

## Frequently Asked Questions

### About the Quality Measure Composite Score used in the National Nursing Home Quality Care Collaborative (NNHQCC), April 2015, October 2015, January 2016 (January 2016 changes are shown in red)

Prepared by the QIN National Coordinating Center for Discussion with QIN-QIOs

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#### **Q1: What is the Quality Measure Composite Score?**

**A:** The Quality Measure Composite Score, also referred to as the Composite Score, can be used to monitor NNHQCC progress at the national, QIN-QIO, and nursing home levels. Nursing homes participating in the NNHQCC focus on processes that improve their systems and measure individual tests of change. Specifically, they look at their Plan-Do-Study-Act (PDSA) improvement cycle results, clinical outcomes measures, and composite scores. The Composite Score is not intended to replace or supersede existing local or federal initiatives, including the 5-star rating system, but is offered as another way to look at quality from a systems perspective.

#### **Q2: Which quality measures are included in the Composite Score?**

**A:** The Composite Score is comprised of 13 NQF-endorsed\*, publically reported, long-stay quality measures that represent processes and interrelated systems of care within the long term care setting:

1. Percent of residents with one or more falls with major injury
2. Percent of residents with a urinary tract infection (UTI)
3. Percent of residents who self-report moderate to severe pain
4. Percent of high-risk residents with pressure ulcer
5. Percent of low-risk residents who lose control of their bowels or bladder
6. Percent of residents with catheter inserted or left in bladder
7. Percent of residents physically restrained
8. Percent of residents whose need for help with Activities of Daily Living (ADL) has increased
9. Percent of residents who lose too much weight
10. Percent of residents who have depressive symptoms
11. Percent of residents who received antipsychotic medications\*
12. Percent of residents assessed and appropriately given the seasonal influenza vaccine
13. Percent of residents assessed and appropriately given the pneumococcal vaccine

\*NQF endorsement anticipated

#### **Q3: What is the data source used to calculate the Composite Score?**

**A:** Two data sources that can be used to calculate the 13-QM Composite Score are described here. Two additional data sources that nursing homes could use to approximate their Composite score are described in Q12.

1) QIES Workbench: Facility-level quality measure numerators, denominators, and rates derived from the MDS 3.0 are extracted from the QIES Workbench for rolling six-month time periods on a monthly basis and used to calculate the Composite Score. The data are not broken out by month. There is a little more than a two month delay from the last month of the time period. For example, the January through June time period would be extracted on the first business day after the first weekend in September; the February through July time period would be extracted on the first business day after the first weekend in October; the March through August time period would be extracted on the first business day after the first weekend in November, and so forth.

2) NHQI (Nursing Home Quality Initiative): Composite scores can also be computed based on NHQI data from one of CMS's data contractors which contains **quarterly** facility-level quality measure numerators, denominators, and rates derived from the MDS 3.0. The data contractor provides the data approximately 3.5 months after the end of the quarter. NHQI data will be used for QIN-QIO evaluation (HCQIS Memo 15-073-NH).

#### **Q4: How is the Composite Score calculated?**

**A:** The Composite Score is calculated based on the "opportunity model" concept. Numerators and denominators are summed across all 13 quality measures to determine the composite numerator and denominator. The composite numerator is then divided by the composite denominator and multiplied by 100 to obtain the Composite Score. Please note that before the numerators and denominators can be summed, the direction of the two vaccine measures must be reversed because they are directionally opposite of the others. This can be done by subtracting the vaccine numerator from the vaccine denominator to obtain a "reversed" numerator. This "reversed" numerator is what should be counted in the composite numerator. By keeping all measure directions consistent, the Composite Score can be interpreted as the lower, the better.

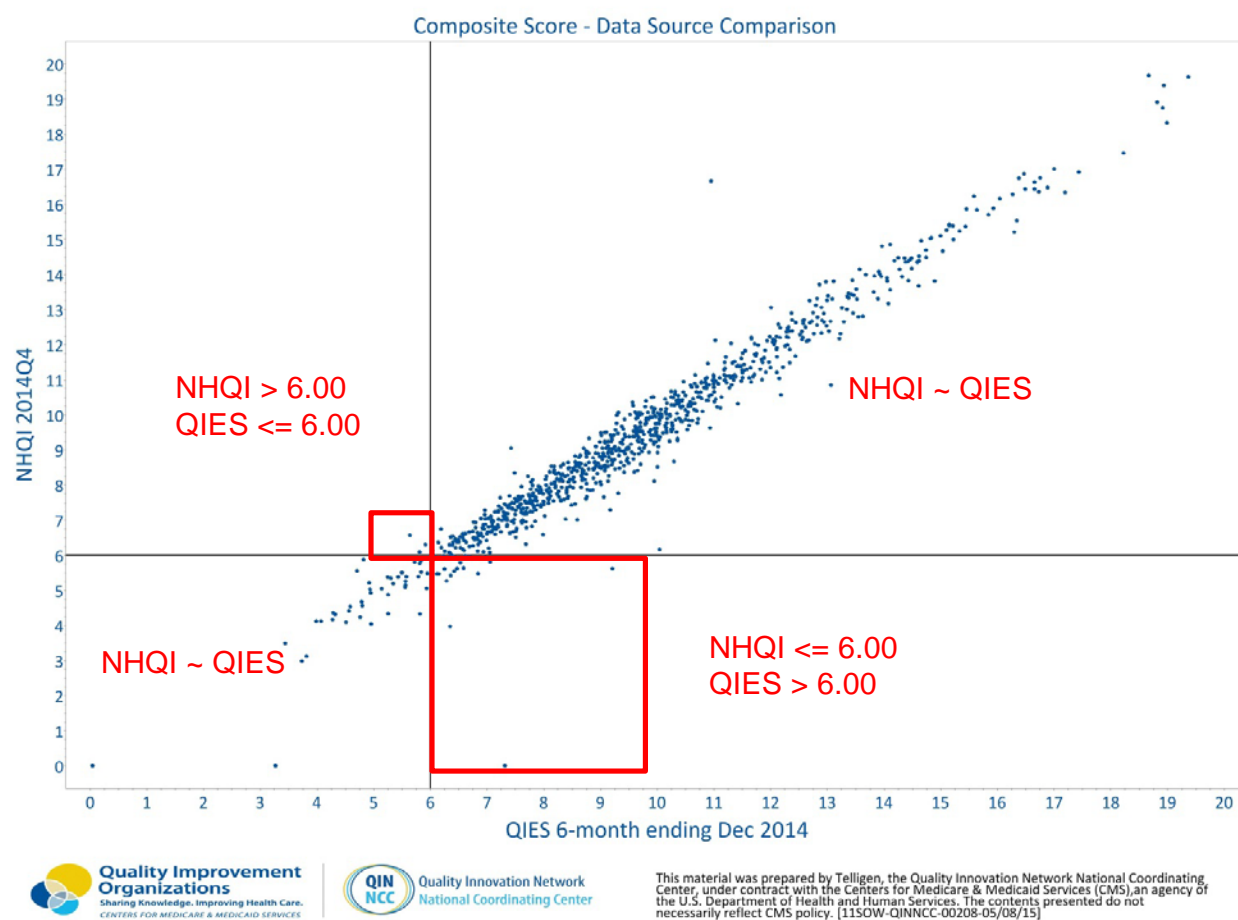
The Composite Scores are computed in the same manner for the six-month time periods based on QIES data and for the quarterly time periods based on NHQI data.

#### **Q5: Is there agreement between Composite Scores calculated from NHQI quarterly data and six month QIES data?**

**A:** CMS and the NCC have conducted analysis to better understand the level of agreement between Composite scores computed from different data sources.

To study how Composite Scores calculated from NHQI data agree with QIES data, the NCC created scatter plots of facility-level composite scores computed from NHQI 2014Q4 and QIES data ending December 2014 for all states. As depicted by dots in graphs below, the two data sources appear to agree quite well. Note that dots falling on the 45-degree diagonal line suggest perfect matches between the two data sources. The vertical reference line signifies a composite score of 6.00 based on QIES data; whereas the horizontal reference line indicates a composite score of 6.00 based on NHQI data. Dots in the upper right or lower left quadrants suggest that the two data sources agree with each other in

determining whether facilities' composite scores are greater or less than 6.00. For most states, more facilities achieved a composite score of 6.00 or lower based on quarterly NHQI data.



The NCC also examined achievement of a Composite Score of 6.00 by analyzing NHQI quarterly datasets 2013Q1-2015Q1 for nine quarters total as compared to using QIES rolling 6-month data March 2013 through March 2015 for a total of 25 6-month evaluation periods. The analysis included collaborative nursing homes based on DDST recruitment data as of June 2015. Composite scores were truncated at two decimal places. Participating nursing homes that achieved a composite score of 6.00 or lower during any of the aforementioned periods were flagged. Results of this investigational analysis reveal that more nursing homes and states would achieve a composite score of 6.00 or lower using quarterly NHQI data over the same evaluation time frame.

#### Q6: What is meant by “mature” data?

A: Data provided by NHQI are considered mature and used for public reporting purposes. Mature data are considered final for the observation period being reported and not subject to further corrections/updates from nursing home MDS assessment submissions.

**Q7: Version 9.0 of the CMS MDS 3.0 Quality Measure’s User’s Manual noted two changes effective October 1, 2015 with the influenza immunization measure. How will these changes impact calculation and results for the Composite Score?**

A: Version 9.0 noted two changes to the influenza vaccine measures: 1) a change in time period for calculation of the measures and 2) a change to a single calculation per year.

The national influenza immunization rates appear flat starting with six-month periods ending July 2015. This is due to two changes in the computation of the measure (a change in the time period for calculation of the measure and a change to a single calculation per year), as described in the MDS 3.0 QM User’s Manual V9.0, released in September 2015 and effective October 1, 2015. The QM User’s Manual V9.0 can be found at <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-instruments/NursingHomeQualityInits/NHQIQualityMeasures.html>. Notes in the measure specifications for Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine (Long Stay) indicate: “This measure is only calculated once a year with a target period of October 1 of the prior year to June 30 of the current year and reports for the October 1 through March 31 influenza season.”

The anticipated impact of this change is that we will no longer see the gradual uptick or worsening of the influenza immunization measure rate in the early months of the flu season, and then the gradual improvement in the rate as the flu season progressed. The worsening of the rate early in the flu season was due to the time it takes for nursing homes to progress through their assessments and vaccinations. This change in the influenza immunization measure computation will likely reduce the quality measure composite score seasonal fluctuations that we have historically seen as well.

**Q8: How was the goal of “6.00 or less” established?**

A: Prior to the launch of the first NNHQCC in early 2013, nearly 10% of the nation’s nursing homes had achieved a Composite Score of 6.00 or less, so that was established as a benchmark.

**Q9: Will QIN-QIOs be able to calculate their state and individual nursing homes scores?**

A: Yes, however, the NCC will provide computed Composite Scores in the scorecards provided to QIN-QIOs. If a QIN-QIO wanted to calculate their scores, they would use the facility-level QIES workbench data files provided by the QIN NCC and follow the method of composite score calculation as described earlier. Or, the QIN-QIOs may calculate the Composite scores for individual nursing homes as well as the state using quarterly NHQI data.

**Q10: Some community-based nursing facilities are not Medicare or Medicaid certified. Are they included in the state composite score?**

A: Nursing homes without a CMS Certification Number (CCN) cannot be included when calculating a composite score. QIN-QIOs track these homes in other ways, including participation totals, and completion of the QAPI self-assessment tool.

**Q11: Can nursing homes calculate their own composite scores?**

**A:** QIN-QIOs may share and are encouraged to share a nursing home’s individual data with nursing home leadership once it has been received from the NCC. Nursing homes can also approximate their own composite scores using the publically available data on Nursing Home Compare, although the time frames reported there are different than the rolling six-month time periods used to monitor progress in the Collaborative, and data would be suppressed for some nursing homes with small numbers. Nursing homes could also use CASPER data, although the two vaccination measure are not reported there and would have to be excluded from the composite score if using this data source to calculate the composite score.

**Q12: Can QIN-QIOs share individual nursing home composite scores with corporations or other stakeholders?**

**A:** QIN-QIOs must follow provisions outlined in Part B of Title XI of the Social Security Act (the Act). Sections 1154, 1156, and 1160 provide the basis for the acquisition, protection, and disclosure of information. 42 CFR Part 480 implements the above referenced provisions of the Act.

“Confidential information” includes information that explicitly or implicitly identifies an individual patient, practitioner, institution, or reviewer. Practitioner, reviewer and provider confidential information may only be disclosed to the identified practitioner, reviewer or provider, and this would include only information about them. Disclosure to others requires the written consent of the identified practitioner, reviewer or provider. QIN-QIOs should follow their organization’s QIN-QIO contractual confidentiality and disclosure policies.

**Q13: Why was the five-star quality rating system not used to measure progress in the Collaborative?**

**A:** The accelerated pace and short term nature of the Collaboratives benefit from data that can be monitored on a monthly or quarterly basis, with the most current data available. The Composite Score can be calculated and updated more frequently than the five-star quality rating system.

**Q14: Is there a listing of state-aggregate composite scores?**

**A:** Yes, state aggregate composite scores are provided by the NCC to QIN-QIOs each month. Here is a snippet from the table that is provided to QIN-QIOs monthly (states de-identified for this document):

	A	B	C	D	E	F	G	H	I	J	K	L
1	<b>Composite Summary by State, 11SoW NNHQCC Nursing Homes</b>											
2	<b>Data was pulled from the QIES workbench for rolling six-month time periods</b>											
3	Composite scores were calculated by summing the numerators & denominators for 13 quality measures*											
4	Note: Total number of nursing homes includes those with a composite score.											
5	<b>January 2015 - June 2015</b>											
6	<b>State</b>	<b># Homes</b>	<b>Avg**</b>	<b>Min</b>	<b>5th pctl</b>	<b>10th pctl</b>	<b>25th pctl</b>	<b>50th pctl</b>	<b>75th pctl</b>	<b>90th pctl</b>	<b>95th pctl</b>	<b>Max</b>
7	NAT'L	7,291	8.47	0.00	4.74	5.49	6.68	8.11	9.80	11.82	13.52	29.41
8	A	17	8.41	4.09	4.09	5.03	6.79	8.98	9.76	10.92	13.06	13.06
9	B	99	8.50	4.03	4.88	5.33	6.56	8.07	9.74	12.25	14.20	18.19
10	C	67	7.78	4.37	4.67	5.25	6.20	7.36	8.97	11.17	11.42	14.70
11	D	76	8.40	0.00	5.12	5.48	6.70	8.10	9.62	11.06	12.93	22.38
12	E	480	6.56	0.32	3.34	3.81	4.97	6.37	7.82	9.38	10.77	19.05

The NCC also provides state aggregate Composite Scores based on quarterly NHQI data in the scorecards provided to QIN-QIOs.

**Q15: Are there differences in composite scores across the nation?**

**A:** Composite scores vary across facilities and states. The report shown above (Q 15) includes the range of facility-level composite scores.