

New York State Department of Health 2021 Nursing Home Quality Initiative Methodology

February 2022 updated

The 2021 Nursing Home Quality Initiative (NHQI) is comprised of two components: **[1]** the Quality Component (quality measures), **[2]** the Compliance Component (compliance with reporting). The NHQI 2021 score is worth a **maximum 70 points**. The NHQI score is reduced from 100 points (previous NHQI years) to 70 points (NHQI 2021) reflecting the removal of the four quality measures (5 points each) and one efficiency measure (10 points).

List of NHQI 2021 measures:

1. Quality Component: 50 points

1. Percent of Contract/Agency Staff Used
2. Rate of Staffing Hours per Resident per Day
3. Percent of Employees Vaccinated for Influenza
4. Percent of Long Stay Residents Who Received the Pneumococcal Vaccine
5. Percent of Long Stay Residents Who Received the Seasonal Influenza Vaccine
6. Percent of Long Stay Residents Experiencing One or More Falls with Major Injury
7. Percent of Low Risk Long Stay Residents Who Lose Control of Their Bowel or Bladder
8. Percent of Long Stay Residents with Dementia Who Received an Antipsychotic Medication (PQA)
9. Percent of Long Stay Residents Whose Need for Help with Daily Activities Has Increased
10. Percent of Long Stay Residents with a Urinary Tract Infection

2. Compliance Component: 20 points

1. NYS Regionally Adjusted Five-Star Quality Rating for Health Inspections
2. Timely Submission of Certified Nursing Home Cost Reports
3. Timely Submission of Employee Influenza Immunization Data

List of measures removed from NHQI2021:

- Three quality measures are removed to offset the impact of COVID-19:
 - Percent of Long Stay High Risk Residents with Pressure Ulcers
 - Percent of Long Stay Residents Who have Depressive Symptoms
 - Percent of Long Stay Residents Who Lose Too Much Weight
- One quality measure was retired by CMS in October 2019:
 - Percent of long stay residents who self-report moderate to severe pain
- One efficiency measure is removed to offset the impact of COVID-19 and the incompleteness of hospitalization data:
 - Potentially avoidable hospitalizations

1. Quality Component (50 points)

Quality measures are calculated from MDS 3.0 data, the CMS' Payroll Based Journal (PBJ) Daily Nurse Staffing data, the Care Compare data and the NYS employee flu vaccination data.

- The allotted 50 points for quality are distributed evenly for all quality measures. The NHQI includes 10 quality measures with each measure being worth a maximum of 5 points.
- The quintiles and results are based on the same measurement year. Therefore, only a certain number of nursing homes are able to achieve these quintiles for each measure. The results are not rounded until after determining the quintile for measures. For measures with very narrow ranges of performance, two facilities may be placed in different quintiles and receive different points, but after rounding, the facilities may have the same rate.
- For quality measures that are awarded points based on their quintile distribution, nursing homes will be rewarded for achieving high performance as well as improvement from previous year's performance. Note that improvement points will not apply to quality measures that are based on threshold values. See the Quality Point Grid for Attainment and Improvement below. Assuming each quality measure is worth 5 points, the distribution of points based on two years of performance is demonstrated in the grid.

Quality Point Grid for Attainment and Improvement

		Year 1 Performance					
		Quintiles	1	2	3	4	5
Year 2 Performance	1 (best)	5	5	5	5	5	5
	2	3	3	4	4	4	4
	3	1	1	1	2	2	2
	4	0	0	0	0	0	1
	5	0	0	0	0	0	0

Year 1 = 2020 (2019 measurement year)

Year 2 = 2021 (2020 measurement year)

For example, if 2020 NHQI performance (Year 1) is in the third quintile, and 2021 NHQI performance (Year 2) is in the second quintile, the facility will receive 4 points for the measure. This is 3 points for attaining the second quintile and 1 point for improvement from the previous year's third quintile.

Table 1a. Quality Component – Measurement Period by Data Sources

Data source	Measurement Period
MDS 3.0	<ul style="list-style-type: none"> October 1, 2019 - June 30, 2020 (Percent of long stay residents who received the seasonal influenza vaccine) Calendar year 2020 (all other MDS based quality measures)
The CMS’ Payroll Based Journal Daily Nurse Staffing data	<ul style="list-style-type: none"> 2020 - quarter 2, quarter 3 & quarter 4. Due to the COVID-19 public health emergency, the submission of the quarter 1 2020 PBJ data was not mandatory
The CMS’ Care Compare data (NH_providerinfo files)	<ul style="list-style-type: none"> 2020 - quarter 2, quarter 3 & quarter 4. Due to the COVID-19 public health emergency, the submission of the quarter 1 2020 PBJ data was not mandatory
Employee vaccination data submitted to the Bureau of Immunization through HERDS	<ul style="list-style-type: none"> 2020 - 2021 influenza season

Table 1b. Quality Component - Measures

Number	Measure	Measure Steward	Data Source	Scoring Method	Notes	Eligible for Improvement in 2021 NHQI
1	Percent of contract/agency staff used	NYSDOH	The CMS’ quarterly Payroll Based Journal Daily Nurse Staffing files.	Threshold	Maximum points are awarded if the rate is less than 10%, and zero points if the rate is 10% or greater.	No (threshold-based measure)
2	Rate of staffing hours per resident per day*	NYSDOH	NH_providerinfo files are downloaded from the CMS’ Care Compare data archive. The staffing hours in the NH_providerinfo files are reported through PBJ.	Quintile		Yes
3	Percent of employees vaccinated for influenza*	NYSDOH	Employee vaccination data submitted to the Bureau of Immunization through HERDS for the 2020 - 2021 influenza season	Threshold	Maximum points are awarded if the rate is 85% or greater, and zero points if the rate is less than 85%	No (threshold-based measure)
4	Percent of long stay residents who received the pneumococcal vaccine*	CMS	MDS 3.0	Quintile		Yes
5	Percent of long stay residents who received the seasonal influenza vaccine*	CMS	MDS 3.0	Quintile		Yes

* a higher rate is better

Table 1b. Quality Component - Measures (continued)

Number	Measure	Measure Steward	Data Source	Scoring Method	Notes	Eligible for Improvement in 2021 NHQI
6	Percent of long stay residents experiencing one or more falls with major injury	CMS	MDS 3.0	Threshold	Maximum points are awarded if the rate is equal to or less than 5%, and zero points if the rate is greater than 5%.	No (threshold-based measure)
7	Percent of low risk long stay residents who lose control of their bowel or bladder	CMS	MDS 3.0	Quintile		Yes
8	Percent of long stay residents with dementia who received an antipsychotic medication	PQA	MDS 3.0	Quintile		Yes
9	Percent of long stay residents whose need for help with daily activities has increased	CMS	MDS 3.0	Quintile		Yes
10	Percent of long stay residents with a urinary tract infection	CMS	MDS 3.0	Threshold	Maximum points are awarded if the rate is equal to or less than 5%, and zero points if the rate is greater than 5%.	No (threshold-based measure)

* a higher rate is better

2. Compliance Component (20 points)

The compliance component consists of **three** measures: CMS' five-star quality rating for health inspections, timely submission of employee influenza immunization data, and timely submission of nursing home certified cost reports.

- CMS Five-Star Quality Rating for Health Inspections (regionally adjusted)
 - The **health inspection survey scores** are downloaded from CMS. These scores are used to calculate cut points for each region in the state. Regions include the Metropolitan Area, Western New York, Capital District, and Central New York. Per CMS' methodology, the top 10% of nursing homes will receive five stars, the middle 70% will receive four, three, or two stars, and the bottom 20% will receive one star. Each nursing home will be awarded a Five-Star Quality Rating based on the cut points calculated from the health inspection survey scores within its region. **Ten** points are awarded for obtaining five stars or the top 10 percent (lowest 10 percent in terms of health inspection deficiency score). **Seven** points for obtaining four stars, **four** points for obtaining three stars, **two** points for obtaining two stars, and **zero** points for one star.
- Timely submission measures
 - Submission of employee influenza vaccination data to the NYSDOH Bureau of Immunization for the 2020 - 2021 influenza season by the deadline of June 1, 2021 is worth five points.
 - Submission of certified and complete nursing home cost reports to the NYSDOH by the deadlines as specified by the Bureau of Residential Health Care Reimbursement, Division of Finance and Rate Setting, is worth five points.

Table 2. Compliance Component Measures

Number	Measure	Measure Steward	Data Source and Measurement Period	Scoring Method
1	CMS Five-Star Quality Rating for Health Inspections (regionally adjusted)	CMS	CMS health inspection survey scores (as of April 2021)	5 stars=10 points 4 stars=7 points 3 stars=4 points 2 stars=2 points 1 star=0 points
2	Timely submission of employee influenza vaccination data	NYSDOH	Employee influenza vaccination data submitted to the Bureau of Immunization through HERDS for the 2020 - 2021 influenza season	Five points for submission by the deadline
3	Timely submission of certified and complete nursing home cost reports	NYSDOH	Nursing home cost report, 2020 calendar year for calendar filers and 2020 fiscal year for fiscal filers	Five points for timely submission of the certified and complete cost report

Scoring

The facility's overall score will be calculated by summing the points for each measure in the NHQI. In the event that a measure cannot be used due to small sample size or unavailable data, the maximum attainable points will be reduced for that facility. For example, if a facility has a small sample size on two of its quality measures (each 5 points), the maximum attainable points will be 60 rather than 70. The sum of its points will be divided by 60 to calculate its total score. The example below provides a mathematical illustration of this method.

Table 3. Calculating the overall score without and with small sample size

	Facility A	Facility B
	no small sample size	small sample size on two quality measures
Sum of points	50	50
Maximum points attainable	70	60
Score ratio (points/maximum)	0.71	0.83
Final score	71	83

Ineligibility for NHQI Ranking

Due to the severity of letter J, K, and L health inspection deficiencies, receipt of a deficiency is incorporated into the NHQI. Nursing homes that receive one or more of these deficiencies are not eligible to be ranked into overall quintiles. J, K, and L deficiencies indicate a Level 4 immediate jeopardy, which is the highest level of severity for deficiencies on a health inspection. Immediate jeopardy indicates that the deficiency resulted in noncompliance and immediate action was necessary, and the event caused or was likely to cause serious injury, harm, impairment, or death to the resident(s).

- Deficiency data shows a J/K/L deficiency between July 1 of the measurement year (2020) and June 30 of the reporting year (2021).
- Deficiencies will be assessed on October 1 of the reporting year to allow a three-month window for potential Informal Dispute Resolutions (IDR) to process.
- Any **new** J/K/L deficiencies between July 1 and September 30 of the reporting year (2021) will **not** be included in the current NHQI; they will be included in the next NHQI cycle.
- If a JKL citation is found to be expunged or lowered based upon an IDR panel review, the Department reserves the right to make the adjustments.

Nursing Home Exclusions from NHQI

The following types of facilities will be excluded from the NHQI and will not contribute to the pool or be eligible for payment:

- Non-Medicaid facilities
- Any facility designated by CMS as a Special Focus Facility at any time during 2020 or 2021, prior to the final calculation of the NHQI
- Specialty facilities
- Specialty units within a nursing home (i.e. AIDS, pediatric specialty, traumatic brain injury, ventilator dependent, behavioral intervention, neurodegenerative units)
- Continuing Care Retirement Communities
- Transitional Care Units

Resources:

- Measure specifications for the CMS Quality Measures used in the NHQI can be found in the MDS 3.0 Quality Measures User's Manual, Versions 13 & 14: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/NHQIQualityMeasures>
- CMS' Care Compare data archive: <https://data.cms.gov/provider-data/archived-data/nursing-homes>
- CMS' Payroll based Journal Staffing data: <https://data.cms.gov/quality-of-care/payroll-based-journal-daily-nurse-staffing>

For more information about the NHQI methodology, please contact the Office of Quality and Patient Safety at NHQP@health.ny.gov.