)^SNOMEDCT` in OBX.5 is the *value* of that observation, using a SNOMED CT code.

- **OBX.5 (Observation Value):** This field contains the observation's result. When the result itself is a coded value (e.g., a positive screening result, a specific type of social need identified, or a remission status), a SNOMED CT code is used here.

  - ***Example for Depression Remission:***

    ```
    OBX|2|CE|[SNOMED_CODE_FOR_DEPRESSION_REMISSION_ASSESSMENT]^
    Depression Remission Assessment
    Outcome^SNOMEDCT||[SNOMED_CODE_FOR_DEPRESSION_REMISSION]^De
    pression in remission
    (finding)^SNOMEDCT|||||F|||20240525134500
    ```

    - The observation identifier in OBX.3 specifies the type of assessment, and the observation value in OBX.5 provides the specific SNOMED CT code for "Depression in remission".

» ***Example for numerical score:***

```
OBX|1|NM|44250-9^Patient Health Questionnaire-9
score^LN||18||[SCORE]||||F|||20240522104500
```

- For numerical scores like PHQ-9, OBX.2 is NM (Numeric), and OBX.5 contains the score (e.g., 18). The LOINC code in OBX.3 identifies what the score represents.

6.3.2. CPT Codes for Services and Referrals

CPT codes typically represent procedures or services rendered. In the context of HEDIS social needs and depression measures, CPT codes are crucial for identifying the screening service itself and any interventions or referrals made.

- **OBR.4 (Universal Service Identifier):** For the primary screening or assessment, the OBR.4 field is used to carry the CPT code or LOINC code that identifies the service.

» ***Example for Social Needs Screening Service:***

```
OBR|1|||88122-7^Food Security Screening
(AHCHRSN)^LN|||20240520101500
```

- While this example uses a LOINC code for the assessment, a CPT code like 96156^Social Determinants of Health Risk Assessment^C4 could also be used here to identify the service.

- **OBX.5 (Observation Value) with CPT for Interventions/Referrals:** For interventions or referrals that are documented as an "observation" (e.g., "referral to food bank"), a CPT code can be placed in the OBX.5 field if the OBX.3 identifies the "intervention/referral" observation.

» ***Example for a Referral Service:***

```
OBX|2|CE|[SNOMED_CODE_FOR_SNS_INTERVENTION]^Social Needs
Intervention
Performed^SNOMEDCT||[CPT_CODE_FOR_FOOD_BANK_REFERRAL]^Refer
ral to Food Bank^C4|||||F|||20240520102000
```

- Here, OBX.3 indicates that an "SNS Intervention" was performed, and OBX.5 provides the specific CPT code for the "Referral to Food Bank" service.

- **PR1 (Procedures) Segment:** CPT codes can be placed here for more complex procedures or if the EHR system explicitly uses the PR1 segment to capture procedures.

» ***Example for a Psychotherapy Session:***

```
PR1|1|C4|90832^Psychotherapy, 30 min^C4||20240522113000
```

- This explicitly states the CPT code for a psychotherapy session performed at a given date/time.

7. CONNECTIVITY AND TRANSMISSION OPTIONS

This section outlines the available methods for connecting with CBH and securely transmitting HL7 files, along with details on file formats and naming conventions.

7.1. SFTP Submission

Beginning September 2, 2025, CBH will begin collecting screening results from providers via HL7 Version2.5.1 ORU^R01 message version, in accordance with the **HL7 Implementation Guide** for batch processing and via claims data. Providers will submit HL7 files via IPSWITCH and submission of files should be uploaded to the HL7 subfolder. The naming convention must be used in order for the file to be processed correctly.

For secure file transfer, please use the following SFTP details.

- In order to access IPSWITCH, providers must complete a form to securely exchange files with CBH and gain access to the HL7 file folders (See **Attachment A**). The completed form must be sent to the **CBH.FileTransfer@phila.gov** and CBH will update your permissions and share credentials.
- File Format: HL7 ORU^R01 files (.hl7), zipped with AES-256 encryption
- Naming Convention:

  "par.xxxx_HL7_YYYYMMDD.HL7"

XXXX refers to your respective 4-digit parent ID number. The date should be the date the file is uploaded into IPSWITCH.

7.2. Response File

Acknowledgement and Response files will be produced by CBH as follows. These files can be found in the provider IPSWITCH HL7 outbound file.

Acknowledgement File: CBH will produce an acknowledgement file with the naming convention of PAR_XXXX_HL7_REPORT_ YYYYMMDD.txt within 1 business day following the receipt of PAR_XXXX_HL7_YYYYMMDD.txt file.

Response File: Within 1 business day of the ingestion of PAR_XXXX_HL7_YYYYMMDD.txt file, CBH will produce response files with the naming convention: PAR_XXXX_HL7_Response_YYYYMMDD.txt.

7.3. Contact Information

For any questions or support, please follow-up with your CBH provider representative.

7.4. Transaction-Specific Information

7.4.1. HL7 Version Standard

Please use HL7 Version 2.5.1 ORU^R01 messages per the HL7 Implementation Guide for Observation Reporting.

7.4.2. HL7 Protocol Standards

- Transport: SFTP (preferred)
- Security: AES-256 encryption for files, TLS 1.2+ for HTTPS
- Delimiters: | (field), ^ (component), & (subcomponent), \ (escape)

7.5. Submitting HL7 Files

Follow these steps for submitting your HL7 files:

1. Generate the ORU^R01 message within your EHR or other platform.
2. Validate the message using HL7 tools (e.g., HAPI HL7v2, HL7 Inspector).
3. Compress the file into a zip archive and upload it to the SFTP server.
4. You will receive a confirmation and any error reports as outlined in 7.2 above.

7.5.1. File Format

- **File Format:** Files must be plain text (ASCII or UTF-8) using HL7 delimiters:
  - |: Field separator (e.g., separates PID-1 from PID-3)
  - ^: Component separator (e.g., separates last name from first name in PID-5)
  - &: Subcomponent separator (e.g., used in coded elements)
  - \: Escape character for special characters
  - ***Example:*** `PID|1||1148649301^^^MB||Smith^John^`

8. HL7 BATCH FILE SEGMENTS

HL7 Version 2.5.1 ORU^R01 messages are used to submit clinical data in batches. The following explains the purpose and details of these batch file segments, which benefit measures such as SNS-E, DSF-E, DRR-E, and PDS-E.

8.1. Purpose and Benefits of Batch Segments

- **FHS (File Header Segment):** Starts the HL7 file, identifying the provider (e.g., NPI) and file metadata (e.g., creation date, file name)
  - **Benefits:** Ensures the receiving system can verify the file's origin and integrity, which is critical for tracking submissions from multiple providers in HEDIS reporting
- **BHS (Batch Header Segment):** Groups multiple patient messages (MSH segments) within a file, allowing submission of data for multiple patients or measures (e.g., SNS-E, DSF-E)
  - **Benefits:** Simplifies processing large datasets, reduces file management overhead, and supports state-wide platform submissions
- **BTS (Batch Trailer Segment):** Closes a batch, specifying the number of messages included
  - **Benefits:** Allows the receiving system to confirm all messages were received, preventing data loss
- **FTS (File Trailer Segment):** Closes the file, specifying the number of batches
  - **Benefits:** Confirms file completeness, ensuring no batches are missing

8.1.1. Why Use These Segments?

While optional in HL7 Version 2.5.1, FHS, BHS, BTS, and FTS are recommended for HEDIS submissions to handle high-volume data from multiple providers or the state-wide platform. They ensure accurate processing, error detection, and traceability, especially for complex submissions involving SNS-E, DSF-E, DRR-E, and PDS-E measures. Omitting them may lead to errors in multi-patient submissions.

8.2. Segment Details

This section provides detailed information on the key fields within each HL7 segment relevant to HEDIS data submission.

8.2.1. FHS - File Header Segment

Field	Description	Optionality/Comments
FHS-4	Sending Facility	Required: Provider NPI or assigned ID (e.g., 1234567890^ProviderName^L).
FHS-9	File Name/ID	Required: Matches file name (e.g., 1234567890_20250527_SNSE_001).

8.2.2. BHS - Batch Header Segment

Field	Description	Optionality/Comments
BHS-4	Sending Facility	Required: Same as FHS-4.

8.2.3. MSH - Message Header Segment

Field	Description	Optionality/Comments
MSH-4	Sending Facility	Required: Provider NPI or assigned ID.
MSH-9	Message Type	Required: ORU^R01.
MSH-11	Processing ID	Required: P (Production) or T (Test).
MSH-12	Version ID	Required: 2.5.1.

8.2.4. PID - Patient Identification Segment

The PID segment contains demographic information about the patient.

Field	Description	Optionality/Comments
PID.1	Set ID - PID	Required: 1.
PID.2	Patient ID	External patient identifier (optional).
PID.3	Patient Identifier	Required: Member ID (type MB or SN, e.g., 1148649301^^^MB).
PID.5	Patient Name	Required: Last^First^Middle.
PID.7	Date of Birth	Required: YYYYMMDD (e.g., 19850515).
PID.8	Sex	Required: F, M, or U.
PID.11	Address	Recommended: Mailing address (type M, e.g., 123 Main St^^Anytown^TX^78701^M).

8.2.5. OBR - Observation Request Segment

The OBR segment describes an order for a battery of observations or a single observation. For HEDIS measures, each screening or assessment (e.g., a PHQ-9 screening, a social needs screening) would typically correspond to one OBR segment, followed by one or more OBX segments for the individual results.

Field	Description	Optionality/Comments
OBR.1	Set ID - OBR	Required: Sequential number (e.g., 1).
OBR.2	Placer Order Number	Unique identifier for the order (optional).
OBR.3	Filler Order Number	Unique identifier assigned by the performing system (optional).
OBR.4	Universal Service Identifier	Mandatory. Identifies the type of observation or battery. Use LOINC or a local code.
OBR.7	Observation Date/Time	Required: YYYYMMDDHHMMSS (e.g., 20250527).

Field	Description	Optionality/Comments
OBR.16	Ordering Provider	Recommended: Provider NPI.
OBR.25	Result Status	Required: F (Final).

8.2.6. OBX - Observation/Result Segment

The OBX segment carries the actual observation result for a single observation. This is where the specific outcomes of screenings, assessments, and details of interventions are reported.

Field	Description	Optionality/Comments
OBX.1	Set ID	Required: Sequential number (e.g., 1).
OBX.2	Value Type	Required: CE (Coded Entry) or TX (Text). NM (Numeric) can be used for scores.
OBX.3	Observation Identifier	Required: SNOMED CT or LOINC (e.g., 423100009^Food insecurity^SCT).
OBX.5	Observation Value	Required: Result (e.g., Y for positive, numerical score, or coded value).
OBX.11	Result Status	Required: F (Final).
OBX.14	Date/Time of Observation	Required: YYYYMMDDHHMMSS (e.g., 20240520101500). When the observation was made.
OBX.15	Producer's ID	Recommended: Performing organization or provider.
OBX.16	Responsible Observer	Recommended: Provider NPI (e.g., 7583493848^Randolph^James^^^^NPI).

8.2.7. NTE - Notes and Comments Segment

The NTE segment allows for additional narrative comments related to a preceding segment, such as an OBX or OBR.

Field	Description	Optionality/Comments
NTE.1	Set ID - NTE	Optional: Sequential number.
NTE.3	Comment	Optional: Notes on OBX results (e.g., Referred to community food bank).

8.2.8. BTS - Batch Trailer Segment

The BTS segment closes a batch, specifying the number of messages included.

Field	Description	Optionality/Comments
BTS-1	Batch Message Count	Required: Number of MSH segments.

8.2.9. FTS - File Trailer Segment

The FTS segment closes the file, specifying the number of batches.

Field	Description	Optionality/Comments
FTS-1	File Batch Count	Required: Number of batches (BHS segments).

8.2.10. Example: Multi-Patient Submission for SNS-E and DSF-E

This example shows a batch file with two patients: one with a food insecurity screening (SNS-E) and one with a depression screening (DSF-E). FHS and FTS bookend the file, while BHS and BTS group the messages.

```
FHS|^~\&|1234567890^ProviderName^L|||20250527||1234567890_20250527_SNSE
_001
BHS|^~\&|1234567890^ProviderName^L|||20250527
MSH|^~\&|1234567890^ProviderName^L|||20250527||ORU^R01|ORU_R01|P|2.5.1
PID|1||1148649301^^^^MB||Smith^John^||19850515|M|||123 Main
St^^Austin^TX^78701^M
OBR|1|||96160^SDOH
Screening^C4|||20250527||||||7583493848^Randolph^James^^^^NPI||||
OBX|1|CE|423100009^Food insecurity^SCT||Y||||||F
NTE|||Referred to community food bank
MSH|^~\&|1234567890^ProviderName^L|||20250527||ORU^R01|ORU_R01|P|2.5.1
PID|1||1148649302^^^^MB||Doe^Jane^||19900620|F|||456 Oak
St^^Austin^TX^78701^M
OBR|1|||96127^Behavioral Health
Screening^C4|||20250527||||||7583493848^Randolph^James^^^^NPI||||
OBX|3|NM|44261-6^PHQ-9 total score^LN||18|||||F|||20240522104500
NTE|||Referred to mental health services
BTS|2
FTS|1
```

Explanation:

- **FHS:** Identifies the file with provider NPI and file name (matches naming convention)
- **BHS:** Starts a batch for multiple patient records
- **First MSH Group:** Reports a food insecurity screening (SNS-E) for John Smith, with a positive result and referral

- **Second MSH Group:** Reports a depression screening (DSF-E) for Jane Doe, with a positive PHQ-9 result and referral
- **BTS:** Confirms two messages (MSH segments) in the batch
- **FTS:** Confirms one batch in the file

9. DETAILED HL7 IMPLEMENTATION EXAMPLES

This section provides concrete HL7 message examples for each HEDIS measure, demonstrating how the required data elements, including SNOMED CT and CPT codes, are placed within the ORU^R01 message structure.

Note: These examples use placeholder codes (e.g., [SNOMED_CODE], [CPT_CODE]). In a real-world implementation, these must be replaced with the exact, current, and HEDIS-compliant codes. Dates and times are in YYYYMMDDHHMMSS format.

9.1. Example 1: SNS-E – Positive Social Needs Screening with Referral

9.1.1. Scenario

A patient, Jane Doe, born on 1985-03-15, underwent a social needs screening on 2024-05-20. The screening identified food insecurity, and on the same day, a referral to a local food bank was made.

9.1.2. HL7 Message Example

```
MSH|^~\&|EHR_SYSTEM|PROVIDER_FACILITY|HEDIS_PROCESSOR|CLIENT_FACILITY|2
0240520103000||ORU^R01|MSG12345|P|2.5.1
PID|1||PATIENTID123^^^EHR^MRN||DOE^JANE^A||19850315|F|||123 MAIN
ST^^ANYTOWN^MN^55123^USA||(555)123-4567|||S
PV1|1|O||||||DR_SMITH^JOHN^MD||||||||VISIT_SNS_20240520|20240520100000

OBR|1|||70868-8^Social Determinants of Health
Assessment^LN|||20240520101500|||||||DR_SMITH^JOHN^MD|||||F|||

OBX|1|CE|88122-7^Food Security Screening (AHC HRSN)^LN||LA28397-0^Food
insecurity identified^LN|||||F|||20240520101500|||DR_SMITH^JOHN^MD|

PR1|1|C4|96156^Health behavior assessment^CPT|||20240520102000|||||

NTE|1||Patient screened positive for food insecurity. Referral to food
bank provided.
```

Explanation of Key Fields:

- **MSH** (Message Header): Standard segment identifying the message's origin, destination, and type.

   - » MSH.4 (Sending Facility): EHR_SYSTEM
   - » MSH.9 (Message Type): ORU^R01 (Observation Result - Unsolicited, a common type for lab results and clinical observations)
   - » MSH.10 (Message Control ID): MSG12345 (Unique message identifier)
   - » MSH.12 (Version ID): 2.5.1 (HL7 version number)

- **PID** (Patient Identification): Provides the patient's demographic information
   - » PID.3 (Patient Identifier List): PATIENTID123 (The unique member ID)
   - » PID.5 (Patient Name): DOE^JANE^A
   - » PID.7 (Date of Birth): 19850315
   - » PID.8 (Administrative Sex): F (Female)
- **PV1** (Patient Visit): Details the patient's encounter or visit.
   - » PV1.2 (Patient Class): O (Outpatient)
   - » PV1.7 (Attending Doctor): DR_SMITH^JOHN^MD
   - » PV1.19 (Visit Number): VISIT_SNS_20240520 (Unique encounter identifier)
   - » PV1.44 (Admit Date/Time): 20240520100000 (The start date/time of the visit)
- **OBR** (Observation Request): Acts as a header for a group of observations. It identifies the overall assessment or service that was performed.
   - » OBR.4 (Universal Service Identifier): 70868-8^Social Determinants of Health Assessment^LN. This LOINC code specifies that the observation group is related to a general SDOH assessment.
   - » OBR.7 (Observation Date/Time): 20240520101500 (The date/time the assessment was completed)
- **OBX**|1 (Screening Outcome): This segment reports the direct result of the food insecurity screening, which is crucial for HEDIS measure calculation.
   - » OBX.2 (Value Type): CE (Coded Element), indicating the value is a code
   - » OBX.3 (Observation Identifier): 88122-7^Food Security Screening (AHC HRSN)^LN. This is the LOINC code for the specific screening tool that was used.
   - » OBX.5 (Observation Value): LA28397-0^Food insecurity identified^LN. This is the LOINC answer code that confirms a positive finding for food insecurity.
- **PR1** (Procedures): This segment is used to report a procedure or service performed, which in this case is the intervention.
   - » PR1.2 (Procedure Coding Method): C4 (CPT-4), specifying the coding system

- PR1.3 (Procedure Code): 96156^Health behavior assessment^CPT. This is the CPT code for the intervention that counts towards the HEDIS numerator.
- PR1.5 (Procedure Date/Time): 20240520102000 (The date/time the intervention was performed)

- **NTE** (Notes and Comments): Provides additional, human-readable context for the observations or procedures
  - NTE.3: "Patient screened positive for food insecurity. Referral to food bank provided." (A textual description of the clinical activity)

9.2. Example 2: DSF-E – Depression Screening (PHQ-9) with Follow-up Plan

9.2.1. Scenario

A patient, John Smith, aged 35, underwent a PHQ-9 depression screening on 2024-05-22 during an outpatient visit. The score was 18, indicating moderately severe depression. A follow-up plan for referral to mental health services was documented on the same day.

9.2.2. HL7 Message Example

```
MSH|^~\&|EHR_SYSTEM|PROVIDER_FACILITY|HEDIS_PROCESSOR|CLIENT_FACILITY|2
0240522103000||ORU^R01|MSG67890|P|2.5.1

PID|1||PATIENTID456^^^EHR^MRN||SMITH^JOHN^A||19890522|M|||456 OAK
ST^^ANYTOWN^MN^55123^USA||(555)987-6543|||S

PV1|1|O||||||DR_LEE^SUSAN^MD||||||||VISIT_DSF_20240522|20240522100000|
||||||||||||||||||||||||

OBR|1|||44250-7^PHQ-9
panel^LN|||20240522101500||||||||DR_LEE^SUSAN^MD|||||F|||

OBX|1|NM|44261-6^PHQ-9 total
score^LN||18|||||F|||20240522102000|||DR_LEE^SUSAN^MD|

DG1|1||Z71.82^Counseling on health without a specified
diagnosis^ICD10|||||A|||
```

9.2.3. NTE|1||Patient screened positive for depression with a PHQ-9 score of 18; a referral to mental health services was provided

Explanation of Key Fields

- **MSH** (Message Header): Standard segment identifying the message's origin, destination, and type.
  - MSH.4 (Sending Facility): EHR_SYSTEM

- » MSH.9 (Message Type): ORU^R01 (Observation Result - Unsolicited)
- » MSH.10 (Message Control ID): MSG67890 (Unique message identifier)
- » MSH.12 (Version ID): 2.5.1 (HL7 version number)

- **PID** (Patient Identification): Provides the patient's demographic information.
  - » PID.3 (Patient Identifier List): PATIENTID456 (The unique member ID).
  - » PID.5 (Patient Name): SMITH^JOHN^A.
  - » PID.7 (Date of Birth): 19890522.
  - » PID.8 (Administrative Sex): M (Male).
- **PV1** (Patient Visit): Details the patient's encounter or visit.
  - » PV1.2 (Patient Class): O (Outpatient).
  - » PV1.7 (Attending Doctor): DR_LEE^SUSAN^MD.
  - » PV1.19 (Visit Number): VISIT_DSF_20240522 (Unique encounter identifier).
  - » PV1.44 (Admit Date/Time): 20240522100000 (The start date/time of the visit).
- **OBR** (Observation Request): Acts as a header for a group of observations. It identifies the overall assessment performed.
  - » OBR.4 (Universal Service Identifier): 44250-7^PHQ-9 panel^LN. This LOINC code specifies that the observation group is related to the PHQ-9 assessment.
  - » OBR.7 (Observation Date/Time): 20240522101500 (The date/time the assessment was started).
- **OBX** (Screening Outcome): This segment reports the direct numeric score from the PHQ-9, which is a key component for HEDIS measure calculation.
  - » OBX.2 (Value Type): NM (Numeric), indicating the value is a number.
  - » OBX.3 (Observation Identifier): 44261-6^PHQ-9 total score^LN. This is the LOINC code for the total score of the PHQ-9.
  - » OBX.5 (Observation Value): 18 (The patient's numeric score).
  - » OBX.14 (Date/Time of Observation): 20240522102000 (The date/time the score was recorded).
- **DG1** (Diagnosis): This segment is used to report a diagnosis or, in this case, a finding that counts as a behavioral health encounter.
  - » DG1.2 (Diagnosis Coding Method): ICD10.
  - » DG1.3 (Diagnosis Code): Z71.82^Counseling on health without a specified diagnosis^ICD10. This ICD-10-CM code is part of the "Behavioral Health Encounter Value Set" and documents the counseling/follow-up action.

- **NTE** (Notes and Comments): Provides additional, human-readable context for the observations or procedures.
    - NTE.3: "Patient screened positive for depression with a PHQ-9 score of 18. A referral to mental health services was provided." (A textual description of the clinical activity)

9.3. Example 3: DRR-E – Depression Remission Assessment

9.3.1. Scenario

A patient, Sarah Davis, diagnosed with Major Depressive Disorder on 2023-11-01, had an initial PHQ-9 score of 20. On 2024-05-25, a follow-up PHQ-9 assessment was performed, yielding a score of 4, indicating remission.

9.3.2. HL7 Message Example

```
MSH|^~\&|EHR_SYSTEM|PROVIDER_FACILITY|HEDIS_PROCESSOR|CLIENT_FACILITY|2
0240525110000||ORU^R01|MSG98765|P|2.5.1

PID|1||PATIENTID789^^^EHR^MRN||DAVIS^SARAH^L||19851015|F|||789 MAPLE
AVE^^ANYTOWN^MN^55123^USA||(555)555-1212|||S

PV1|1|O||||||DR_JONES^MARY^MD|||||||||VISIT_DSF_20240525|20240525103000
|||||||||||||||||||||||||

DG1|1||F32.2^Major depressive disorder, single episode, severe without
psychotic features^ICD10|||||A|||20231101|

OBR|1|||44250-7^PHQ-9
panel^LN|||20240525104500||||||||DR_JONES^MARY^MD|||||F|||

OBX|1|NM|44261-6^PHQ-9 total
score^LN||20|||||F|||20231101120000|||DR_JONES^MARY^MD|

OBX|2|NM|44261-6^PHQ-9 total
score^LN||4|||||F|||20240525105000|||DR_JONES^MARY^MD|

NTE|1||Follow-up PHQ-9 score of 4 indicates remission of depression
symptoms.
```

9.3.3. Explanation of Key Fields

- **MSH** (Message Header): Standard header identifying the message's origin, destination, and type
    - MSH.4 (Sending Facility): EHR_SYSTEM
    - MSH.9 (Message Type): ORU^R01 (Observation Result - Unsolicited)
    - MSH.10 (Message Control ID): MSG98765 (Unique message identifier)
    - MSH.12 (Version ID): 2.5.1 (HL7 version number)

- **PID** (Patient Identification): Provides the patient's demographic information
  - PID.3 (Patient Identifier List): PATIENTID789 (The unique member ID)
  - PID.5 (Patient Name): DAVIS^SARAH^L
  - PID.7 (Date of Birth): 19851015
  - PID.8 (Administrative Sex): F (Female)
- **PV1** (Patient Visit): Details the patient's encounter or visit
  - PV1.2 (Patient Class): O (Outpatient)
  - PV1.7 (Attending Doctor): DR_JONES^MARY^MD
  - PV1.19 (Visit Number): VISIT_DSF_20240525 (Unique encounter identifier)
  - PV1.44 (Admit Date/Time): 20240525103000 (The start date/time of the visit)
- **DG1** (Diagnosis): Reports the patient's primary diagnosis; demonstrates the existence of the major depressive disorder
  - DG1.2 (Diagnosis Coding Method): ICD10
  - DG1.3 (Diagnosis Code): F32.2^Major depressive disorder, single episode, severe without psychotic features^ICD10. This is the ICD-10-CM code for the diagnosis.
  - DG1.5 (Diagnosis Date/Time): 20231101 (The date the diagnosis was made)
- **OBR** (Observation Request): Acts as a header for a group of observations; identifies the overall assessment performed
  - OBR.4 (Universal Service Identifier): 44250-7^PHQ-9 panel^LN (This LOINC code specifies that the observation group is related to the PHQ-9 assessment.)
  - OBR.7 (Observation Date/Time): 20240525104500 (The date/time the assessment was started)
- **OBX** (Screening Outcome): This segment reports the direct numeric score from the follow-up PHQ-9, which is a key component for HEDIS measure calculation.
  - OBX.2 (Value Type): NM (Numeric), indicating the value is a number
  - OBX.3 (Observation Identifier): 44261-6^PHQ-9 total score^LN (This is the LOINC code for the total score of the PHQ-9.)
  - OBX.5 (Observation Value): 4 (The patient's numeric score) A score of <5 indicates remission, satisfying the numerator criteria.
  - OBX.14 (Date/Time of Observation): 20240525105000 (The date/time the score was recorded)
- **NTE** (Notes and Comments): Provides additional, human-readable context for the observations or procedures

» NTE.3: “Follow-up PHQ-9 score of 4 indicates remission of depression symptoms.” (A textual description of the clinical activity)

9.4. Example 4: PDS-E – Perinatal Depression Screening

9.4.1. Scenario

A pregnant patient, Maria Garcia, 28 years old, had an EPDS screening on 2024-05-27. Her score was 14, indicating a positive screen for perinatal depression. A referral for perinatal mental health counseling was made on the same day.

9.4.2. HL7 Message Example

```
MSH|^~\&|EHR_SYSTEM|PROVIDER_FACILITY|HEDIS_PROCESSOR|CLIENT_FACILITY|2
0240527103000||ORU^R01|MSG54321|P|2.5.1

PID|1||PATIENTID999^^^EHR^MRN||GARCIA^MARIA^E||19960305|F|||123 ELM
ST^^ANYTOWN^MN^55123^USA||(555)333-4444|||S

PV1|1|O||||||DR_PATEL^ANNA^MD||||||||VISIT_PDS_20240527|20240527100000
|||||||||||||||||||||||||

DG1|1||Z33.1^Pregnant state, incidental^ICD10|||||A|||20240527|

OBR|1|||71354-5^Edinburgh Postnatal Depression Scale (EPDS) total
score^LN|||20240527101500||||||||DR_PATEL^ANNA^MD|||||F|||

OBX|1|NM|71354-5^Edinburgh Postnatal Depression Scale (EPDS) total
score^LN||14|||||F|||20240527102000|||DR_PATEL^ANNA^MD|

DG1|2||Z71.82^Counseling on health without a specified
diagnosis^ICD10|||||A|||20240527|

NTE|1||Patient screened positive for perinatal depression with an EPDS
score of 14. A referral for mental health counseling was documented.
```

9.4.3. Explanation of Key Fields

- **MSH** (Message Header): Standard segment identifying the message’s origin, destination, and type
  - » MSH.4 (Sending Facility): EHR_SYSTEM
  - » MSH.9 (Message Type): ORU^R01 (Observation Result - Unsolicited)
  - » MSH.10 (Message Control ID): MSG54321 (A unique message identifier)
- **PID** (Patient Identification): Provides the patient’s demographic information
  - » PID.3 (Patient Identifier List): PATIENTID999 (The unique member ID)
  - » PID.5 (Patient Name): GARCIA^MARIA^E

- PID.7 (Date of Birth): 19960305
- PID.8 (Administrative Sex): F (Female)

- **PV1** (Patient Visit): Details the patient's encounter or visit
  - PV1.2 (Patient Class): O (Outpatient)
  - PV1.7 (Attending Doctor): DR_PATEL^ANNA^MD
  - PV1.19 (Visit Number): VISIT_PDS_20240527 (A unique encounter identifier)
- **DG1** (Diagnosis) | 1: Reports the patient's pregnancy status, which is a key part of the PDS-E measure's denominator
  - DG1.2 (Diagnosis Coding Method): ICD10
  - DG1.3 (Diagnosis Code): Z33.1^Pregnant state, incidental^ICD10. This ICD-10-CM code establishes the patient's pregnancy status.
  - DG1.5 (Diagnosis Date/Time): 20240527 (The date the pregnancy was confirmed or documented in the chart)
- **OBR** (Observation Request): Acts as a header for a group of observations; identifies the overall assessment performed
  - OBR.4 (Universal Service Identifier): 71354-5^EPDS total score^LN. This LOINC code specifies that the observation group is related to the EPDS assessment.
  - OBR.7 (Observation Date/Time): 20240527101500 (The date/time the assessment was started)
- **OBX** (Screening Outcome): This segment reports the direct numeric score from the EPDS. A score of 14 is a positive finding, satisfying the screening criteria.
  - OBX.2 (Value Type): NM (Numeric), indicating the value is a number
  - OBX.3 (Observation Identifier): 71354-5^ EPDS total score^LN. This is the LOINC code for the total score of the EPDS.
  - OBX.5 (Observation Value): 14 (The patient's numeric score, which is a positive screen)
- **DG1** (Diagnosis) | 2: This second diagnosis segment documents the counseling provided, which satisfies the follow-up portion of the measure.
  - DG1.2 (Diagnosis Coding Method): ICD10
  - DG1.3 (Diagnosis Code): Z71.82^Counseling on health without a specified diagnosis^ICD10. This ICD-10-CM code is part of the "Behavioral Health Encounter Value Set" and documents the counseling/follow-up action.
- **NTE** (Notes and Comments): Provides additional, human-readable context for the observations or procedures

» NTE.3: "Patient screened positive for perinatal depression with an EPDS score of 14. A referral for mental health counseling was documented." (A textual description of the clinical activity)

10. DATA STANDARDS

This section details the recommended data elements and coding standards for HEDIS measure submissions, ensuring consistency and accuracy in reporting.

10.1. Recommended Data Elements

The following table lists key data elements for SNS-E, DSF-E, DRR-E, and PDS-E submissions, with their HL7 data types.

Data Element	Segment	Type	Optionality/Comments
Member ID	PID-3	ST	Required: Member ID (MB or SN type).
Patient Name	PID-5	XPN	Required: Last^First^Middle (e.g., Smith^John^).
Date of Birth	PID-7	TS	Required: YYYYMMDD (e.g., 19850515).
Administrative Sex	PID-8	IS	Required: F, M, or U.
Address	PID-11	XAD	Recommended: Mailing address (type M, e.g., 123 Main St^^Anytown^TX^78701^M).
Observation Identifier	OBX-3	CE	Required: SNOMED CT or LOINC (e.g., 423100009^Food insecurity^SCT).
Universal Service ID	OBR-4	CE	Required: CPT code (e.g., 96160^SDOH Screening^C4).
Observation Value	OBX-5	*	Required: Screening result (e.g., Y for positive).
Observation Date	OBR-7	TS	Required: YYYYMMDD (e.g., 20250527).
Result Status	OBR-25	ID	Required: F (Final).
Ordering Provider	OBR-16	XCN	Recommended: Provider NPI (e.g., 7583493848^Randolph^James^^^^NPI).
Comments	NTE-3	FT	Optional: Notes (e.g., Referred to community food bank).

10.2. Coding Standards

Adherence to the following coding standards is essential for accurate HEDIS reporting:

- LOINC: Screenings (e.g., 88121-7 for food insecurity, 44261-1 for PHQ-9)
- SNOMED CT: interventions (e.g., 46148100024102 referral to peer support)

- CPT: Procedures (e.g., 96160 for SDOH screening, 96127 for behavioral health screening) *Source:* **NCQA HEDIS Value Set Directory**.

*See **Attachment B** and **Attachment C** for 2025 HEDIS Value Set Directories specific to CBH-required screenings.*

11. SUPPORT AND TROUBLESHOOTING

This section provides guidance on common issues and answers frequently asked questions to assist providers in successfully submitting HL7 data.

11.1. Common Issues and Troubleshooting

Common Issue	Troubleshooting
Invalid Codes	Verify against NCQA Value Set Directory.
Missing Segments	Ensure FHS, BHS, MSH, PID, OBR, OBX are included.
SFTP Errors	Confirm credentials and file naming.
Validation Failures	Use HAPI HL7v2 or HL7 Inspector.
Delimiter Errors	Ensure |, ^, &, \ are used correctly.
Incorrect Data Types	Sending a string where a numeric value is expected, or vice-versa
Outdated Codes	Using old or incorrect SNOMED CT or CPT codes. Regularly update code sets and communicate changes
Date/Time Format Issues	HL7 timestamps (TS) require YYYYMMDD[HHMM[SS[.SSSS]]] format. Inconsistent formats are a common source of errors.
Character Encoding	Ensure consistent character encoding (e.g., UTF-8) across systems to avoid garbled text.
Missing Patient Context	Ensure PID and PV1 segments are complete and accurately reflect the patient and encounter associated with the observations.
Ambiguous Observation Identifiers (OBX.3)	Use specific LOINC or SNOMED CT codes for observation identifiers to clearly define what is being measured. Avoid generic local codes if a standard exists.
Misuse of OBX.5 (Observation Value)	Ensure the value type (OBX.2) matches the content of OBX.5. If OBX.5 is a coded element, it should follow the CODE^TEXT^CODING_SYSTEM format.

11.2. Frequently Asked Questions

1. **Why use FHS/BHS/BTS/FTS?**

   They organize and validate batch submissions, ensuring no data is lost in multi-patient or multi-measure files.

2. **Can I use alternative header segments?**

   FHS and BHS are standard for HL7 Version 2.5.1 batch processing. Alternatives (e.g., FHIR, CDA) are incompatible without significant system changes—contact support for guidance.

3. **What if my EHR uses an older HL7 version?**

   Versions 2.2-2.4 may be accepted; contact support.

4. **How do I get a Submitter ID?**

   Request via support@cbh.org.

5. **What file format is required?**

   Plain text with HL7 delimiters (|, ^, &, \), zipped with AES-256 encryption.

APPENDIX A: RELEVANT HL7 DATA TYPES AND TABLE VALUES (EXAMPLES)

This appendix provides a brief overview of common HL7 data types and example table values that are frequently used in the context of clinical observations and patient demographics.

Common HL7 Data Types:

Data Type	Description	Example
ST	String Data	Patient expressed concerns.
NM	Numeric	15
TS	Time Stamp	20240527103000 (YYYYMMDDHHMMSS)
CE	Coded Element (Code, Text, Coding System)	80242007^Food insecurity (finding)^SNOMEDCT
ID	Coded Value for HL7 Defined Tables	F (for Final Result Status)
IS	Coded Value for User Defined Tables	MRN (for Identifier Type Code)
XPN	Extended Person Name (Last^First^Middle)	DOE^JANE^A
XAD	Extended Address (Street^City^State^Zip^Country)	123 MAIN ST^^ANYTOWN^MN^55123^USA
XTN	Extended Telecommunication Number (Phone Number)	555-123-4567

Example Table Values (for HL7-defined fields):

- MSH.11 - Processing ID (ID):
    - P: Production
    - T: Training
    - D: Debugging
- MSH.12 - Version ID (ID):
    - 2.5.1 (or other agreed-upon HL7 version)
- PID.8 - Administrative Sex (ID):
    - M: Male
    - F: Female
    - U: Unknown

  - O: Other
  - A: Ambiguous
  - N: Not Applicable
- PV1.2 - Patient Class (ID):
  - I: Inpatient
  - O: Outpatient
  - E: Emergency
  - R: Recurring
- OBR.25 / OBX.11 - Result Status (ID):
  - F: Final results
  - P: Preliminary results
  - C: Corrected results
  - X: Cancelled results
  - D: Deleted results

APPENDIX B: REFERENCES AND FURTHER READING

- **HL7 International**: Official website for HL7 standards and documentation
  - **HL7 v2.x Messaging Standard Documentation**: For detailed segment and field definitions, refer to the specific version of the HL7 v2.x standard being implemented.
- **NCQA**: Official source for HEDIS measure specifications
- **SNOMED International**: Official website for SNOMED CT
- **American Medical Association (AMA)**: Source for CPT codes
- **LOINC (Logical Observation Identifiers Names and Codes)**: Official website for LOINC
- **CBH Provider Bulletin 25-26**, released on August 1, 2025

ATTACHMENT A: IPSWITCH REQUEST FORM

Dear Provider:

Thank you for choosing to securely exchange files with Community Behavioral Health. When filled out, this document allows you to formally request access to our secure file transfer server.

Our server currently supports two primary secure protocols: HTTPS and FTP over SSH. Additionally, we can accommodate FTP over SSL – please contact us if this is your preferred method. While your files are resident on our server, we use 256-bit, FIPS 140-2 validated AES encryption to protect your files from unauthorized use, theft, hacking and/or viewing. Additionally, depending on the client you choose, you may be able to take advantage of the file integrity and transfer resume features which are native to our multi-protocol file transfer server.

Please fill out the sections below with as much information as you can provide.

Identification

Contact Name		Organization Name	
CBH Parent ID		Provider Number(s) *(n/a for Provider Claims)*	
Provider Location		Contact Job Title	
Contact Phone		Contact Email Address	

Purpose of Connection

Access to submit the following (please select):	☐ HL7 Files

Optional:

Restrict Access to IP(s)/Host(s):	
Primary Organizational Contact (if other):	

Preferred Protocol and Client

You have your choice of protocols when using our server. You may opt to use more than one protocol and/or client with the same set of credentials, as all protocols access the same virtual filesystem on our secure server.

Please tell us which protocols and/or clients you plan to use with our service.

Preferred Protocol(s):	☐ HTTPS ☐ FTP over SSH ☐ Don't Know

Preferred Secure Transfer Client(s):

Name:		Version:		OS:	
Name:		Version:		OS:	
Name:		Version:		OS:	

☐ Don't Know

Secure Transfer Confidentiality Agreement

I attest that I am authorized to set up secure transmissions on behalf on my organization. I promise to keep any credentials (including username and password) provided to me by Community Behavioral Health secret and well-protected. I understand that shared accounts are not allowed on this server. I further accept that transmissions made using these credentials will be treated in every way as being performed by me and/or my organization.

Authorized Signature: ______________________ Date: __________

Print Name and Title: ______________________

For additional information, please contact **CBH.FileTransfer@phila.gov**.

ATTACHMENT B: CODE DEFINITIONS

The tables below provide a crosswalk of each LOINC, SNOMED, HCPCS, or CPT code that is required for the performance measure and a brief description of the code.

LOINC Codes

Performance Measure	LOINC Code	Description
DSF-E DRR-E PDS-E	44261-6	Code "Patient Health Questionnaire 9 item (PHQ-9) total score [Reported]": '44261-6' from "LOINC" display 'Patient Health Questionnaire 9 item (PHQ-9) total score [Reported]'
PDS-E	71354-5	Code "Edinburgh Postnatal Depression Scale [EPDS]": '71354-5' from "LOINC" display 'Edinburgh Postnatal Depression Scale [EPDS]'

Social Needs Screening Tools LOINC Crosswalk

AHC HRSN Screening Tool

Category	Question	Response	LOINC Code
Completion of Screening	N/A	N/A	96777-8
Housing Instability	1. What is your living situation today?	Completion of Question	71802-3
		I have a steady place to live.	LA31993-1
		I have a place to live today, but I am worried about losing it in the future.	LA31994-9
		I do not have a steady place to live (I am temporarily staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, abandoned building, bus or train station, or in a park).	LA31995-6
Housing Inadequacy	2. Think about the place you live. Do you have problems with any of the following?	Completion of Question	96778-6
		Pests such as bugs, ants, or mice	LA31996-4
		Mold	LA28580-1
		Lead paint or pipes	LA31997-2
		Lack of heat	LA31998-0
		Oven or stove not working	LA31999-8

Category	Question	Response	LOINC Code
		Smoke detectors missing or not working	LA32000-4
		Water leaks	LA32001-2
		None of the above	LA9-3
Food Insecurity	3. Within the past 12 months, you worried that your food would run out before you got money to buy more?	Completion of Question	88122-7
		Often true	LA28397-0
		Sometimes true	LA6729-3
		Never true	LA28398-8
		DK or Refused	LA30968-4
	4. Within the past 12 months, the food you bought just didn't last and you didn't have money to get more.	Completion of Question	88123-5
		Often true	LA28397-0
		Sometimes true	LA6729-3
		Never true	LA28398-8
		DK or Refused	LA30968-4
Transportation Insecurity	5. In the past 12 months, has lack of reliable transportation kept you from medical appointments, meetings, work, or from getting things needed for daily living?	Completion of Question	93030-5
		Yes	LA33-6
		No	LA32-8
Utilities	6. In the past 12 months has the electric, gas, oil, or water company threatened to shut off services in your home?	Completion of Question	96779-4
		Yes	LA33-6
		No	LA32-8
		Already shut off	LA32002-0
Safety	7. How often does anyone, including family and friends, physically hurt you?	Completion of Question	95618-5
		Never	LA6270-8
		Rarely	LA10066-1
		Sometimes	LA10082-8
		Fairly often	LA16644-9
		Frequently	LA6482-9

Category	Question	Response	LOINC Code
	8. How often does anyone, including family and friends, insult or talk down to you?	Completion of Question	95617-7
		Never	LA6270-8
		Rarely	LA10066-1
		Sometimes	LA10082-8
		Fairly often	LA16644-9
		Frequently	LA6482-9
	9. How often does anyone, including family and friends, threaten you with harm?	Completion of Question	95616-9
		Never	LA6270-8
		Rarely	LA10066-1
		Sometimes	LA10082-8
		Fairly often	LA16644-9
		Frequently	LA6482-9
	10. How often does anyone, including family and friends, scream or curse at you?	Completion of Question	95615-1
		Never	LA6270-8
		Rarely	LA10066-1
		Sometimes	LA10082-8
		Fairly often	LA16644-9
		Frequently	LA6482-9

PRAPARE Screening Tool

Category	Question	Response	LOINC Code
Completion of Screening	N/A	N/A	93025-5
Personal Characteristics	1. Are you Hispanic or Latino?	Completion of Question	56051-6
		Yes	LA33-6
		No	LA32-8
		I choose not to answer this question.	LA30122-8

Category	Question	Response	LOINC Code
	2. Which race(s) are you?	Completion of Question	32624-9
		Asian	LA6156-9
		Native Hawaiian	LA14045-1
		Pacific Islander	LA30187-1
		Black/African American	LA14042-8
		White	LA4457-3
		American Indian/Alaskan Native	LA4-4
		Other (Please write)	LA46-8
		I choose not to answer this question.	LA30122-8
	3. At any point in the past 2 years, has season or migrant farm work been your or your family's main source of income?	Completion of Question	93035-4
		Yes	LA33-6
		No	LA32-8
		I choose not to answer this question.	LA30122-8
	4. Have you been discharged from the armed forces of the United States?	Completion of Question	93034-7
		Yes	LA33-6
		No	LA32-8
		I choose not to answer this question.	LA30122-8
	5. What language are you most comfortable speaking?	Completion of Question	54899-0
		English	LA43-5
		Language other than English (Please write)	LA30188-9
		I choose not to answer this question.	LA30122-8
Family and Home	6. How many family members, including yourself, do you currently live with?	Completion of Question	63512-8
		#	# of Units
Housing Instability	7. What is your housing situation today?	Completion of Question	71802-3
		I have housing.	LA30189-7
		I do not have housing (staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a care, or in a park).	LA30190-5

Category	Question	Response	LOINC Code
		I choose not to answer this question.	LA30122-8
	8. Are you worried about losing your housing?	Completion of Question	93033-9
		Yes	LA33-6
		No	LA32-8
		I choose not to answer this question.	LA30122-8
	9. What address do you live at?	Completion of Question	56799-0
Money and Resources	10. What is the highest level of school that you have finished?	Completion of Question	82589-3
		Less than high school degree	LA30191-3
		High school diploma or GED	LA30192-1
		More than high school	LA30193-9
		I choose not to answer this question.	LA30122-8
	11. What is your current work situation?	Completion of Question	67875-5
		Unemployed	LA17956-6
		Part-time or temporary work	LA30138-4
		Full-time work	LA30136-8
		Otherwise unemployed but not seeking work (e.g., student, retired, disabled, unpaid primary caregiver) (Please write)	LA30137-6
		I choose not to answer this question.	LA30122-8
	12. What is your main insurance?	Completion of Question	76437-3
		None/uninsured	LA30194-7
		Medicaid	LA17849-3
		CHIP Medicaid	LA30195-4
		Medicare	LA15652-3
		Other public insurance (not CHIP)	LA30196-2
		Other public insurance (CHIP)	LA30197-0
		Private Insurance	LA6350-8
	13. During the past year, what was the total combined income for you	Completion of Question	63586-2

Category	Question	Response	LOINC Code
	and the family members you live with? This information will help us determine if you are eligible for any benefits.		
Food Insecurity	14. In the past year, have you or any family members you live with been able to get any of the following when it was really needed? Check all that apply.	Completion of Question	93031-3
	Food	Yes	LA30125-1
		No	N/A
		I choose not to answer this question.	LA30122-8
Transportation Insecurity	15. Has lack of transportation kept you from medical appointments or from getting my medications?	Completion of Question	93030-5
		Yes, it has kept me from medical appointments or from getting my medications.	LA30133-5
		Yes, it has kept me from non-medical meetings, appointments, work, or from getting things that I need.	LA30134-3
		No	LA32-8
		I choose not to answer this question.	LA30122-8
Social and Emotional Health	16. How often do you see or talk to people that you care about and feel close to? (For example: talking to friends on the phone, visiting friends or family, going to church or club meetings)	Completion of Question	93029-7
		Less than once a week	LA27722-0
		1 or 2 times a week	LA30130-1
		3 to 5 times a week	LA30131-9
		5 or more times a week	LA30132-7
		I choose not to answer this question.	LA30122-8
	17. Stress is when someone feels tense, nervous, anxious, or can't sleep at night because their mind is troubled. How stressed are you?	Completion of Question	93038-8
		Not at all	LA6568-5
		A little bit	LA13863-8
		Somewhat	LA13909-9
		Quite a bit	LA13902-4
		Very much	LA13914-9

Category	Question	Response	LOINC Code
		I choose not to answer this question.	LA30122-8
Optional Additional Questions	18. In the past year, have you spent more than 2 nights in a row in a jail, prison, detention center, or juvenile correctional facility?	Completion of Question	93028-9
		Yes	LA33-6
		No	LA32-8
		I choose not to answer this question.	LA30122-8
	19. Are you a refugee?	Completion of Question	93027-1
		Yes	LA33-6
		No	LA32-8
		I choose not to answer this question.	LA30122-8
	20. Do you feel physically and emotional safe where you currently live?	Completion of Question	93026-3
		Yes	LA33-6
		No	LA32-8
		Unsure	LA14072-5
		I choose not to answer this question.	LA30122-8

CPT Codes

Performance Measure	Value Set Name	Code	Definition
SNS-E	➡ Food Insecurity Procedures ➡ Housing Instability Procedures ➡ Inadequate Housing Procedures ➡ Homelessness Procedures	96156	A health behavior assessment or re-assessment conducted through a health-focused clinical interview, behavioral observations, and clinical decision-making
SNS-E	➡ Food Insecurity Procedures ➡ Housing Instability Procedures ➡ Inadequate Housing Procedures ➡ Homelessness Procedures	96160	Administration of a patient-focused health risk assessment instrument with scoring and documentation, using a standardized instrument
SNS-E	➡ Food Insecurity Procedures ➡ Housing Instability Procedures ➡ Inadequate Housing Procedures ➡ Homelessness Procedures	96161	Administration of a caregiver-focused health risk assessment instrument, such as depression inventory, for the benefit of the patient

Performance Measure	Value Set Name	Code	Definition
SNS-E	➡ Food Insecurity Procedures	97802	Medical Nutrition Therapy; initial assessment and intervention, individual, face-to-face with the patient, each 15 minutes
SNS-E	➡ Food Insecurity Procedures	97803	Medical Nutrition Therapy; re-assessment and intervention, individual, face-to-face with the patient, each 15 minutes
SNS-E	➡ Food Insecurity Procedures	97804	Group Medical Nutrition Therapy sessions that last 30 minutes

HCPCS Codes

Performance Measure	Value Set Name	Code	Definition
SNS-E	Food Insecurity Procedures	S5170	Home delivered meals, including preparation; per meal (S5170)
SNS-E	Food Insecurity Procedures	S9470	Nutritional counseling, dietitian visit (S9470)
CMS #504	N/A	M1350	Patients who had a completed suicide safety plan initiated, reviewed, or updated in collaboration with their clinician (concurrent or within 24 hours) of the index clinical encounter
CMS #504	N/A	M1351	Patients who had a suicide safety plan initiated, reviewed, or updated in collaboration with the patient and their clinician concurrent or within 24 hours of clinical encounter and within 120 days after initiation
CMS #504	N/A	M1352	Suicidal ideation and/or behavior symptoms based on the C-SSRS or equivalent assessment
CMS #504	N/A	M1353	Patients who did not have a completed suicide safety plan initiated, reviewed, or updated in collaboration with the patient and their clinician concurrent or within 24 hours of clinical encounter and within 120 days after initiation
CMS #504	N/A	M1354	Patients who did not have a suicide safety plan initiated, reviewed, or updated or reviewed and updated in collaboration with the patient and their clinician concurrent or within 24 hours of clinical encounter and within 120 days after initiation
CMS #504	N/A	M1355	Suicide risk based on their clinician's evaluation or a clinician-rated tool
CMS #504	N/A	M1356	Patients who died during the measurement period

ATTACHMENT C: SNOMED CODES FOR SNS-E INTERVENTIONS

- **SNOMED Codes for SNS-E Interventions** *(downloadable xlsx spreadsheet)*