Quality Improvement Organizations
Sharing Knowledge. Improving Health Care.
CENTERS FOR MEDICARE & MEDICAID SERVICES

SUPERIOR HEALTH
Quality Alliance

Encyclopedia of Measures (EOM)
QIN-QIO 13 Scope of Work
Setting: Nursing Home

Last updated 10/29/2025

Contents

Aim: Advancing Healthcare Quality Through Technology

Percentage of Nursing Homes Advancing Readiness Tiers in the Advancing Health Care Quality Through Technology (AHQT) Pilot

Measure Name	Percentage of nursing homes in the pilot advancing AHQT Readiness tiers
Measure Identifier	nh_ahqt_advancement
Sub Aim	Advancing access and use of Health IT and interoperability for improving quality and outcomes
Numerator	Number of Tier 1 (Basic Technology) nursing homes in the pilot that advance to Tier 2 (Interoperability Adopter)
Denominator	Number of nursing homes in the pilot AHQT with a baseline Readiness of Tier 1
Inclusions/Exclusions	N/A
Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	As a Quality Improvement Organization (QIO), we're assessing facilities' readiness to electronically access, share, and use data for quality improvement and reporting. This AHQT Readiness Assessment places providers into one of four Technical Readiness Tiers (0–3), helping us tailor support based on your current systems and infrastructure. The assessment includes foundational, technical, administrative, and operational questions. The QIO team will share more details.
Data source(s)	QIO AHQT Readiness Assessment
Evaluator(s)	QIO
Evaluation period	To Be Determined
Target	90% of Tier 1 (Basic Technology) providers' practices in the pilot advance to Tier 2 (Interoperability Adopter)
Additional Notes	AHQT Readiness will be reassessed annually.

Aim: Behavioral Health

Percent of Residents Who Have Depressive Symptoms (Long-stay)

Measure Name	Percent of Residents Who Have Depressive Symptoms (Long-stay)
Measure Identifier	nh_resident_depression
Sub Aim	Depression and Suicide
Numerator	Long-stay residents with a selected target assessment where depressive symptoms are indicated.
Denominator	All long-stay residents with a selected target assessment, except those with exclusions.
Inclusions/Exclusions	Denominator Exclusion: 1. Resident is comatose or comatose status is missing (B0100 = [1, -]). 2. Resident is not included in the numerator (the resident did not meet the depression symptom conditions for the numerator) AND both of the following are true: a. D0200A2 = [^, -] OR D0200B2 = [^, -] OR D0300 = [99, -, ^]. b. D0500A2 = [^, -] OR D0500B2 = [^, -] OR D0600 = [-, ^].
Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	Numerator: Either of two conditions must be met. CONDITION A (The resident mood interview must meet Part 1 and Part 2 below) PART 1: Little interest or pleasure in doing things half or more of the days over the last two weeks (D0200A2 = [2, 3]). or Feeling down, depressed, or hopeless half or more of the days over the previous two weeks (D0200B2 = [2, 3]). PART 2: The resident interview total severity score indicates the presence of depression (D0300 [10] and D0300 [27]). CONDITION B: (The staff assessment of resident mood must meet Part 1 and Part 2 below) PART 1: Little interest or pleasure in doing things half or more of the days over the last two weeks (D0500A2 = [2, 3]). or Feeling or appearing down, depressed, or hopeless half or more of the days over the last two weeks (D0500B2 = [2, 3]). PART 2: The staff assessment total severity score indicates the presence of depression (D0600 [10] and D0600 [30]).
CMS Measures Inventory Tool (CMIT) ID	522 - Percent of Residents Who Have Depressive Symptoms (LS) - Active (00522-01-C- NHQI)
Data source(s)	Minimum Data Set (MDS)

Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Reduce by 30% (Relative Improvement Rate)
Additional Notes	N/A

Aim: Care Coordination

Readmissions to Hospitals from skilled nursing facility (SNF) (short-stay)

Measure Name	Readmissions to Hospitals from SNF (short-stay)
Measure Identifier	nh_readmissions
Sub Aim	Readmissions to Hospitals from SNF
Numerator	The numerator includes nursing home stays for beneficiaries who: a) Met the inclusion and exclusion criteria for the denominator; AND b) Were admitted to a hospital for an inpatient stay or outpatient observation stay within 30 days of entry/reentry to the nursing home, regardless of whether they were discharged from the nursing home before the hospital readmission. Note that inpatient hospitalizations and observation stays are identified using Medicare claims; AND c) The hospital readmission did not meet the definition of a planned hospital readmission (identified using principal discharge diagnosis and procedure codes on Medicare claims for the inpatient stay).
Denominator	Included in the measure are stays for residents who: a) Entered or reentered the nursing home within 1 day of discharge from an inpatient hospitalization (Note that inpatient rehabilitation facility and long-term care hospitalizations are not included). These hospitalizations are identified using Medicare Part A claims; AND b) Entered or reentered the nursing home within the target 12-month period.
Inclusions/Exclusions	**Short-stay** residents are excluded if: a) The resident did not have Fee-for-Service Parts A and B Medicare enrollment for the entire risk period (measured as the month of the index hospitalization and the month after the month of discharge from the nursing home); OR b) The resident was ever enrolled in hospice care during their stay; OR c) The resident was comatose (B0100 = [01]) or missing data on comatose on the first Minimum Data Set (MDS) assessment after the start of the stay; OR d) Data were missing for any of the claims or MDS items used to construct the numerator or denominator; OR e) The resident did not have an initial MDS assessment to use in constructing covariates for risk-adjustment.

Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	N/A
CMS Measures Inventory Tool (CMIT) ID	548 – Percentage of Short-Stay Residents Who Were Re-Hospitalized after a Nursing Home Admission.
Data source(s)	Medicare Fee-for-Service Claims, MDS
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Reduce by 10% (Relative Improvement Rate)
Additional Notes	N/A

ED Visits Among Short-stay and Long-stay Nursing Home Residents

Measure Name	ED Visits Among Short-stay (SS) and Long-stay (LS) Nursing Home Residents
Measure Identifier	nh_ed_visits
Sub Aim	ED Utilization
Numerator	**(SS)** Nursing home stays for beneficiaries who: a) Met the inclusion and exclusion criteria for the denominator; AND b) Were admitted to an emergency department within 30 days of entry/reentry to the nursing home, regardless of whether they were discharged from the nursing home before the emergency department visit. Outpatient emergency department visits are identified using Medicare Part B claims; AND c) were not admitted to a hospital for an inpatient stay or observation stay immediately after the visit to the emergency department. Inpatient and observation stays are identified using Medicare Parts A and B claims. **(LS)** All ED visits for Medicare beneficiaries who: a) met the inclusion criteria for the denominator; AND b) had an outpatient (Medicare Part B) claim with revenue codes (0450, 0451, 0452, 0456,0459, 0981) for an ED visit while they were residing in the nursing home and not enrolled in hospice; AND c) where the 'through' date on the outpatient claim for the ED visit was not equal to the 'from' date on an outpatient claim for an observation stay or an inpatient (Medicare Part A) claim for a hospitalization.
Denominator	**(SS)** Included in the measure are stays for residents who: a) Entered or reentered the nursing home within 1 day of discharge from an inpatient hospitalization (Note that inpatient rehabilitation facility and long-term care hospitalizations are not included). These hospitalizations are identified using Medicare Part A claims; AND b) entered or reentered the nursing home within the 12-month target period **(LS)** The sum of all long-stay days in the target period, divided by 1,000. A long-stay day is any day after a resident's one-hundredth cumulative day in the nursing home or the beginning of the 12-month target period (whichever is later) and until the day of discharge, the day of death, or the end of the 12-month target period (whichever is earlier).

Inclusions/Exclusions	**(SS)** Short-stay residents are excluded if: a) The resident did not have Fee-for-Service Parts A and B Medicare enrollment for the entire risk period (measured as the month of the index hospitalization and the month after the month of discharge from the nursing home); OR b) The resident was ever enrolled in hospice care during their stay; OR c) The resident was comatose (B0100 =[01]) or missing data on comatose on the first Minimum Data Set (MDS) assessment after the start of the stay; OR d) Data were missing for any of the claims or MDS items used to construct the numerator or denominator; OR e) The resident did not have an initial MDS assessment to use in constructing covariates for risk-adjustment. **(LS)** Long-stay residents meeting any of the following criteria are excluded: b) the resident was not a Medicare beneficiary or the resident was enrolled in Medicare managed care during any portion of the stay, i.e. between admission and discharge or the end of the target period (whichever is earlier); Long-stay days meeting any of the following criteria are excluded: c) the resident was enrolled in hospice care; d) the resident was not in the nursing home for any reason during the episode, including days admitted to an inpatient facility or other institution, or days temporarily residing in the community.
Rate calculation	**(SS)** Numerator / Denominator X 100% **(LS)** Numerator / Denominator X 100%
Specifications/definitions	N/A
CMS Measures Inventory Tool (CMIT) ID	547 - Percentage of short-stay residents who have had an outpatient emergency department (ED) visit. - Active (00547- 01-C-NHQI). 472 - Number of outpatient emergency department (ED) visits per 1,000 long-stay resident days. - Active (00472-01- C-NHQI).
Data source(s)	Medicare Fee-for-Service Claims, MDS
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Reduce by 25% (Relative Improvement Rate)
Additional Notes	N/A

Aim: Patient Safety

Skilled Nursing Facility Healthcare-Associated Infections Requiring Hospitalization (short-stay residents only)

Measure Name	Skilled Nursing Facility (SNF) Healthcare-Associated Infections (HAI) Requiring Hospitalization (short-stay residents only)
Measure Identifier	nh_hai_hospitalization
Sub Aim	Infection Prevention and Control
Numerator	HAIs are identified using the principal diagnosis code and the Present on Admission (POA) indicators on the rehospitalization claim within a specified incubation window. The HAI definition applies a 14-day repeat infection timeline to exclude pre-existing infections from the numerator count.
Denominator	Medicare Part A Fee-for-Service (FFS) SNF stays that were admitted during the measure time period.
Inclusions/Exclusions	The eligible stays for this measure are all Medicare FFS SNF stays that do not meet the exclusion criteria during the measurement period. Residents who died during the SNF stay or during the post-discharge window (three days after SNF discharge) and residents with a missing discharge date (or have "active" SNF stays) are included in the denominator. SNF stays are **excluded** from the denominator if they meet one or more of the following criteria: • Resident is less than 18 years old at the time of SNF admission. • The SNF length of stay was shorter than four days. • Residents who were not continuously enrolled in Part A FFS Medicare during the SNF stay, 12 months before the measure period, and three days after the end of the SNF stay. • Residents who did not have a Part A short-term acute care hospital stay within 30 days before the SNF admission date. The short-term stay must have a positive payment and a positive length of stay. • Residents who were transferred to a federal hospital from the SNF, as determined by the discharge status code on the SNF claim. • Residents who received care from a provider located outside of the United States, Puerto Rico, or a U.S. territory, as determined from the first two characters of the SNF CMS Certification Number.

	• SNF stays in which data were missing on any variable used in the measure construction or risk adjustment. This also includes stays where Medicare did not pay for the stay, which is identified by a non-positive payment on the SNF claim.
Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	Numerator specifications: The repeat infection timeline is defined as the number of days between inpatient stays, which is calculated by taking the difference between the discharge date of the most proximal IP stay before SNF admission and the admission date of the readmitting IP stay. Pre-existing infections are determined using all of the diagnosis codes on the prior IP claim immediately preceding the SNF admission. The pre-existing infection recorded in the prior proximal hospitalization must be a diagnosis that is related to the HAI recorded in the rehospitalization. If the number of days between the rehospitalization and the prior proximal hospitalization is less than 14 days and a pre-existing infection is recorded in any of the diagnosis codes for the prior IP stay, then the HAI is excluded from the numerator. A list of principal diagnoses codes is found in "Skilled Nursing Facility Healthcare-Associated Infections Requiring Hospitalization for the Skilled Nursing Facility Quality Reporting Program, Appendix 5: ICD-10 codes for Identifying Skilled Nursing Facility Healthcare-Associated Infections Requiring Hospitalization", February 2021, at https://www.cms.gov/files/document/snf-hai-technical-report.pdf.
CMS Measures Inventory Tool (CMIT) ID	680 - Skilled Nursing Facility Healthcare- Associated Infections Requiring Hospitalization - Active (00680-01-C- SNFQRP). The number of stays with an HAI acquired during SNF care and resulting in an inpatient hospitalization. This measure is risk-adjusted.
Data source(s)	Medicare Part A Claims
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Reduce by 20% (Relative Improvement Rate)
Additional Notes	N/A

Adverse Drug Events Among Medicare Beneficiaries in Nursing Homes

Measure Name	Adverse Drug Events Among Medicare Beneficiaries in Nursing Homes
Measure Identifier	nh_ade_highrisk
Sub Aim	Adverse Drug Events (ADE)
Numerator	Short-stay **(SS)** Emergency department (ED) visits, observation stay, and inpatient hospital stays with ICD-10 codes indicating an adverse drug event, among those eligible for denominator. Long-stay **(LS)** Utilization of ED, observation stays, and inpatient hospitalizations with ICD-10 codes indicating an adverse drug event, among those eligible for denominator.
Denominator	**(SS)** Number of nursing home residents prescribed at least one medication (see Appendix A for lists of anticoagulant, diabetes, and opioid medications) during the measurement period within enrolled nursing homes. To be included in the denominator, nursing home residents must be Medicare beneficiaries. (**LS)** Number of nursing home residents prescribed at least one medication (see Appendix A for lists of anticoagulant, diabetes, opioid medications) during the measurement period within enrolled nursing homes. To be included in the denominator, nursing home residents must be Medicare beneficiaries.
Inclusions/Exclusions	(**SS) Numerator Inclusions** • ED visits, observation stays, and inpatient admissions at short-term hospitals, critical access hospitals, and inpatient psychiatric hospitals and units with a discharge date during the reporting time period; • An admission date during the reporting time period and in the period from the day after entry to the nursing home through the day of discharge among short stays contributing to the denominator; • See Appendix B: first-listed/principal diagnosis code for a drug-specific anticoagulant, antidiabetic, or opioid specific ADE or with a first-listed/principal diagnosis code for a non-drug-specific anticoagulant, antidiabetic, or opioid ADE with the admission date in the date range beginning on the respective anticoagulant, antidiabetic, or opioid prescription fill date and ending on the prescription fill date plus the days' supply minus 1 (an ADE should only be counted once). **(SS) Denominator Inclusions**

	• Short stays with an entry date within the reporting time period • Medicare beneficiaries with a stand-alone (S) drug plan with anticoagulant, antidiabetic, or opioid prescription(s) filled during the reporting time period or the date range beginning on the prescription fill date and ending on the prescription fill date plus the days' supply minus 1 includes any days in the reporting time period. • Short stays for beneficiaries having Fee-for-Service (FFS) Part A and B coverage for all of the days of the stay within the reporting time period. **(SS) Exclusions** are short stays for beneficiaries receiving hospice care on any days during the reporting time period and short stays where the entry date is the same as the discharge date. **(LS) Numerator Inclusions** • ED visits, observation stays, and inpatient admissions at short-term hospitals, critical access hospitals, and inpatient psychiatric hospitals and units with a discharge date during the reporting time period. • ED visits, observation stays, and inpatient admissions with an admission date during the reporting time period, and on a long-stay resident day contributing to the denominator, or the day of discharge from the stay contributing to the long-stay resident days. • ED visits, observation stays, and inpatient admissions with a first-listed/principal diagnosis code for a drug-specific anticoagulant, antidiabetic, or opioid specific ADE, or with a first-listed/principal diagnosis code for a non-drug-specific anticoagulant, antidiabetic, or opioid ADE, with the admission date in the date range beginning on the respective anticoagulant, antidiabetic, or opioid prescription fill date and ending on the prescription fill date plus the days' supply minus 1 (an ADE should only be counted once). See Appendix B. **(LS) Denominator Inclusions** • Long-stay resident days in the reporting time period from stays in nursing homes • Medicare beneficiaries with a stand-alone (S) drug plan with anticoagulant, antidiabetic, or opioid prescription(s) filled during the reporting time period or the date range beginning on the prescription fill date and ending on the prescription fill date plus the days' supply minus 1, includes any days in the reporting time period.

	• Long-stay resident days from stays having FFS Part A and Part B coverage for all of the long-stay resident days within the reporting time period, and FFS Part A and Part B coverage on the day of discharge from the stay contributing to the long-stay resident days when in the reporting time period. Inclusion of Medicare Advantage beneficiaries under development. **(LS) Exclusions** are long-stay resident days for beneficiaries receiving hospice care on any days during the reporting time period and long-stay resident days from stays where the entry date is the same as the discharge date
Rate calculation	**(SS)** Numerator / Denominator X 1,000 stays **(LS)** Numerator / Denominator X 100,000 resident-days
Specifications/definitions	(**SS)** Rate of nursing home short stays with an emergency department, observation, or inpatient anticoagulant, antidiabetic, or opioid adverse drug event per 1,000 short stays among Medicare beneficiaries with filled anticoagulant, antidiabetic, or opioid prescription(s). (**LS)** Rate of emergency department, observation, and inpatient anticoagulant, antidiabetic, or opioid adverse drug events per 100,000 nursing home long-stay resident days among Medicare Fee-for-Service beneficiaries with filled anticoagulant, antidiabetic, or opioid prescription(s).
Data source(s)	Medicare Part A claims; Medicare Part D claims stand-alone prescription drug plan claims; Beneficiary Information on the Cloud (BIC); FDA Drug Files; MDS
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Reduce by 40% (Relative Improvement Rate)
Additional Notes	Residents may have just one or multiple short stays, and each stay may be eligible for a numerator event. When the denominator is the number of stays, a resident with multiple stays will contribute more to the denominator than a resident with just one stay. Inclusion of Medicare Advantage beneficiaries under development.

Residents Receiving Antipsychotic Medications

Measure Name	Residents Receiving Antipsychotic Medications
Measure Identifier	nh_antipsychotic
Sub Aim	Adverse Drug Events (ADE)
Numerator	Short-stay **(SS)** residents for whom one or more assessments in a look-back scan (not including the initial assessment) indicate that an antipsychotic medication was received. Long-stay **(LS)** residents with a selected target assessment where antipsychotic medications were received.
Denominator	**(SS)** All short-stay residents who do not have exclusions and who meet all of the following conditions: 1. The resident has a target assessment, and 2. The resident has an initial assessment, and 3. The target assessment is not the same as the initial assessment. **(LS)** Long-stay nursing home residents with a selected target assessment, except those with exclusions.
Inclusions/Exclusions	**(SS)** Denominator exclusions: 1. The following is true for all assessments in the look-back scan (excluding the initial assessment): 1.1. For assessments with target dates on or after 04/01/2012: (N0410A = [-]). 2. Any of the following related conditions are present on any assessment in a look-back scan: 2.1. Schizophrenia (I6000 = [1]). 2.2. Tourette s syndrome (I5350 = [1]). 2.3. Huntington s disease (I5250 = [1]). 3. The resident's initial assessment indicates antipsychotic medication use or antipsychotic medication use is unknown: 3.1. For initial assessments with target dates on or after 04/01/2012: (N0410A = [1, 2, 3, 4, 5, 6, 7, -]). **(LS)** Denominator exclusions: 1. The resident did not qualify for the numerator and any of the following is true: 1.1. For assessments with target dates on or after 04/01/2012: (N0410A = [-]). 2. Any of the following related conditions are present on the target assessment (unless otherwise indicated): 2.1. Schizophrenia (I6000 = [1]). 2.2. Tourette s syndrome (I5350 = [1]). 2.3. Tourette's syndrome (I5350 = [1]) on the prior assessment if this item is not active on the target assessment and if a prior assessment is available. 2.4. Huntington s disease (I5250 = [1]).

Rate calculation	**(SS)** Numerator / Denominator X 100% **(LS)** Numerator / Denominator X 100%
Specifications/definitions	Antipsychotic medications received is defined as follows: 1. For assessments with target dates on or after 04/01/2012: (N0410A = [1, 2, 3, 4, 5, 6, 7]).
CMS Measures Inventory Tool (CMIT) ID	1183 - Percent of Residents Who Newly Received an Antipsychotic Medication (SS). - Active (01183- 01-C-NHQI) 526 - Percent of Residents Who Received an Antipsychotic Medication (LS). - Active (00526-01-C- NHQI)
Data source(s)	MDS
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Reduce by 75% (Relative Improvement Rate)
Additional Notes	N/A

Drug Regimen Review with Follow-up for Identified Issues (short-stay residents only)

Measure Name	Drug Regimen Review with Follow-up for Identified Issues (short-stay residents only)
Measure Identifier	nh_regimen_review
Sub Aim	Adverse Drug Events (ADE)
Numerator	The total number of Medicare Part A skilled nursing facility (SNF) Stays in the denominator meeting each of the following 2 criteria: 1. The facility conducted a drug regimen review on admission which resulted in one of the 3 following scenarios: No potential and actual clinically significant medication issues were found during the review (N2001= [0]) or potential or actual clinically significant medication issues were found during the review (N2001 = [1]) and then a physician(or physician- designee) was contacted and prescribed/recommended actions were complete by midnight of the next calendar day (N2003 =[1]) or the resident was not taking any medications (N2001= [9]). 2) Appropriate follow-up occurred each time a potential or actual clinically significant medication issue was identified during the stay (N2005=[1]); or no potential or actual clinically significant medication issues were identified since the admission or patient was not taking any medications (N2005=[9]).
Denominator	The number of Medicare Part A SNF Stays during the reporting period.
Inclusions/Exclusions	Medicare Part A SNF Stays are excluded if: 1. The resident died during the SNF stay (i.e., Type 2 SNF Stays). a. Type 2 SNF Stays are SNF stays with a PPS 5-day Assessment (A0310B = [01]) and a matched Death in Facility Tracking Record (A0310F = [12]).
Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	N/A
CMS Measures Inventory Tool (CMIT) ID	225 - Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post- Acute Care (PAC) Skilled Nursing Facility (SNF) Quality Reporting Program (QRP) - Active (00225-03-C- SNFQRP). The QIO program uses the inverse (NO review), so it is 100 - (CMIT measure).
Data source(s)	Medicare Part A claims;

	MDS
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Reduce by 50% (Relative Improvement Rate)
Additional Notes	N/A

Percent of Residents Experiencing One or More Falls with Major Injury (long-stay residents only)

Measure Name	Percent of Residents Experiencing One or More Falls with Major Injury (long-stay residents only)
Measure Identifier	nh_falls
Sub Aim	Safety Events
Numerator	Long-stay residents with one or more look-back scan assessments that indicate one or more falls that resulted in major injury, including bone fractures, joint dislocations, closed-head injuries with altered consciousness, or subdural hematoma (J1900C = [1,2]).
Denominator	All long-stay nursing home residents with one or more look-back scan assessments, except those with exclusions.
Inclusions/Exclusions	Residents are excluded if the following is true for all look-back scan assessments: 1. The number of falls with major injury was not coded (J1900C = [-]).
Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	N/A
CMS Measures Inventory Tool (CMIT) ID	520 - Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) - Active (00520- 02-C-SNFQRP); 520 - Application of Percent of Residents Experiencing One or More Falls with Major Injury (LS) - Active (00520-05-C-NHQI)
Data source(s)	MDS
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Reduce by 35% (Relative Improvement Rate)
Additional Notes	N/A

Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury

Measure Name	Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury
Measure Identifier	nh_postacute_pressure_injury
Sub Aim	Safety Events
Numerator	The number of complete resident Medicare Part A stays for which the discharge assessment indicates one or more new or worsened Stage 2-4 pressure ulcers, or unstageable pressure ulcers due to slough/eschar, non-removable dressing/device, or deep tissue injury, compared to admission.
Denominator	The number of Medicare Part A skilled nursing facility (SNF) stays in the selected time window for SNF residents ending during the selected time window, except those who meet the exclusion criteria.
Inclusions/Exclusions	1. Resident stay is excluded if data on new or worsened Stage 2, 3, 4, and unstageable pressure ulcers, including deep tissue injuries are missing at discharge; i.e., (M0300B1 = [-] or M0300B2 = [-]) and (M0300C1 = [-] or M0300C2 = [-]) and (M0300D1 = [-] or (M0300D2=[-]) and (M0300E1= [-] or M0300E2=[-]) and (M0300F1= [-] or M0300F2=[-]) and (M0300G1= [-] or M0300G2=[-]). 2. Resident stay is excluded if the resident died during the SNF stay.
Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	Staging: 1) Stage 2 (M0300B1) - (M0300B2) > 0, OR 2) Stage 3 (M0300C1) - (M0300C2) > 0, OR 3) Stage 4 (M0300D1) - (M0300D2) > 0, OR 4) Unstageable Non-removable dressing/device (M0300E1) - (M0300E2) > 0, OR 5) Unstageable Slough and/or eschar (M0300F1) - (M0300F2) > 0, OR 6) Unstageable Deep tissue injury (M0300G1) - (M0300G2) > 0.
CMS Measures Inventory Tool (CMIT) ID	121 - Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury. - Active (00121- 03-C-SNFQRP)
Data source(s)	MDS; Medicare Part A claims

Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Reduce by 20% (Relative Improvement Rate)
Additional Notes	N/A

Aim: Prevention and Chronic Disease Management

Percent of Residents or Patients Who Were Given the Seasonal Influenza Vaccine or had Medical Contraindications.

Measure Name	Percent of Residents or Patients Who Were Given the Seasonal Influenza Vaccine or had Medical Contraindications
Measure Identifier	nh_resident_influenza_vaccination
Sub Aim	Vaccinations
Numerator	Short-stay **(SS)** residents who received the influenza vaccine during the current or most recent influenza season, or were ineligible due to contraindication(s). Long-stay **(LS)** residents who received the influenza vaccine during the current or most recent influenza season, or were ineligible due to contraindication(s).
Denominator	**(SS)** All short-stay residents with a selected influenza vaccination assessment. **(LS)** All long-stay residents with a selected influenza vaccination assessment.
Inclusions/Exclusions	**(SS & LS)** Denominator exclusions: Resident's age on the target date of selected influenza vaccination assessment is 179 days or less.
Rate calculation	**(SS)** Numerator / Denominator X 100% **(LS)** Numerator / Denominator X 100%
Specifications/definitions	Residents are counted in the numerators if they meet any of the following criteria on the selected target assessment: 1. resident received the influenza vaccine during the current or most recent influenza season, either in the facility (O0250A = [1]) or outside the facility (O0250C = [2]); or 2. resident was ineligible due to contraindication(s) (O0250C = [3]) (e.g., anaphylactic hypersensitivity to eggs or other components of the vaccine, history of Guillian-Barre Syndrome within 6 weeks after a previous

	influenza vaccination, bone marrow transplant within the past 6 months). Denominators include all residents who have an entry date (A1600) on or before March 31 of the most recently completed influenza season and have an assessment with a target date on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), except those with exclusions.
Data source(s)	MDS
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Increase to 80% absolute rate
Additional Notes	Emphasis on Vaccine Hesitancy. Applicable to LS and SS.

Percent of Residents Assessed Who Were Given the Pneumococcal Vaccine or had Medical Contraindications

Measure Name	Percent of Residents Assessed Who Were Given the Pneumococcal Vaccine or had Medical Contraindications
Measure Identifier	nh_resident_pneumococcal_vaccination
Sub Aim	Vaccinations
Numerator	Short-stay **(SS)** residents whose selected target assessment indicates their pneumococcal vaccine status is up to date or were ineligible due to medical contraindication(s) Long-stay **(LS)** residents whose selected target assessment indicates their pneumococcal vaccine status is up to date or were ineligible due to medical contraindication(s)
Denominator	**(SS)** All short-stay residents with a selected target assessment. **(LS)** All long-stay residents with a selected target assessment.
Inclusions/Exclusions	Exclude if the resident's age on the target date of the selected target assessment is less than 5 years (i.e., the resident has not yet reached their fifth birthday on the target date).
Rate calculation	**(LS)** Numerator / Denominator X 100% **(SS)** Numerator / Denominator X 100%
Specifications/definitions	Numerators include residents meeting any of the following criteria on the selected target assessment: 1. Pneumococcal vaccine status is up to date (O0300A = [1]); or 2. were ineligible due to medical contraindication(s) (O0300B = [1]) (e.g., anaphylactic hypersensitivity to components of the vaccine; bone marrow transplant within the past 12 months; or receiving a course of chemotherapy within the past two weeks).
Data source(s)	MDS
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Increase to 80% absolute rate
Additional Notes	N/A

COVID-19 Vaccination Coverage among Healthcare Personnel

Measure Name	COVID-19 Vaccination Coverage among Healthcare Personnel
Measure Identifier	nh_staff_covid19_vaccination
Sub Aim	Vaccinations
Numerator	Cumulative number of healthcare personnel (HCP) eligible to work in the facility for at least one day during the reporting period and who received a complete vaccination course against SARS-CoV-2.
Denominator	Number of HCP eligible to work in the healthcare facility for at least one day during the reporting period, excluding persons with contraindications to SARS-CoV-2 vaccination.
Inclusions/Exclusions	The denominator for this measure excludes HCP with documented contraindications to the COVID-19 vaccine. As of March 2021, the CDC considers contraindications to vaccination with COVID-19 vaccines to be: Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component of the COVID-19 vaccine; Immediate allergic reaction of any severity to a previous dose or known (diagnosed) allergy to a component of the vaccine.
Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	N/A
CMS Measures Inventory Tool (CMIT) ID	180 - COVID–19 Vaccination Coverage among Healthcare Personnel 00180-01-C- SNFQRP
Data source(s)	National Healthcare Safety Network (NHSN)
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Increase to 30% up-to-date absolute
Additional Notes	N/A

COVID-19 Vaccination Among Residents

Measure Name	COVID-19 Vaccination Among Residents
Measure Identifier	nh_resident_covid19_vaccination
Sub Aim	Vaccinations
Numerator	Nursing Home Residents Who Are Up-to-Date based on the CDC's Latest Definition.
Denominator	Nursing home residents
Inclusions/Exclusions	Exclude residents with medical contraindications.
Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	See Staying Up to Date with COVID-19 Vaccines | COVID-19 | CDC
Data source(s)	National Healthcare Safety Network (NHSN)
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	Increase to 80% absolute rate
Additional Notes	N/A

Aim: Quality Management Infrastructure

Number of Nursing Homes with a Summed Severity Score >5 Related to Quality Assessment and Performance Improvement (QAPI) Requirements

Measure Name	Number of Nursing Homes with a Summed Severity Score >5 Related to QAPI Requirements
Measure Identifier	nh_inspections_qapi_high_severity
Sub Aim	Quality Management Infrastructure: Inspection Deficiencies Related to QAPI requirements
Numerator	Number of nursing homes with a summed severity score >5 for QAPI requirements
Denominator	N/A
Inclusions/Exclusions	N/A
Rate calculation	N/A
Specifications/definitions	Inspection Deficiencies Resulting from QAPI requirements used the following tags for nursing homes: F0865, F0868, F0867. Calculation of summed severity specific to the QIO program, see Appendix C.
Data source(s)	Enforcement Data
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	0
Additional Notes	N/A

Number of Nursing Homes with a Summed Severity Score >8 Related to Emergency Preparedness Requirements

Measure Name	Number of Nursing Homes with a Summed Severity Score >8 Related to Emergency Preparedness Requirements
Measure Identifier	nh_inspections_ep_high_severity
Sub Aim	Emergency Preparedness: Inspection Deficiencies Related to emergency preparedness requirements
Numerator	Number of nursing homes with a summed severity score >8 related to emergency preparedness requirements
Denominator	N/A
Inclusions/Exclusions	N/A
Rate calculation	N/A
Specifications/definitions	Inspection Deficiencies Resulting from emergency preparedness requirements used the following deficiency tags for nursing homes: E0001, E0004, E0006, E0007, E0009, E0013, E0015, E0018, E0020, E0022, E0023, E0024, E0025, E0026, E0029, E0030, E0031, E0032, E0033, E0034, E0035, E0036, E0037, E0039, E0041, E0042. Calculation of summed severity score specific to the QIO program, see Appendix C.
Data source(s)	Enforcement Data
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	0
Additional Notes	N/A

Number of Nursing Homes with a Summed Severity Score >22 Related to the 4 Aims

Measure Name	Number of Nursing Homes with a Summed Severity Score >22 Related to the 4 Aims
Measure Identifier	nh_inspections_4aims_high_severity
Sub Aim	Inspection Deficiencies Related to the 4 Aims
Numerator	Number of nursing homes with a summed severity score >22 related to the 4 Aims
Denominator	N/A
Inclusions/Exclusions	N/A
Rate calculation	N/A
Specifications/definitions	Inspection Deficiencies Resulting from 4 aims used the following tags for nursing homes: 0660, F0661, F0691, F0697, F0698, F0710, F0740, F0741, F0742, F0743, F0759, F0760, F0867, F0880, F0883. Calculation of summed severity score specific to the QIO program, see Appendix C.
Data source(s)	Enforcement Data
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	0
Additional Notes	N/A

Median Summed Severity Score Related to the 4 Aims Among Nursing Homes

Measure Name	Median Summed Severity Score Related to the 4 Aims Among Nursing Homes
Measure Identifier	nh_inspections_4aims_median
Sub Aim	Inspection Deficiencies Related to the 4 Aims
Numerator	Median summed severity score related to the 4 Aims among nursing homes
Denominator	N/A
Inclusions/Exclusions	N/A
Rate calculation	N/A
Specifications/definitions	Inspection Deficiencies Resulting from the four aims used the following tags for nursing homes: F0660, F0661, F0691, F0697, F0698, F0710, F0740, F0741, F0742, F0743, F0759, F0760, F0867, F0880, F0883. Calculation of summed severity score specific to the QIO program, see Appendix C.
Data source(s)	Enforcement Data
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	6
Additional Notes	N/A

Case-Mix Adjusted Total Nursing Hours Per Resident Day

Measure Name	Case-mix Adjusted Total Nursing Hours Per Resident Day
Measure Identifier	nh_staff_ratio
Sub Aim	NH Workforce Planning
Numerator	Total number of nursing hours worked by RNs, LPNs, and nurse aides combined for a quarter
Denominator	Total resident-days for a quarter (e.g., two residents staying for 30 days each is 60 resident days)
Inclusions/Exclusions	N/A
Rate calculation	(Numerator * Case-mix adjustment) / Denominator
Specifications/definitions	Measure specific to QIO program, “See definitions in: Design for Care Compare Nursing Home Five-Star Quality Rating System: Technical Users’ Guide September 2023. https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcomplianc/downloads/usersguide.pdf , last accessed 2/2/2024."
Data source(s)	CMS Payroll-Based Journal (PBJ) System; MDS
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	20% (Relative Improvement Rate)
Additional Notes	N/A

The Percentage of Nursing Staff Who Left the Nursing Home Over a Twelve-month Period

Measure Name	The Percentage of Nursing Staff Who Left the Nursing Home Over a Twelve-month Period
Measure Identifier	nh_staff_turnover
Sub Aim	NH Workforce Planning
Numerator	The number of eligible nursing staff who left the nursing home, which is defined as not working for 90 consecutive days.
Denominator	Total number of nursing staff who worked at least 120 hours in the 90 days starting from the first workday observed across the baseline quarter and the first two quarters of the evaluation period.
Inclusions/Exclusions	N/A
Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	Measure specific to QIO program, “See definitions in: Design for Care Compare Nursing Home Five-Star Quality Rating System: Technical Users’ Guide September 2023. https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcomplianc/downloads/usersguide.pdf , last accessed 2/2/2024."
Data source(s)	CMS Payroll-Based Journal (PBJ) System
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	20% reduction in total nursing staff turnover (Relative Improvement Rate)
Additional Notes	Measure calculation requires six consecutive months of reported PBJ data.

The Number of Administrators Who Left the Nursing Home Over a Twelve-month Period

Measure Name	The number of administrators who left the nursing home over a twelve-month period
Measure Identifier	nh_administrator_turnover
Sub Aim	NH Workforce Planning
Numerator	The number of eligible administrators who left the nursing home, which is defined as not working for 90 consecutive days.
Denominator	Total number of administrators who worked at least 120 hours in the 90 days starting from the first workday observed across the baseline quarter and the first two quarters of the evaluation period.
Inclusions/Exclusions	N/A
Rate calculation	Numerator / Denominator X 100%
Specifications/definitions	Measure specific to QIO program, “See definitions in: Design for Care Compare Nursing Home Five-Star Quality Rating System: Technical Users’ Guide September 2023. https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcomplianc/downloads/usersguide.pdf , last accessed 2/2/2024."
Data source(s)	CMS Payroll-Based Journal (PBJ) System
Evaluator(s)	Program Monitoring and Evaluation Contractor
Evaluation period	To Be Determined
Target	50% reduction in administrator turnover (Relative Improvement Rate)
Additional Notes	Measure calculation requires six consecutive months of reported PBJ data.

Appendix A: Adverse Drug Event Drug List

Anticoagulants, antidiabetics, and opioids listed below are included whether prescribed as a single-agent product or a combination drug product (e.g., single-agent drug products: Alogliptin, Sitagliptin; combination drug products: Alogliptin and Metformin, Sitagliptin and Simvastatin).

ANTICOAGULANTS
Apixaban, Argatroban, Betrixaban, Dabigatran, Dalteparin, Desirudin, Edoxaban, Enoxaparin, Fondaparinux, Heparin, Rivaroxaban, Tinzaparin, Warfarin

ANTIDIABETICS
Acarbose, Albiglutide, Alogliptin, Bromocriptine, Canagliflozin, Chlorpropamide, Dapagliflozin, Dulaglutide, Empagliflozin, Ertugliflozin, Exenatide, Glimepiride, Glipizide, Glyburide, Human Insulin, Insulin, Insulin Aspart, Insulin Degludec, , Insulin Detemir, Insulin Glargine, Insulin Glulisine, Insulin Isophane, Insulin Lispro, Linagliptin, Liraglutide, Lixisenitide, Metformin, Miglitol, Nateglinide, Pioglitazone, Pramlintide, Repaglinide, Rosiglitazone, Saxagliptin, Semaglutide, Sitagliptin, Tolazamide, Tolbutamide

OPIOIDS
The following medications exclude IV/injectable, epidural, and powder formulations: Benzhydrocodone, Buprenorphine*, Butorphanol, Codeine, Dihydrocodeine, Fentanyl, Hydrocodone, Hydromorphone, Levorphanol, Meperidine, Methadone, Morphine, Opium, Oxycodone, Oxymorphone, Pentazocine, Tapentadol, Tramadol.

For more information: Use of Medicare Administrative Claims to Identify a Population at High Risk for Adverse Drug Events and Hospital Use for Quality Improvement. J Manag Care Spec Pharm, 2019 Mar;25(3):402-410.

Appendix B: Adverse Drug Event ICD-10-CM Diagnosis Codes

Anticoagulants

Code	*Description*
D500	Iron deficiency anemia secondary to blood loss (chronic)
D62	Acute post-hemorrhagic anemia
D649	Anemia, unspecified
H05231	Hemorrhage of right orbit
H05232	Hemorrhage of left orbit
H05233	Hemorrhage of bilateral orbit
H05239	Hemorrhage of unspecified orbit
H1130	Conjunctival hemorrhage, unspecified eye
H1131	Conjunctival hemorrhage, right eye
H1132	Conjunctival hemorrhage, left eye
H1133	Conjunctival hemorrhage, bilateral
H3560	Retinal hemorrhage, unspecified eye
H3561	Retinal hemorrhage, right eye
H3562	Retinal hemorrhage, left eye
H3563	Retinal hemorrhage, bilateral
H4310	Vitreous hemorrhage, unspecified eye
H4311	Vitreous hemorrhage, right eye
H4312	Vitreous hemorrhage, left eye
H4313	Vitreous hemorrhage, bilateral
I312	Hemopericardium, not elsewhere classified
I6000	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation
I6001	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation
I6002	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation
I6010	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery
I6011	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery
I6012	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery
I602	Nontraumatic subarachnoid hemorrhage from anterior communicating artery
I6030	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery
I6031	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery
I6032	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery
I604	Nontraumatic subarachnoid hemorrhage from basilar artery
I6050	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery

I6051	Nontraumatic subarachnoid hemorrhage from right vertebral artery
I6052	Nontraumatic subarachnoid hemorrhage from left vertebral artery
I606	Nontraumatic subarachnoid hemorrhage from other intracranial arteries
I607	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery
I608	Other nontraumatic subarachnoid hemorrhage
I609	Nontraumatic subarachnoid hemorrhage, unspecified
I610	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical
I611	Nontraumatic intracerebral hemorrhage in hemisphere, cortical
I612	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified
I613	Nontraumatic intracerebral hemorrhage in brain stem
I614	Nontraumatic intracerebral hemorrhage in cerebellum
I615	Nontraumatic intracerebral hemorrhage, intraventricular
I616	Nontraumatic intracerebral hemorrhage, multiple localized
I618	Other nontraumatic intracerebral hemorrhage
I619	Nontraumatic intracerebral hemorrhage, unspecified
I6200	Nontraumatic subdural hemorrhage, unspecified
I6201	Nontraumatic acute subdural hemorrhage
I6202	Nontraumatic subacute subdural hemorrhage
I6203	Nontraumatic chronic subdural hemorrhage
I621	Nontraumatic extradural hemorrhage
I629	Nontraumatic intracranial hemorrhage, unspecified
K2211	Ulcer of esophagus with bleeding
K250	Acute gastric ulcer with hemorrhage
K252	Acute gastric ulcer with both hemorrhage and perforation
K254	Chronic or unspecified gastric ulcer with hemorrhage
K256	Chronic or unspecified gastric ulcer with both hemorrhage and perforation
K260	Acute duodenal ulcer with hemorrhage
K262	Acute duodenal ulcer with both hemorrhage and perforation
K264	Chronic or unspecified duodenal ulcer with hemorrhage
K266	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation
K270	Acute peptic ulcer, site unspecified, with hemorrhage
K272	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation
K274	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage
K276	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation
K280	Acute gastrojejunal ulcer with hemorrhage
K282	Acute gastrojejunal ulcer with both hemorrhage and perforation

K284	Chronic or unspecified gastrojejunal ulcer with hemorrhage
K286	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation
K2931	Chronic superficial gastritis with bleeding
K2941	Chronic atrophic gastritis with bleeding
K2951	Unspecified chronic gastritis with bleeding
K2961	Other gastritis with bleeding
K2971	Gastritis, unspecified, with bleeding
K2991	Gastroduodenitis, unspecified, with bleeding
K625	Hemorrhage of anus and rectum
K649	Unspecified hemorrhoids
K661	Hemoperitoneum
K920	Hematemesis
K921	Melena
K922	Gastrointestinal hemorrhage, unspecified
M2500	Hemarthrosis, unspecified joint
M25011	Hemarthrosis, right shoulder
M25012	Hemarthrosis, left shoulder
M25019	Hemarthrosis, unspecified shoulder
M25021	Hemarthrosis, right elbow
M25022	Hemarthrosis, left elbow
M25029	Hemarthrosis, unspecified elbow
M25031	Hemarthrosis, right wrist
M25032	Hemarthrosis, left wrist
M25039	Hemarthrosis, unspecified wrist
M25041	Hemarthrosis, right hand
M25042	Hemarthrosis, left hand
M25049	Hemarthrosis, unspecified hand
M25051	Hemarthrosis, right hip
M25052	Hemarthrosis, left hip
M25059	Hemarthrosis, unspecified hip
M25061	Hemarthrosis, right knee
M25062	Hemarthrosis, left knee
M25069	Hemarthrosis, unspecified knee
M25071	Hemarthrosis, right ankle
M25072	Hemarthrosis, left ankle
M25073	Hemarthrosis, unspecified ankle
M25074	Hemarthrosis, right foot

M25075	Hemarthrosis, left foot
M25076	Hemarthrosis, unspecified foot
M2508	Hemarthrosis, other specified site
N950	Postmenopausal bleeding
R040	Epistaxis
R041	Hemorrhage from throat
R042	Hemoptysis
R0489	Hemorrhage from other sites in respiratory passages
R049	Hemorrhage from respiratory passages, unspecified
R233	Spontaneous ecchymoses
R310	Gross hematuria
R319	Hematuria, unspecified
R58	Hemorrhage, not elsewhere classified
R791	Abnormal coagulation profile
T45511A	Poisoning by anticoagulants, accidental (unintentional), initial encounter
T45511D	Poisoning by anticoagulants, accidental (unintentional), subsequent encounter
T45511S	Poisoning by anticoagulants, accidental (unintentional), sequela
T45513A	Poisoning by anticoagulants, assault, initial encounter
T45513D	Poisoning by anticoagulants, assault, subsequent encounter
T45513S	Poisoning by anticoagulants, assault, sequela
T45514A	Poisoning by anticoagulants, undetermined, initial encounter
T45514D	Poisoning by anticoagulants, undetermined, subsequent encounter
T45514S	Poisoning by anticoagulants, undetermined, sequela
T45515A	Adverse effect of anticoagulants, initial encounter
T45515D	Adverse effect of anticoagulants, subsequent encounter
T45515S	Adverse effect of anticoagulants, sequela
T45521A	Poisoning by antithrombotic drugs, accidental (unintentional), initial encounter
T45521D	Poisoning by antithrombotic drugs, accidental (unintentional), subsequent encounter
T45521S	Poisoning by antithrombotic drugs, accidental (unintentional), sequela
T45523A	Poisoning by antithrombotic drugs, assault, initial encounter
T45523D	Poisoning by antithrombotic drugs, assault, subsequent encounter
T45523S	Poisoning by antithrombotic drugs, assault, sequela
T45524A	Poisoning by antithrombotic drugs, undetermined, initial encounter
T45524D	Poisoning by antithrombotic drugs, undetermined, subsequent encounter
T45524S	Poisoning by antithrombotic drugs, undetermined, sequela
T45525A	Adverse effect of antithrombotic drugs, initial encounter

T45525D	Adverse effect of antithrombotic drugs, subsequent encounter
T45525S	Adverse effect of antithrombotic drugs, sequela

Antidiabetics

Code	*Description*
E08649	Diabetes mellitus due to underlying condition with hypoglycemia without coma
E160	Drug-induced hypoglycemia without coma
E161	Other hypoglycemia
E162	Hypoglycemia, unspecified
R410	Disorientation, unspecified
R4182	Altered mental status, unspecified
R55	Syncope and collapse
T383X1A	Poisoning by insulin and oral hypoglycemic [antidiabetic] drugs, accidental (unintentional), initial encounter
T383X1D	Poisoning by insulin and oral hypoglycemic [antidiabetic] drugs, accidental (unintentional), subsequent encounter
T383X1S	Poisoning by insulin and oral hypoglycemic [antidiabetic] drugs, accidental (unintentional), sequela
T383X3A	Poisoning by insulin and oral hypoglycemic [antidiabetic] drugs, assault, initial encounter
T383X3D	Poisoning by insulin and oral hypoglycemic [antidiabetic] drugs, assault, subsequent encounter
T383X3S	Poisoning by insulin and oral hypoglycemic [antidiabetic] drugs, assault, sequela
T383X4A	Poisoning by insulin and oral hypoglycemic [antidiabetic] drugs, undetermined, initial encounter
T383X4D	Poisoning by insulin and oral hypoglycemic [antidiabetic] drugs, undetermined, subsequent encounter
T383X4S	Poisoning by insulin and oral hypoglycemic [antidiabetic] drugs, undetermined, sequela
T383X5A	Adverse effect of insulin and oral hypoglycemic [antidiabetic] drugs, initial encounter
T383X5D	Adverse effect of insulin and oral hypoglycemic [antidiabetic] drugs, subsequent encounter
T383X5S	Adverse effect of insulin and oral hypoglycemic [antidiabetic] drugs, sequela

Opioids

Code	*Description*
J80	Acute respiratory distress syndrome
J9600	Acute respiratory failure, unspecified whether with hypoxia or hypercapnia

J9601	Acute respiratory failure with hypoxia
J9602	Acute respiratory failure with hypercapnia
J9690	Respiratory failure, unspecified, unspecified whether with hypoxia or hypercapnia
J9691	Respiratory failure, unspecified with hypoxia
J9692	Respiratory failure, unspecified with hypercapnia
R0603	Acute respiratory distress
R0901	Asphyxia
R0902	Hypoxemia
R092	Respiratory arrest
R400	Somnolence
R401	Stupor
R4020	Unspecified coma
R403	Persistent vegetative state
R404	Transient alteration of awareness
R410	Disorientation, unspecified
R4182	Altered mental status, unspecified
R440	Auditory hallucinations
R442	Other hallucinations
R443	Hallucinations, unspecified
R55	Syncope and collapse
F11120	Opioid abuse with intoxication, uncomplicated
F11121	Opioid abuse with intoxication delirium
F11122	Opioid abuse with intoxication with perceptual disturbance
F11129	Opioid abuse with intoxication, unspecified
F1113	Opioid abuse with withdrawal
F1114	Opioid abuse with opioid-induced mood disorder
F11150	Opioid abuse with opioid-induced psychotic disorder with delusions
F11151	Opioid abuse with opioid-induced psychotic disorder with hallucinations
F11159	Opioid abuse with opioid-induced psychotic disorder, unspecified
F11181	Opioid abuse with opioid-induced sexual dysfunction
F11182	Opioid abuse with opioid-induced sleep disorder
F11188	Opioid abuse with other opioid-induced disorder
F1119	Opioid abuse with unspecified opioid-induced disorder
F11220	Opioid dependence with intoxication, uncomplicated
F11221	Opioid dependence with intoxication delirium
F11222	Opioid dependence with intoxication with perceptual disturbance
F11229	Opioid dependence with intoxication, unspecified

F1123	Opioid dependence with withdrawal
F1124	Opioid dependence with opioid-induced mood disorder
F11250	Opioid dependence with opioid-induced psychotic disorder with delusions
F11251	Opioid dependence with opioid-induced psychotic disorder with hallucinations
F11259	Opioid dependence with opioid-induced psychotic disorder, unspecified
F11281	Opioid dependence with opioid-induced sexual dysfunction
F11282	Opioid dependence with opioid-induced sleep disorder
F11288	Opioid dependence with other opioid-induced disorder
F1129	Opioid dependence with unspecified opioid-induced disorder
F11920	Opioid use, unspecified with intoxication, uncomplicated
F11921	Opioid use, unspecified with intoxication delirium
F11922	Opioid use, unspecified with intoxication with perceptual disturbance
F11929	Opioid use, unspecified with intoxication, unspecified
F1193	Opioid use, unspecified with withdrawal
F1194	Opioid use, unspecified with opioid-induced mood disorder
F11950	Opioid use, unspecified with opioid-induced psychotic disorder with delusions
F11951	Opioid use, unspecified with opioid-induced psychotic disorder with hallucinations
F11959	Opioid use, unspecified with opioid-induced psychotic disorder, unspecified
F11981	Opioid use, unspecified with opioid-induced sexual dysfunction
F11982	Opioid use, unspecified with opioid-induced sleep disorder
F11988	Opioid use, unspecified with other opioid-induced disorder
F1199	Opioid use, unspecified with unspecified opioid-induced disorder
T402X1A	Poisoning by other opioids, accidental (unintentional), initial encounter
T402X1D	Poisoning by other opioids, accidental (unintentional), subsequent encounter
T402X1S	Poisoning by other opioids, accidental (unintentional), sequela
T402X3A	Poisoning by other opioids, assault, initial encounter
T402X3D	Poisoning by other opioids, assault, subsequent encounter
T402X3S	Poisoning by other opioids, assault, sequela
T402X4A	Poisoning by other opioids, undetermined, initial encounter
T402X4D	Poisoning by other opioids, undetermined, subsequent encounter
T402X4S	Poisoning by other opioids, undetermined, sequela
T402X5A	Adverse effect of other opioids, initial encounter
T402X5D	Adverse effect of other opioids, subsequent encounter
T402X5S	Adverse effect of other opioids, sequela
T403X1A	Poisoning by methadone, accidental (unintentional), initial encounter
T403X1D	Poisoning by methadone, accidental (unintentional), subsequent encounter
T403X1S	Poisoning by methadone, accidental (unintentional), sequela

T403X3A	Poisoning by methadone, assault, initial encounter
T403X3D	Poisoning by methadone, assault, subsequent encounter
T403X3S	Poisoning by methadone, assault, sequela
T403X4A	Poisoning by methadone, undetermined, initial encounter
T403X4D	Poisoning by methadone, undetermined, subsequent encounter
T403X4S	Poisoning by methadone, undetermined, sequela
T403X5A	Adverse effect of methadone, initial encounter
T403X5D	Adverse effect of methadone, subsequent encounter
T403X5S	Adverse effect of methadone, sequela
T40411A	Poisoning by fentanyl or fentanyl analogs, accidental (unintentional), initial encounter
T40411D	Poisoning by fentanyl or fentanyl analogs, accidental (unintentional), subsequent encounter
T40411S	Poisoning by fentanyl or fentanyl analogs, accidental (unintentional), sequela
T40413A	Poisoning by fentanyl or fentanyl analogs, assault, initial encounter
T40413D	Poisoning by fentanyl or fentanyl analogs, assault, subsequent encounter
T40413S	Poisoning by fentanyl or fentanyl analogs, assault, sequela
T40414A	Poisoning by fentanyl or fentanyl analogs, undetermined, initial encounter
T40414D	Poisoning by fentanyl or fentanyl analogs, undetermined, subsequent encounter
T40414S	Poisoning by fentanyl or fentanyl analogs, undetermined, sequela
T40415A	Adverse effect of fentanyl or fentanyl analogs, initial encounter
T40415D	Adverse effect of fentanyl or fentanyl analogs, subsequent encounter
T40415S	Adverse effect of fentanyl or fentanyl analogs, sequela
T40421A	Poisoning by tramadol, accidental (unintentional), initial encounter
T40421D	Poisoning by tramadol, accidental (unintentional), subsequent encounter
T40421S	Poisoning by tramadol, accidental (unintentional), sequela
T40423A	Poisoning by tramadol, assault, initial encounter
T40423D	Poisoning by tramadol, assault, subsequent encounter
T40423S	Poisoning by tramadol, assault, sequela
T40424A	Poisoning by tramadol, undetermined, initial encounter
T40424D	Poisoning by tramadol, undetermined, subsequent encounter
T40424S	Poisoning by tramadol, undetermined, sequela
T40425A	Adverse effect of tramadol, initial encounter
T40425D	Adverse effect of tramadol, subsequent encounter
T40425S	Adverse effect of tramadol, sequela
T40491A	Poisoning by other synthetic narcotics, accidental (unintentional), initial encounter
T40491D	Poisoning by other synthetic narcotics, accidental (unintentional), subsequent encounter

T40491S	Poisoning by other synthetic narcotics, accidental (unintentional), sequela
T40493A	Poisoning by other synthetic narcotics, assault, initial encounter
T40493D	Poisoning by other synthetic narcotics, assault, subsequent encounter
T40493S	Poisoning by other synthetic narcotics, assault, sequela
T40494A	Poisoning by other synthetic narcotics, undetermined, initial encounter
T40494D	Poisoning by other synthetic narcotics, undetermined, subsequent encounter
T40494S	Poisoning by other synthetic narcotics, undetermined, sequela
T40495A	Adverse effect of other synthetic narcotics, initial encounter
T40495D	Adverse effect of other synthetic narcotics, subsequent encounter
T40495S	Adverse effect of other synthetic narcotics, sequela
T404X1A	Poisoning by other synthetic narcotics, accidental (unintentional), initial encounter
T404X1D	Poisoning by other synthetic narcotics, accidental (unintentional), subsequent encounter
T404X1S	Poisoning by other synthetic narcotics, accidental (unintentional), sequela
T404X3A	Poisoning by other synthetic narcotics, assault, initial encounter
T404X3D	Poisoning by other synthetic narcotics, assault, subsequent encounter
T404X3S	Poisoning by other synthetic narcotics, assault, sequela
T404X4A	Poisoning by other synthetic narcotics, undetermined, initial encounter
T404X4D	Poisoning by other synthetic narcotics, undetermined, subsequent encounter
T404X4S	Poisoning by other synthetic narcotics, undetermined, sequela
T404X5A	Adverse effect of other synthetic narcotics, initial encounter
T404X5D	Adverse effect of other synthetic narcotics, subsequent encounter
T404X5S	Adverse effect of other synthetic narcotics, sequela
T40601A	Poisoning by unspecified narcotics, accidental (unintentional), initial encounter
T40601D	Poisoning by unspecified narcotics, accidental (unintentional), subsequent encounter
T40601S	Poisoning by unspecified narcotics, accidental (unintentional), sequela
T40603A	Poisoning by unspecified narcotics, assault, initial encounter
T40603D	Poisoning by unspecified narcotics, assault, subsequent encounter
T40603S	Poisoning by unspecified narcotics, assault, sequela
T40604A	Poisoning by unspecified narcotics, undetermined, initial encounter
T40604D	Poisoning by unspecified narcotics, undetermined, subsequent encounter
T40604S	Poisoning by unspecified narcotics, undetermined, sequela
T40605A	Adverse effect of unspecified narcotics, initial encounter
T40605D	Adverse effect of unspecified narcotics, subsequent encounter
T40605S	Adverse effect of unspecified narcotics, sequela
T40691A	Poisoning by other narcotics, accidental (unintentional), initial encounter
T40691D	Poisoning by other narcotics, accidental (unintentional), subsequent encounter

T40691S	Poisoning by other narcotics, accidental (unintentional), sequela
T40693A	Poisoning by other narcotics, assault, initial encounter
T40693D	Poisoning by other narcotics, assault, subsequent encounter
T40693S	Poisoning by other narcotics, assault, sequela
T40694A	Poisoning by other narcotics, undetermined, initial encounter
T40694D	Poisoning by other narcotics, undetermined, subsequent encounter
T40694S	Poisoning by other narcotics, undetermined, sequela
T40695A	Adverse effect of other narcotics, initial encounter
T40695D	Adverse effect of other narcotics, subsequent encounter
T40695S	Adverse effect of other narcotics, sequela

For more information: Use of Medicare Administrative Claims to Identify a Population at High Risk for Adverse Drug Events and Hospital Use for Quality Improvement. J Manag Care Spec Pharm, 2019 Mar;25(3):402-410.

Appendix C: Severity Score Methodology

The methodology for nursing homes is different from hospitals. Deficiencies were assigned severity scores: J, K, L = 10; H, I, F = 5, G, D, E = 1; A, B, C = 0. Those scores were then summed to create a total score. The results were then broken into three groups based on those sums. Because there were more providers for nursing homes, the thresholds were set using percentiles of the distribution of all severity scores. For example, for nursing home inspection deficiencies related to the four aims, the 90th percentile was 10, which also corresponds with having at least one instance of an immediate jeopardy incident. The 99th percentile was 22, and the 99.9th percentile was 36. The three groups were thus 10-21 (low concern), 22-35 (medium concern), and 36+ (high concern) on severity score.

Summary of Updates

- 8/7/2025:
  - Initial template created
  - Measure names and information based on 13 SOW Appendix 5 – Measure Definitions and Specifications.
- 10/23/2025:
  - Updated data source from “NHSN” to “MDS” for the following measures:
    - Percent of Residents or Patients Who Were Given the Seasonal Influenza Vaccine or had Medical Contraindications.
    - Percent of Residents Assessed Who Were Given the Pneumococcal Vaccine or had Medical Contraindications
  - Evaluator(s) for applicable measures updated to reflect ‘Program Monitoring and Evaluation Contractor’ exclusively, replacing the previous designation of ‘PMEC or CMS’.
  - Changed measure name “Case-mix adjusted total nursing hours per resident day (registered nurse (RN) + licensed practical nurse (LPN) + nurse aide hours) for a quarter averaged across all days (weekdays and weekends)” to “Case-Mix Adjusted Total Nursing Hours Per Resident Day”
- 10/29/2025
  - Edited to improve clarity in metric descriptions and include acronym descriptions for each table.

This material was prepared by the Superior Health Quality Alliance, a Quality Innovation Network-Quality Improvement Organization under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. 13SOW-QINQIO-R4-25-24 091125