



Department of Health

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Dear Nursing Home Administrator:

The New York State Department of Health (NYS DOH) is finalizing the results of the 2015 Nursing Home Quality Initiative (NHQI) for public reporting and would like you to review the data submitted by your organization. This is not an opportunity to update your data, but to review and compare the results to other existing sources such as the CMS Nursing Home Compare and the CASPER system.

Two new NYS DOH staffing measures have been developed for benchmarking purposes, and are included in the release of the 2015 NHQI results for feedback. These benchmarking measures include:

1. Percent of Staff Turnover
2. Rate of Staffing Hours Per Day

Please note that these two staffing measures are for benchmarking purposes only, and were **not** used in the scoring algorithm for the 2015 NHQI. The data used to calculate these measures and the results will **not** be publically released.

The following pages in this document contain the methodology for the 2015 NHQI (pages 3-10), instructions for interpreting your facility's 2015 NHQI results (pages 11-14), and the methodologies and instructions for interpreting the two new benchmarking staffing measures (pages 15-22).

Your facility's report is posted to the Health Commerce System (HCS). The report contains three pages: the results of the 2015 NHQI for feedback, the results of the benchmarking Percent of Staff Turnover, and the results of the benchmarking Rate of Staffing Hours Per Day. To access this report, follow the instructions below.

1. Access the HCS at <https://commerce.health.state.ny.us>
2. At the security screen, enter your HCS ID and password
3. At the HCS Welcome Page, select "NH Rate Sheets 4/2009-Forward" under the heading "My Applications"
4. At the Nursing Home Rates screen, select "2015 Nursing Home Quality Initiative Results for Feedback" from the drop-down list under "Nursing Home Rates Selection List"
5. Identify your facility in the drop-down list under "Nursing Home Selection List", then select "SHOW REPORTS"

If there are any questions about the 2015 NHQI, please email us at NHQP@health.ny.gov. We request that nursing homes provide feedback by December 15, 2015. The Department will post this data on its Health Data NY website, and we will inform you when the file is publically available.

Sincerely,

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Attachments

cc: Mr. Roohan
Mr. Kissinger
Mr. Simmons
Ms. Bean

New York State Department of Health 2015 Nursing Home Quality Initiative Methodology

Updated November 2015

The 2015 Nursing Home Quality Initiative (NHQI) is comprised of three areas: **[1]** quality measures (Quality Component), **[2]** compliance with reporting (Compliance Component), **[3]** the Efficiency Component. The 2015 NHQI is worth a maximum 100 points.

Quality Component (70 points)

Quality measures are calculated from MDS 3.0 data, the NYS employee flu vaccination data, nursing home cost report data for the percent of contract/agency staff used, and the CMS five-star quality rating for staffing.

- The allotted 70 points for quality are distributed evenly for all quality measures. The 2015 NHQI includes 14 quality measures with each measure being worth a maximum of 5 points.
- Four quarters of 2014 MDS 3.0 data are used.
- The quintiles are based on the same measurement year of the results. 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 based on the quintile distribution, nursing homes will be rewarded for achieving high performance as well as improvement from previous years' 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
Year 2 Performance	1 (best)	5	5	5	5	5
	2	3	3	4	4	4
	3	1	1	1	2	2
	4	0	0	0	0	1
	5	0	0	0	0	0

Year 1=2014 Year 2=2015

For example, if 2014 NHQI performance (Year 1) is in the third quintile, and 2015 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.

Changes to the Quality Component

- Long stay resident antipsychotic medication measure

- The CMS antipsychotic measure has been replaced by the Pharmacy Quality Alliance measure for Antipsychotic use in Persons with Dementia. This is a companion measure to the PQA measure for antipsychotic use among health plans, which was endorsed by the National Quality Forum in 2013 (NQF #2111). The PQA measure focuses on long stay residents with dementia who have a history of receiving an antipsychotic medication. Please contact the NHQI email address with questions about this measure. More information can be found at <http://pqaalliance.org/measures/default.asp>. Because this is a new measure, it is not eligible for improvement.
- Long stay resident pneumococcal vaccination measure
 - Preliminary 2014 MDS data shows that the statewide average for the percent of long stay residents who received the pneumococcal vaccine is below 85%. Therefore, this measure will be assigned points based on quintiles rather than a threshold value of 85%. More nursing homes benefit from the quintile method. Because this measure was not based on quintiles in the previous 2014 NHQI, it is not eligible for improvement.

Quality Measures (70 points)

The 14 quality measures for the 2015 NHQI are shown in the table below.

Number	Measure	Measure Steward	Data Source and Measurement Period	Scoring Method	Notes	Eligible for Improvement in 2015 NHQI
1	Percent of contract/agency staff used	NYS DOH	Nursing home cost report, 2014 calendar year for calendar filers and 2014 fiscal year for fiscal filers	Threshold	Maximum points are awarded if the rate is less than 10%, and zero points if the rate is 10% or greater.	No
2	CMS five-star quality rating for staffing	CMS	CMS Five-Star Quality Ratings as of April 1, 2015	5 stars=5 points 4 stars=3 points 3 stars=1 point 2 stars=0 points 1 star=0 points		No
3	Percent of employees vaccinated for influenza	NYS DOH	Employee vaccination data submitted to the Bureau of Immunization through HERDS for the 2014-2015 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
MDS 3.0 Quality Measures						
4	Percent of long stay high risk residents with pressure ulcers	CMS	MDS 3.0, 2014 calendar year	Quintile	Risk adjusted by the New York State Department of Health (NYS DOH)	Yes
5	Percent of long stay residents who received the pneumococcal vaccine*	CMS	MDS 3.0, 2014 calendar year	Quintile		No
6	Percent of long stay residents who received the seasonal influenza vaccine*	CMS	MDS 3.0, 2014 calendar year	Quintile		Yes
7	Percent of long stay residents experiencing one or more falls with major injury	CMS	MDS 3.0, 2014 calendar year	Quintile		Yes

*a higher rate is better

Number	Measure	Measure Steward	Data Source and Measurement Period	Scoring Method	Notes	Eligible for Improvement in 2015 NHQI
8	Percent of long stay residents who have depressive symptoms	CMS	MDS 3.0, 2014 calendar year	Quintile		Yes
9	Percent of long stay low risk residents who lose control of their bowel or bladder	CMS	MDS 3.0, 2014 calendar year	Quintile		Yes
10	Percent of long stay residents who lose too much weight	CMS	MDS 3.0, 2014 calendar year	Quintile	Risk adjusted by the NYS DOH	Yes
11	Antipsychotic use in persons with dementia	Pharmacy Quality Alliance (PQA)	MDS 3.0, 2014 calendar year	Quintile	New measure	No
12	Percent of long stay residents who self-report moderate to severe pain	CMS	MDS 3.0, 2014 calendar year	Quintile	Risk adjusted by the NYS DOH	Yes
13	Percent of long stay residents whose need for help with daily activities has increased	CMS	MDS 3.0, 2014 calendar year	Quintile		Yes
14	Percent of long stay residents with a urinary tract infection	CMS	MDS 3.0, 2014 calendar year	Quintile		Yes

*a higher rate is better

Compliance Component (20 points)

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

- CMS Five-Star Quality Rating for Health Inspections (regionally adjusted)
 - CMS' facility ratings for the health inspections domain are based on the number, scope, and severity of the deficiencies identified during the three most recent annual inspection surveys, as well as substantiated findings from the most recent 36 months of complaint investigations. All deficiency findings are weighted by scope and severity. The CMS rating also takes into account the number of revisits required to ensure that deficiencies identified during the health inspection survey have been corrected.
 - The **health inspection survey scores** from CMS will be 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 NYS DOH Bureau of Immunization by the deadline of May 1, 2015 is worth five points.
 - Submission of certified and complete 2014 nursing home cost reports to the NYS DOH by the deadlines of August 14, 2015 for calendar year filers, and November 13, 2015 for fiscal year filers, is worth five points.

The three compliance measures for the 2015 NHQI are shown in the table below.

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 1, 2015	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	NYS DOH	Employee influenza vaccination data submitted to the Bureau of Immunization through HERDS for the 2014-2015 influenza season	Five points for submission by the deadline
3	Timely submission of certified and complete nursing home cost reports	NYS DOH	Nursing home cost report, 2014 calendar year for calendar filers and 2014 fiscal year for fiscal filers	Five points for timely, certified and complete submission of the 2014 cost report

Efficiency Component (10 points)

- To align with the other CMS quality measures, the Potentially Avoidable Hospitalizations rate will be calculated for each quarter, then averaged to create an annual average.
- The PAH measure is risk adjusted.

Number	Measure	Measure Steward	Data Source and Measurement Period	Scoring Method
1	Potentially Avoidable Hospitalizations	CMS/NYS DOH	MDS 3.0 and SPARCS, 2014 calendar year	Quintile 1=10 points Quintile 2=8 points Quintile 3=6 points Quintile 4=2 points Quintile 5=0 points

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 90 rather than 100. The sum of its points will be divided by 90 to calculate its total score. The example below provides a mathematical illustration of this method.

	Facility A no small sample size	Facility B small sample size on two quality measures
Sum of points	80	80
Maximum points attainable	100	90
Score (points/maximum)	.80	.89
Score x 100	80%	89%

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 (2014) and June 30 of the reporting year (2015).
- 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 (2015) will **not** be included in the current NHQI; they will be included in the next NHQI cycle.

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 2014 or 2015, prior to the final calculation of the 2015 NHQI
- Specialty facilities
- Specialty units within a nursing home (i.e. AIDS, pediatric specialty, traumatic brain injury, ventilator dependent, behavioral intervention)
- Continuing Care Retirement Communities
- Transitional Care Units

NYS DOH Development of Staffing Measures

Two new NYS DOH staffing measures will be included in the release of the 2015 NHQI results **for benchmarking purposes only**. These measures will **not** be used in the scoring algorithm for the 2015 NHQI. Each nursing home's 2015 NHQI results will include the values and quintile placements for the measures in the table below. NYS DOH continues to communicate with the NHQI workgroup regarding testing and evaluation of these measures. Nursing homes are encouraged to compare these measures to their cost report data. Other projects that nursing homes may be involved in, such as Advancing Excellence in America's Nursing Homes, produce similar measures that may be comparable. Please contact the NHQI email address with questions and feedback. The measure descriptions and data sources are described below.

Number	Measure	Measure Steward	Data Source and Measurement Period	Measure description
1	Staffing rate (nurse hours per day for RNs, LPNs, and Aides)	NYS DOH	2014 nursing home cost report and 2014 MDS 3.0	<ul style="list-style-type: none"> • The hours reported are taken from the hours worked field for RNs, LPNs, and Aides on the nursing home cost report. • The hours expected are computed using the MDS RUG distribution of the nursing home residents and the CMS Time Staff Measurement Studies. • The hours reported are divided by the hours expected and multiplied by the statewide average to create a case-mix-adjusted staffing rate.
2	Percent of staff turnover	NYS DOH	2014 nursing home cost report	<ul style="list-style-type: none"> • The total number of RNs, LPNs, and Aides at the end of each quarter, and the total number of RNs, LPNs, and Aides terminated at the end of the year will be taken from the nursing home cost report. • The total number of above-mentioned staff members terminated will be divided by the average number of staff members per quarter to calculate the percent of staff turnover. • Contract and per diem staff are excluded from this measure.

Schedule for the 2015 NHQI

- May 1, 2015 – Employee influenza vaccination data due
- August 14, 2015 – Nursing home certified and complete cost reports due for calendar year filers
- November 13, 2015 - Nursing home certified and complete cost reports due for fiscal year filers
- December 2015 – NYS DOH will release preliminary results on the Health Commerce System for feedback
- January 2016 – NYS DOH will release the final results of the 2015 NHQI on the Health Commerce System and on Health Data NY
- Early 2016 – NYS DOH will release the methodology for the 2016 NHQI

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

Measure specifications for the CMS Quality Measures can be found in the MDS 3.0 QM User's Manual, Version 8.0 at <http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/NHQIQualityMeasures.html>.

New York State Department of Health

2015 Nursing Home Quality Initiative

Interpreting the Facility's Report

The facility-level report is comprised of five areas: [1] quality component, [2] compliance component, [3] efficiency component, [4] scoring, and [5] determination of ineligibility.

1. Quality Component (70 points)

The quality component contains 14 quality measures worth a combined maximum of 70 points. Each measure is weighted equally. The quality component consists of the MDS 3.0 quality measures (using all four quarters of 2014), the staffing measures (using the CMS five-star quality rating for staffing as of April 1, 2015 and the percent of contract/agency staff used from 2014 nursing home certified cost report data), and the NYS-specific employee flu immunization measure (using data from the 2014-2015 influenza season).

MDS 3.0 quality measures

- The 'Value' column shows the rates of each MDS 3.0 quality measure. A value of 'SS' (small sample) indicates that the denominator for the measure was less than 30 and thus the sample was too small to create a meaningful rate. This did not result in a loss of points. In cases of a small sample size, the maximum points that the facility could obtain were reduced from the base and its final score divided by the maximum points available.
 - For example, if a facility has a small sample size on two of its quality measures (each worth five points), the maximum attainable points will be 90 rather than 100. The sum of its points will be divided by 90 to calculate its total score.
- The 'Quintile' column shows the quintile for which the facility qualified based on the distribution of values from all facilities in the Nursing Home Quality Initiative (NHQI). Quintile one is the top quintile, while five is the bottom.
 - Two quality measures were not separated into quintiles and will show 'NA' (not applicable) for their quintile assignment: *Percent of contract/agency staff used*, and *Percent of employees vaccinated for influenza*. These quality measures are assigned all or no points based on threshold values.
 - For the employee influenza vaccination measure, a rate of 85% or higher resulted in five points awarded, while a rate below 85% resulted in zero points. If the measure had too small of a sample size and the value indicates 'SS', the quintile will indicate 'NA'.
 - For the percent of contract/agency staff used measure, a rate of 10% or higher resulted in zero points, while a rate of less than 10% resulted in five points awarded.
- The 'Points' column shows the number of points awarded to the facility based on its performance in the measure.

Staffing measures

- CMS five-star quality rating for staffing
 - The 'Value' column shows the number of stars awarded by CMS' five-star rating as of April 1, 2015. A value of 'NA' indicates that data from CMS was not available, or the facility was too new to rate. In this case, the facility was not penalized and the base was reduced.

- This measure does not require a quintile ranking and will indicate 'NA'.
- The 'Points' column shows the number of points awarded to the facility based on the number of stars it received.
- Percent of contract/agency staff used
 - The 'Value' column shows the percent of contract/agency staff used by the facility in 2014. This value was calculated using the 2014 nursing home cost report data.
 - A value of 'DNS' (did not submit) indicates that the facility did not submit cost report data by its designated deadline. In this case, the facility received zero points and the base was not reduced.
 - A value of 'NA' indicates that the facility was not required to submit the level of data needed to calculate a rate because the facility was designated as a Part 1 filer. In this case, the facility was not penalized and the base was reduced.
 - This measure does not require a quintile ranking and will indicate 'NA'.
 - The 'Points' column shows the number of points awarded. Five points were awarded for a percent of contract/agency staff used of less than 10%. Zero points were awarded for 10% or higher.

Percent of employees vaccinated for influenza

- The 'Value' column shows the percent of nursing facility staff who received the influenza vaccine during the 2014-2015 influenza season. A value of 'DNS' indicates that the facility did not submit employee influenza immunization data by the designated deadline. In this case, the facility received zero points and the base was not reduced.
- This measure does not require a quintile ranking and will indicate 'NA'.
- The 'Points' column shows the number of points awarded. Five points were awarded if the rate was 85% or higher. Zero points were awarded if the rate was less than 85%.

2. Compliance Component (20 points)

The compliance component contains three measures worth a combined maximum of 20 points. The NYS regionally adjusted five-star health inspection rating as of April 1, 2015 is worth ten points and is adjusted for regional variation by NYS. The timely submission of 2014 nursing home certified cost reports and timely submission of 2014 employee influenza immunization data for the 2014-2015 influenza season are each worth five points.

NYS regionally-adjusted five-star quality rating for health inspections

- The 'Value' column shows the number of stars awarded by the five-star rating. A value of 'NA' indicates that health inspection score data from CMS was not available, or the facility was too new to rate. In this case, the facility was not penalized and the base was reduced.
- This measure does not require a quintile ranking and will indicate 'NA'.
- The 'Points' column shows the number of points awarded to the facility based on its five-star rating.
- 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 are awarded for four stars, four points for three stars, two point for two stars, and zero points for one star.

Timely submission of nursing home certified cost reports
Timely submission of employee influenza immunization data

- The 'Value' column indicates whether or not the facility submitted the data by the designated deadline.
- These measures do not require quintile rankings and will indicate 'NA'.
- The 'Points' column shows the number of points awarded to the facility.
- Timely submission of nursing home certified cost reports
 - Five points are awarded if the value is 'Yes', and zero points if the value is 'No'.
- Timely submission of employee influenza immunization data
 - May 1, 2015 deadline: five points are awarded if the value is 'Yes', and zero points if the value is 'No'.

3. Efficiency Component (10 points)

The efficiency component includes the potentially avoidable hospitalizations measure. This measure is based on all four quarters of 2014, and is worth 10 points. It indicates the number of potentially avoidable hospitalizations per 10,000 long stay days.

- The 'Value' column shows the number of potentially avoidable hospitalizations per 10,000 long stay days.
- The 'Quintile' column shows the quintile for which the facility qualified based on the distribution of values from all facilities in the NHQI.
- The 'Points' column shows the number of points awarded to the facility based on its quintile.
- 10 points are awarded for obtaining the first quintile, eight points for the second quintile, six points for the third quintile, two points for the fourth quintile, and zero points for the fifth quintile.

4. Scoring

The scoring component contains the overall score and the quintile ranking.

Overall score

- The 'Points' column shows the sum of the points earned for each measure, divided by the total base of points for the facility, multiplied by 100. The example below provides a mathematical illustration of this method.

	Facility A No small sample size (no reduction of base points)	Facility B Small sample size on two quality measures, each worth 5 points (10-point reduction of base points)
Sum of points	80	80
Base points	100	90
Score (points/maximum)	.80	.89
Score x 100	80%	89%

Quintile ranking

- The 'Quintile' column shows the quintile for which the facility qualified based on the distribution of scores from all facilities in the NHQI. The first quintile is the top rank, while the fifth quintile is the bottom.

5. Determination of Ineligibility

The determination of ineligibility section indicates that a facility had a level J, K, or L deficiency between July 1 of the measurement year (2014) and June 30 of the reporting year (2015), making it ineligible for potential payment. The overall score and quintile ranking are displayed for these facilities to show where they would have placed in the rankings had they had not received a level J, K, or L deficiency.

New York State Department of Health 2015 Nursing Home Quality Initiative

Benchmarking Staffing Measure Reports Methodology and Interpretation

Background

The New York State Department of Health (NYS DOH) continues to explore and test new measures, and improve existing measures for implementation in future Nursing Home Quality Initiatives. Two new NYS DOH staffing measures have been developed, and are included in the release of the 2015 Nursing Home Quality Initiative (NHQI) results. The two benchmarking measures are:

1. Percent of Staff Turnover
2. Rate of Staffing Hours Per Day

These measures are for benchmarking purposes only and were not used in the scoring algorithm for the 2015 NHQI. The data used to calculate these measures and the results will not be publically released.

Nursing homes that were required to submit only Part 1 of the 2014 nursing home cost report were not eligible for the two benchmarking staffing measures. Part 1 filers were not required to submit the level of data needed to calculate these measures. As a result, nursing homes that filed as Part 1 filers will see the letters 'NA' for both benchmarking staffing measure reports.

Nursing homes that did not submit their 2014 nursing home cost reports by their designated deadlines will see the letters 'DNS' for both benchmarking staffing measure reports, as their cost report data was not available.

The NYS DOH continues to communicate with the NHQI workgroup regarding testing and evaluation of these measures. Nursing homes are encouraged to compare these measures to their cost report data. Other projects that nursing homes may be involved in, such as Advancing Excellence in America's Nursing Homes, produce similar measures that may be comparable. Nursing homes are encouraged to contact the NHQI email address at nhqp@health.ny.gov with questions and feedback regarding these measures. The measure descriptions, data sources, and formulas are described below.

1. Percent of Staff Turnover

Background on Measure Development

A high rate of staff turnover in a nursing home can lead to decreased productivity, lower staff and resident morale, and has the potential to negatively affect quality of care. The NYS DOH has been developing a staff turnover measure using the nursing home cost report data; an already-existing data source available to the Department.

During consultation with the NHQI workgroup, the issue that per diem staff may have higher turnover rates than non-per diem staff was discussed. The decision was made to exclude both per diem and contract staff from the measure. Schedule P – Staff Turnover is already stratified by non-contract and contract staff, so the contract staff data are not incorporated into the measure. However, the non-contract section of Schedule P includes both non-contract and per diem staff. In order to capture the

turnover data for per diem staff only, the necessary fields were added to Schedule O – Quality. The per diem staff are then subtracted from the non-contract section on Schedule P using the following formula: Number of non-contract and per diem staff on Schedule P **minus** Number of per diem staff on Schedule O

The staff turnover measure represents the average annual turnover for non-contract, non-per diem Registered Nurses (RNs), Licensed Practical Nurses (LPNs), and Aides, Orderlies, and Assistants (Aides).

Cost Report Data

The staff turnover measure utilizes two schedules from the 2014 nursing home cost report:

1. Schedule O (2) – Quality Measures – Total Number of Per Diem Employees
2. Schedule P – Staff Turnover

Tables 1 and 2 below reference the line numbers and data fields on the nursing home’s percent of staff turnover benchmarking measure report. The tables show the rows and columns that are used from the cost report schedules to calculate the numbers in the data fields.

For example, on the nursing home’s staff turnover benchmarking measure report, line number A1 is the number of per diem RNs, LPNs, and Aides on 3-31-2014. Below, Table 1 shows the rows and columns from Schedule O – Quality that were used to calculate the number on line A1. In column 0571 of the schedule, the numbers of RNs, LPNs, and Aides for the RHCF (row 001) and each available specialty unit (rows 002-007) are summed to calculate the number of per diem RNs, LPNs, and Aides on 3-31-2014. Table 2 shows the same information for Schedule P – Staff Turnover.

Table 1. Schedule O – Quality: Per Diem Staff

Line Number	Data Field	Schedule Row(s)	Schedule Column(s)
A1	Per diem RNs, LPNs, & Aides on 3-31-2014	001, 002, 003, 004, 005, 006, 007	0571
B1	Per diem RNs, LPNs, & Aides on 6-30-2014	001, 002, 003, 004, 005, 006, 007	0572
C1	Per diem RNs, LPNs, & Aides on 9-30-2014	001, 002, 003, 004, 005, 006, 007	0273
D1	Per diem RNs, LPNs, & Aides on 12-31-2014	001, 002, 003, 004, 005, 006, 007	0574
E1	Per diem terminated	001, 002, 003, 004, 005, 006, 007	0575

Table 2. Schedule P – Staff Turnover: Non-contract Staff (includes per diem)

Line Number	Data Field	Schedule Row(s)	Schedule Column(s)
A2	Non-contract RNs, LPNs, & Aides on 3-31-2014	003, 004, 005	0771
B2	Non-contract RNs, LPNs, & Aides on 6-30-2014	003, 004, 005	0772
C2	Non-contract RNs, LPNs, & Aides on 9-30-2014	003, 004, 005	0773
D2	Non-contract RNs, LPNs, & Aides on 12-31-2014	003, 004, 005	0774
E2	Non-contract terminated	003, 004, 005	0779

Below, Table 3 shows the line numbers used to subtract per diem staff and calculate the average number of non-contract, non-per diem RNs, LPNs, and Aides per quarter.

Table 3. Excluding Per Diem Staff from Schedule P – Staff Turnover

Line Number	Data Field	Formula (using Line Numbers)
A3	Non-contract minus per diem on 3-31-2014	A2-A1
B3	Non-contract minus per diem on 6-30-2014	B2-B1
C3	Non-contract minus per diem on 9-30-2014	C2-C1
D3	Non-contract minus per diem on 12-31-2014	D2-D1
E3	Average number of non-contract, non-per diem per quarter	$(A3+B3+C3+D3) / 4$
F3	Non-contract terminated minus per diem terminated	E2-E1

Result – Percent of Staff Turnover

The percent of staff turnover (line A4 on the measure report) is then calculated by dividing line F3 (Non-contract terminated minus per diem terminated) by line E3 (Average number of non-contract, non-per diem per quarter), and multiplying by 100.

The NYS DOH intended to quintile this measure and assign hypothetical quintile placements to nursing homes based on their performance. However, an issue with the cost report data, discussed below, prevented this. Some nursing homes reported inaccurate data for Schedules O – Quality and P – Staff Turnover, respectively. The inaccuracies would have led to inaccurate quintile cut points and quintile placements.

Cost Report Issues

In the 2014 nursing home cost reports, some facilities reported a number of per diem staff on Schedule O that was greater than the total number of non-contract staff on Schedule P. On Schedule P, the section for non-contract staff should include any per diem staff. Schedule O should include only per diem staff. The number of per diem staff on Schedule O can then be subtracted from the number of staff on Schedule P.

In the hypothetical example report below, after subtracting the number of per diem staff from Schedule P, the result is -10 RNs, LPNs, and Aides at the end of each quarter. The calculation results in a negative percent of staff turnover.

Line Number	Data Field	Value
1. Schedule O – Quality: Per Diem Staff		
A1	Per diem staff on 3-31-14	50
B1	Per diem staff on 6-30-14	50
C1	Per diem staff on 9-30-14	50
D1	Per diem staff on 12-31-14	50
E1	Per diem staff terminated	10
2. Schedule P - Staff Turnover: Non-contract Staff (includes per diem)		
A2	Non-contract staff on 3-31-14	40
B2	Non-contract staff on 6-30-14	40
C2	Non-contract staff on 9-30-14	40
D2	Non-contract staff on 12-31-14	40
E2	Non-contract staff terminated	15
3. Excluding per diem staff from Schedule P – Staff Turnover		
A3	Non-contract minus per diem on 3-31-14	-10
B3	Non-contract minus per diem on 6-30-14	-10
C3	Non-contract minus per diem on 9-30-14	-10
D3	Non-contract minus per diem on 12-31-14	-10
E3	Average number of non-contract, non-per diem staff per quarter	-10
F3	Non-contract minus per diem terminated	5
4. Result		
A4	Percent staff turnover	-50%

2. Rate of Staff Hours Per Day

Background on Measure Development

The NYS DOH and the NHQI workgroup have had discussions about the need for a more robust, annual staffing measure. The CMS Five-Star Quality Rating for Staffing utilizes reported staffing data from a two-week period prior to the onsite health inspection survey. It determines the nursing home's case-mix by using the Resource Utilization Group (RUG) distribution of its residents from a point in time.

Alternatively, the staffing measure that NYS DOH has developed incorporates staffing and RUG data spanning the entire year. The annual reported rate of staff hours per day and reported patient days are calculated using the cost report data. The annual expected rate and expected patient days are calculated using the MDS data and the estimated staff minutes from the CMS 1995-1997 Staff Time Measurement Study located in Table A1 of the Appendix of the CMS Design for *Nursing Home Compare* Five-Star Quality Rating System: Technical User's Guide¹. The annual adjusted rate is then calculated by dividing the reported rate by the expected rate, and multiplying by the statewide reported rate.

Reported Staffing Hours per Day Cost Report Data

The reported rate of staff hours per day utilizes the following schedules from the 2014 nursing home cost report, depending on the nursing home's Residential Health Care Facility (RHCF) filer type:

RHCF-4 Filers

1. Schedule 5A – Standard Workweek and Hours Worked
2. Schedule 5A (RELCO): Related Company – Standard Workweek and Hours Worked
3. Schedule O (1) – Quality Measures – Hours Paid for Purchased of Contracted Services
4. Bed Capacity & Days of Care

RHCF-2 Filers

1. Direct Charge Employees Wage Schedule
2. Schedule O (1) – Quality Measures – Hours Paid for Purchased of Contracted Services
3. Bed Capacity & Days of Care

The table below shows the cost report schedules used to calculate the reported number of staff hours (line A1 on the measure report), and the reported number of bed capacity patient days (line B1 on the measure report). The rows and columns taken from each schedule, as well as the corresponding line number and data fields on the measure report, are shown. For RHCF-4 and RHCF-2 filers, more than one cost report schedule is used to calculate the reported number of staff hours.

For example, on the nursing home's rate of staffing hours per day measure report, line number A1 is the annual number of hours for full time (hours worked) and contract (hours paid) RNs, LPNs, and Aides. Note that RHCF-4 and RHCF-2 filers complete a different schedule to capture full time employee hours worked. For RHCF-4 filers, the numbers of RNs, LPNs, and Aides from Schedule 5A, Schedule 5A RELCO, and Schedule O are summed together to calculate the total number of full-time and contract staff. If the

¹ Centers for Medicare and Medicaid Services (February 2015). Design for *Nursing Home Compare* Five-Star Quality Rating System: Technical User's Guide February 2015. Retrieved from <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/CertificationandCompliance/Downloads/usersguide.pdf>

nursing home submitted more than one Schedule 5A RELCO (one for each related company), each RELCO schedule is included. To calculate this for RHCF-2 filers, the numbers of RNs, LPNs, and Aides from the Direct Charge Employees Wage Schedule and Schedule O are summed together.

Table 1. Cost Report Data

Line Number	Data Field	Filer Type	Schedule(s) Row(s)	Schedule(s) Column(s)
A1	Total reported staffing hours (full-time and contract)	RHCF-4	Schedule 5A: 051, 071, 072, 073, 074, 075, 076 Schedule 5A RELCO: 051, 071, 072, 073, 074, 075, 076 Schedule O: 001, 002, 003, 004, 005, 006, 007	Schedule 5A: 0146, 0148, 0150 Schedule 5A RELCO: 0331, 0333, 0335 Schedule O: 0560, 0561, 0562
		RHCF-2	Direct Charge Employees Wage Schedule: 003, 004, 005, 006, 007, 008, 009 Schedule O: 001, 002, 003, 004, 005, 006, 007	Direct Charge Employees Wage Schedule: 0456 Schedule O: 0560, 0561, 0562
B1	Total reported bed capacity patient days	RHCF-4	Bed Capacity & Days of Care: 017	Bed Capacity & Days of Care: 0620
		RHCF-2	Bed Capacity & Days of Care: 017	Bed Capacity & Days of Care: 0620

For both RHCF-4 and RHCF-2 filers, the reported staffing hours per day (line C1 on the measure report) is calculated by dividing line A1 (total reported staffing hours) by line B1 (total reported bed capacity patient days).

Expected Staffing Hours per Day

MDS Data

The expected rate of staff hours per day utilizes MDS data for all nursing home residents in the 2014 measurement year. The number of days each nursing home resident spends in the nursing home is summed to calculate the nursing home’s total expected patient days for the year (line A2 on the measure report). Each day the nursing home resident spends at a specific RUG is summed and multiplied by the RUG’s associated minutes designated by the CMS 1995-1997 Staff Time Measurement Study (line B2 on the measure report). The expected staffing hours per day (line C2 on the measure report) is then calculated by dividing line A2 by line B2.

For the following simplified example, assume a nursing home has two residents for the year (Resident A and Resident B). Resident A spends 200 days in the nursing home, while Resident B spends 100 days in the nursing home. The total expected patient days for the nursing home is 300.

Resident A (200 total days)

- Resident A contributes 100 days to the Low Rehabilitation Group, at RUG RLA. RUG RLA requires 3.636 hours per day (218.18 minutes). Therefore, it is expected that Resident A receives a total of 363.6 staff care hours for the 100 days he is at RUG RLA.
- Resident A contributes the remaining 100 days to the Behavior Group, at RUG BB2. RUG BB2 requires 3.433 hours per day (206.0 minutes). Therefore, it is expected that Resident A receives a total of 343.3 staff care hours for the 100 days he is at RUG BB2.
- The total number of expected staffing hours for Resident A is 707.0.

Resident B (100 total days)

- Resident B contributes 20 days to the High Rehabilitation Group, at RUG RHC. RUG RHC requires 5.106 hours per day (306.37 minutes). Therefore, it is expected that Resident B receives a total of 102.1 staff care hours for the 20 days she is at RUG RHC.
- Resident B contributes the remaining 80 days to the Physical Function Group, at RUG PE2. RUG PE2 requires 4.230 hours per day (253.80 minutes). Therefore, it is expected that Resident B receives a total of 338.4 staff care hours for the 80 days she is at RUG PE2.
- The total number of expected staffing hours for Resident B is 440.5.

The total number of expected staffing hours for the nursing home is 1147.5 (707.0 from Resident A + 440.5 from Resident B). The nursing home's expected staffing hours per day is calculated by dividing the expected hours by the expected days (1147.5 hours / 300 days). The result is 3.8 expected staffing hours per day.

Statewide Average

The statewide average of staffing hours per day (line A3 on the measure report) utilizes the reported rates from all nursing home cost reports. The reported staffing hours per day from every nursing home is summed and divided by the total number of nursing homes in the measure to calculate the statewide average.

Result – Rate of Staffing Hours per Day (adjusted)

The adjusted rate of staffing hours per day (line A4 on the measure report) is calculated by dividing the reported staffing hours per day (line C1 on the measure report) by the expected staffing hours per day (line C2 on the measure report), and multiplying by the statewide average (line A3 on the measure report). The adjusted rates from all nursing homes in the measure are then stratified into quintiles (line B4 on the measure report). The quintile shown on line B4 is the hypothetical quintile placement based on the nursing home's performance in this benchmarking measure.