NATIONAL QUALITY FORUM
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MAP PAC/LTC Preliminary Analysis Worksheet

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Measure Information

Characteristic	Submitted Information
MUCID	MUC20-0002
Other Measure Identification Numbers	
Title	Skilled Nursing Facility Healthcare-Associated Infections Requiring Hospitalization
Program	Skilled Nursing Facility Quality Reporting Program
Workgroup	Measure Applications Partnership (MAP) – Post-Acute Care/Long-Term Care (PAC-LTC)
In what state of development is the measure?	Fully Developed
State of Development Details	Reportability Testing: We examined the total number and proportion of SNFs that would have at least 25 eligible stays for this measure using one year of data. In FY 2018, 85.90% of total SNFs (n= 14,347) met this threshold. This indicates high reportability and usability of the measure. Variability Testing: We summarized the distribution of the facility-level risk standardized HAI rate. In FY 2018, the mean risk-adjusted HAI rate among SNFs with at least 25 stays was 6.15% (median: 5.85%, IQR: 4.91%-7.08%). The risk-adjusted HAI rate among reportable SNFs ranged from a minimum of 2.19% to a maximum of 19.83%. Reliability Testing: 1. We conducted split-half testing to assess the internal consistency of a measure. In split-half testing, stays within a SNF are randomly assigned into two groups and the risk adjusted HAI rate per facility is calculated for both groups. To maintain the precision of the estimate as the measure would be used in the program, we doubled our sample size by including two years of data (FYs 2017 and 2018) prior to splitting the sample into two groups. This process only included SNFs with at least 50 stays in FYs 2017 and 2018 and was repeated 20 times to rule out extreme values. We used Spearman's rank correlation to assess the correlation between the HAI rates of the two groups. The average correlation from the 20 iterations was 0.52, which suggests moderate reliability. Validity Testing:1. We analyzed the model fit statistics to determine if the HAI model can accurately predict HAI cases while controlling for differences in resident case-mix. The C-statistic of the model was 0.72, which suggests good model discrimination. 2. To assess convergent validity, we assessed the relationship between the HAI measure and other publicly reported quality measures. The analysis was restricted to FY 2018 and only included data from providers with at least 25 stays. Using the Spearman's rank correlation, we compared the HAI measure to SNF QRP claims-based measures (Discharge to Community (DTC) and Potentially Preventable 30-Day Post-Discharge Readmission Measure (PPR), NHQI short-stay assessment-based measures (Percentage of short-stay residents who were assessed and appropriately given the seasonal influenza vaccine and Percentage of short-stay residents assessed and appropriately given the pneumococcal vaccine), and Five-Star Quality Rating measures (RN Staffing). As expected, the following measures were negatively correlated with HAI: DTC (-0.42), RN Staffing (-0.23), Percentage of short-stay residents who were assessed and appropriately given the seasonal

	influenza vaccine (-0.13), Percentage of short-stay residents assessed and appropriately given the pneumococcal vaccine (-0.10). As expected, PPR was positively correlated with HAI (0.12). All Spearman's rank correlations were statistically significant using the alpha level of 0.05. 3. We convened a Technical Expert Panel (TEP) meeting in May 2019 in which the TEP showed strong support for the face validity of the HAI measure. TEP members agreed with the conceptual and operational definition of the HAI measure. Specifically, the TEP agreed that the measure should focus on infections severe enough to require hospitalization and supported the clinical criteria used to select HAI diagnoses.
Measure Description	This measure will estimate the risk-adjusted rate of healthcare-associated infections (HAIs) that are acquired during skilled nursing facility (SNF) care and result in hospitalizations. The measure is risk adjusted to "level the playing field" and to allow comparison of measure performance based on residents with similar characteristics between SNFs. It is important to recognize that HAIs in SNFs are not considered "never-events." The goal of this risk-adjusted measure is to identify SNFs that have notably higher rates of HAIs that are acquired during SNF care and result in hospitalization, when compared to their peers.
Numerator	To calculate the measure numerator, we first count the outcome and then apply risk-adjustment. The final measure numerator is the adjusted numerator. Measure Outcome - Unadjusted. The unadjusted numerator is the number of stays with an HAI acquired during SNF care and results in an inpatient hospitalization. The hospitalization must occur during the period beginning on day 4 after SNF admission and within 3 days after SNF discharge. Emergency department visits and observations stays are excluded from the numerator. HAIs are identified using both the principal diagnosis code and the Present on Admission (POA) indicator on the re-hospitalization claim. An HAI is excluded from the numerator if it is a pre-existing infection. A pre-existing infection is defined as an HAI that was reported in any of the diagnosis code fields on the most proximal hospitalization claim prior to the SNF admission with a discharge date that is less than 14 days from the admission date of the readmitting IP stay. The pre-existing infection recorded in the prior proximal hospitalization must be a diagnosis that is related to the HAI recorded in the re-hospitalization. Measure Outcome - Adjusted. The final numerator is a risk-adjusted estimate of the number of SNF stays predicted to have an HAI that results in hospitalization. This estimate starts with the observed count of the measure outcome, which is then risk adjusted for resident characteristics and a statistical estimate of the measured SNF's effect beyond resident case mix. The SNF effect accounts for clustering of patients within the same facility and captures variation in the measure outcome across SNFs, which helps isolate the differences in measure performance that are due to provider-specific behavior and characteristics.
Denominator	To calculate the measure denominator, we first count the number of eligible stays and then apply risk-adjustment. The final measure denominator is the adjusted denominator. Unadjusted Denominator: Part A FFS Medicare SNF stays during the measurement period. Adjusted Denominator: The measure denominator is the risk-adjusted "expected" number of SNF stays with the measure outcome. The calculation of the "expected" number of stays starts with the total eligible SNF stays which is

	then risk adjusted for resident characteristics excluding the SNF effect. The "expected" number of stays with the measure outcome represents the predicted number of stays with the measure outcome if the same SNF residents were treated in the "average" SNF.
Exclusions	SNF stays are excluded from the denominator if they meet one or more of the following criteria: Resident is under 18 years old at SNF admission; Resident is not continuously enrolled in Part A FFS Medicare during the measurement period (1 year before SNF admission and 3 days after discharge); SNF length of stay was shorter than 4 days; SNF stay cannot be matched to prior inpatient stay within 30 days before SNF admission; Resident was transferred to federal hospital; SNF stay has zero Medicare payment; Provider of stay is outside of the 50 U.S. states, Puerto Rico, or U.S. Territory; SNF stay does not have complete information for measure construction and risk adjustment.
Measure type	Outcome
What is the NQF status of the measure?	Never submitted
NQF ID number	N/A
Year of next anticipated NQF CDP endorsement review	
Year of most recent NQF Consensus Development Process (CDP) endorsement	
Is the measure being submitted exactly as endorsed by NQF?	
If not exactly as endorsed, describe the nature of the differences	
What data sources are used for the measure?	Claims
If EHR or Administrative Claims or Chart-Abstracted Data, description of parts related to these sources.	The entire measure will use claims data.
At what level of analysis was the measure tested?	Facility; Other (enter here): Stay

In which setting was this measure tested?	Skilled nursing facility
What NQS priority applies to this measure?	
What one primary meaningful measure area applies to this measure?	Healthcare-associated infections
What secondary meaningful measure area applies to this measure?	
What one primary healthcare priority applies to this measure?	Make care safer by reducing harm caused in the delivery of care
What secondary healthcare priority applies to this measure?	
What area of specialty best fits the measure?	Infectious disease
What is the target population of the measure?	Medicare FFS SNF beneficiaries
Is this measure an eCQM?	No
If eCQM, enter Measure Authoring Tool (MAT) number	No
If eCQM, does the measure have a Health Quality Measures Format (HQMF) specification?	No
Comments	Level of Analysis: Facility and stay level
Measure steward	Centers for Medicare & Medicaid Services
Long-Term Measure Steward (if different)	

Measure Steward Contact Information	Freeman, Casey; 410-786-4354; Casey.Freeman@cms.hhs.gov
Primary Submitter Contact Information	Wei, Dee Dee; Acumen LLC; 650-558-8882 ext 1447; dwei@acumenllc.com
Long-Term Measure Steward Contact Information	
Secondary Submitter Contact Information	Lin, Cheng; Acumen LLC; 650-558-8882 ext 1474; clin@sphereinstitute.org
Was this measure proposed for a previous year's MUC list?	No
In what prior year(s) was this measure proposed?	
What were the programs that NQF MAP reviewed the measure for in each year?	
Why was the measure not recommended in those year(s)?	
What were the MUC IDs for the measure in each year?	
NQF MAP report page number being referenced for each year	
What was the NQF MAP recommendation in each year?	
List the NQF MAP workgroup(s) in each year	
What is the history or background for including this measure on the new MUC list?	New measure never reviewed by MAP Workgroup or used in a CMS program

Range of years(s) this measure has been used by CMS Program(s)	
What other federal programs are currently using this measure?	
Evidence that the measure can be operationalized	The data needed to calculate this measure are readily available and require no additional data submission beyond what is already collected on Medicare FFS claims in the normal course of business. This measure poses no additional data collection burden to SNF providers.
How is the measure expected to be reported to the program?	Claims
Is this measure similar to and/or competing with measure(s) already in a program?	Yes
Which existing measure(s) is your measure similar to and/or competing with?	Related measures included in CMS PAC Quality Reporting Programs and Nursing Home Quality Initiative Program: NQF #0684 Percent of Residents with a Urinary Tract Infection (Long-Stay) (NQF #0684); NQF #0138: National Healthcare Safety Network Catheter-associated Urinary Tract Infections (CAUTI); NQF #0139: National Healthcare Safety Network Central Line-Associated Bloodstream Infections (CLABSI); NQF #1717: National Healthcare Safety Network Facility-Wide Inpatient Hospital-onset Clostridium difficile Infection Outcome Measure; Skilled Nursing Facility 30-Day Potentially Preventable Readmission after Hospital Discharge measure (SNFPPR); Skilled Nursing Facility 30-Day All-Cause Readmission measure (SNFRM) (NQF #2510); Potentially Preventable 30-Day Post-Discharge Readmission Measure for Skilled Nursing Facility Quality Reporting.
How will this measure be distinguished from other similar and/or competing measures?	None of these measures (NQF #0684, 0138, 1039, 1716, 1717, 2510, or the SNFPPR) directly compete with the SNF HAI measure as they are either not specific to the SNF population (apply similar methodology across PAC settings), only capture one type of infection rather than HAIs overall, or do not incorporate an indicator for infection severity.
Rationale for how this measure will add to the CMS program	The intent of this measure is to assess all HAIs acquired in SNFs that result in hospitalizations. Existing infection measures are not specific to SNF residents and are aimed at measuring specific types of infections (i.e. those associated with the use of specific devices, specific locations, or specific bacterial organisms) rather than HAIs overall. Additionally, there are no measures that focus on infections requiring hospitalization, a criterion that can be used to assess the severity of infections and providers' management of infections. In terms of hospitalizations, the

	existing readmission measures for the SNF setting (SNFRM and SNFPPR) are not focused on infections. Rather, they cover hospitalizations due to several reasons such as inadequate management of chronic conditions, infections, inadequate injury prevention and inadequate management of other unplanned events. Unlike the HAI measure, the existing SNF readmission measures include readmissions due to infection without accounting for pre-existing or repeated infections. Therefore, the added benefit of this proposed HAI measure is that it focuses on severe infections and captures several infection types in the SNF setting. This measure will generate actionable data on infection rates that can be used to target quality improvement in the highest impact areas.
If this measure is being proposed to meet a statutory requirement, please list the corresponding statute.	
Evidence of performance gap	This measure intends to identify SNF providers that have a significantly higher or lower HAI rate in comparison to the average SNF with the same resident population. An analysis of FY 2018 SNF claims indicates that there is a performance gap in HAI rates across SNFs. Among 14,347 SNFs included in the 2018 sample, risk-adjusted measure scores ranged from 2.19% (min) to 19.83% (max) with a mean score of 6.15% and a standard deviation of 1.72%. The 25th percentile, median, and 75th percentile were 4.91%, 5.85%, and 7.08%, respectively. The literature review indicates that there is wide variation in HAI rates by provider characteristics across SNFs, indicating potential opportunities for some SNF providers to improve the quality of care they deliver. Past research shows that HAI rates are associated with staffing levels in nursing homes. For example, both urinary tract infections (UTIs) and multidrug resistant organisms (MDROs) rates were negatively related to the RN staff rating component of the Nursing Home Five-Star Quality Rating System [1]. Other literature found nursing facility structural characteristics and resident case mix impacted infection rates in both nursing homes and SNFs, including chain membership, occupancy rates, size and proportion of Medicare and Medicaid beneficiaries [2, 3]. Lastly, the adoption of infection surveillance and prevention policies in nursing homes is associated with facility characteristics such as profit status, chain status, hospital affiliation, size and percentage of Medicare residents [4].References:1.Gucwa, A. L., Dolar, V., Ye, C., & Epstein, S. (2016). Correlations between quality ratings of skilled nursing facilities and multidrug-resistant urinary tract infections. American Journal of Infection Control, 44(11), 1256–1260. http://dx.doi.org/10.1016/j.ajic.2016.03.0152.Castle, N., Engberg, J. B., Wagner, L. M., & Handler, S. (2017). Resident and facility factors associated with the incidence of urinary tract infections identified in the Nursing Home Minimum Data Set. Journal of Applied Gerontology, 36(2), 173–194. http://dx.doi.org/10.1177/0733464815584663. Joyce, N. R., Mylonakis, E., & Mor, V. (2017). Effect of Clostridium difficile prevalence in hospitals and nursing homes on risk of infection. Journal of the American

	Geriatrics Society, 65(7), 1527–1534. http://dx.doi.org/10.1111/jgs.148384. Dick, A. W., Bell, J. M., Stone, N. D., Chastain, A. M., Sorbero, M., & Stone, P. W. (2019). Nursing home adoption of the National Healthcare Safety Network Long-term Care Facility Component. American Journal of Infection Control, 47(1), 59–64. http://dx.doi.org/10.1016/j.ajic.2018.06.018.
Unintended consequences	This measure may lead SNFs to selectively enroll residents, either by encouraging or avoiding admission of certain types of residents and residents with certain characteristics. The measure specification could incentivize very short SNF stays leading to inadequate care, since the measure excludes SNF stays shorter than 4 days. Providers' performance is evaluated among their peers after adjusting for difference in resident case-mix across SNFs. The risk adjustment methodology applied to this measure will help mitigate providers' incentive to selectively enroll residents or transfer residents to hospitals early. The variables included in the risk adjustment model are designed to capture resident characteristics that are associated with higher rates of HAIs. Therefore, providers' performance on this measure will be adjusted for the characteristics of their resident population and "level the playing field" across providers. The detailed risk-adjustment strategy, supported by educational materials, will be made available if the measure is implemented in the future, allowing providers to understand that those who provide care for more "high risk" residents are not at a disadvantage given their resident case mix. If implemented, this measure will be monitored to identify unintended consequence, including patient selection patterns, which could lead to future re-specification of the measure as needed.
Which clinical guideline(s)?	
Briefly describe the peer reviewed evidence justifying this measure	Healthcare associated infection (HAI) is defined as an infection acquired while receiving care at a health care facility that was not present or incubating at the time of admission. [1] If the prevention and treatment of HAIs are poorly managed, they can cause poor health care outcomes for patients and lead to wasteful resource use. Most HAIs are considered potentially preventable because they are outcomes of care related to processes or structures of care. In other words, these infections typically result from inadequate management of patients following a medical intervention, such as surgery or device implantation, or poor adherence to hygiene protocol and antibiotic stewardship guidelines. Measuring HAIs among SNF residents can therefore provide valuable information about SNFs' quality of care. HAIs are associated with longer lengths of stay, use of higher-intensity care (e.g., critical care services and hospital readmissions), and increased mortality. [2, 3, 4] HAIs also lead to increased health care costs and present an economic burden. [2,5] Addressing HAIs in SNFs is particularly important because several factors place SNF residents at high risk for infection, including increased age, cognitive and functional decline, use of indwelling devices, frequent care transitions, and close contact with other residents and health care workers. [6,7] A recent report from the OIG (2014) estimated that 1 in 4 adverse events among SNF residents are due to HAIs and that more than half of all HAIs are potentially preventable. [2] Infection prevention and control programs with core components in education, monitoring, and feedback on infection rates from surveillance programs or feedback on infection control

	practices from audits have been found to be successful interventions for reducing HAIs. [8] Preventing and reducing HAIs is crucial to delivering safe and high-quality care across the health care system and has been a priority objective at the federal, state, and local levels. For example, the Office of Disease Prevention and Health Promotion has created a National Action Plan to Prevent Health Care-Associated Infections, with specific attention to HAIs in long-term care facilities (LTCFs). [6] In 2017, CMS launched the Meaningful Measures framework. Making Care Safer by Reducing Harm Caused in the Delivery of Care is one of the six meaningful measure domains and is a companion priority for quality assurance and improvement work at CMS. The meaningful measure area of HAIs is under this domain. References:1. World Health Organization. (n.d.). The burden of health care-associated infection worldwide. Retrieved from https://www.who.int/gpsc/country_work/burden_hcai/en/2. Office of Inspector General. (2014). Adverse events in skilled nursing facilities: National incidence among Medicare beneficiaries. Retrieved from https://oig.hhs.gov/oei/reports/oei-06-11-00370.pdf3. Ouslander, J. G., Diaz, S., Hain, D., & Tappen, R. (2011). Frequency and diagnoses associated with 7- and 30-day readmission of skilled nursing facility patients to a nonteaching community hospital. Journal of the American Medical Directors Association, 12(3), 195–203. http://dx.doi.org/10.1016/j.jamda.2010.02.015Zimlichman et al., 20134. Zimlichman, E., Henderson, D., Tamir, O., Franz, C., Song, P., Yamin, C. K., . . . Bates, D. W. (2013). Health care-associated infections: A meta-analysis of costs and financial impact on the US health care system. JAMA Internal Medicine, 173(22), 2039–2046. http://dx.doi.org/10.1001/jamainternmed.2013.97635. Bureau of Labor Statistics6. Office of Disease Prevention and Health Promotion. (2013). Long-term care facilities. In U.S. Department of Health and Human Services, National action plan to prevent health care-associated infections: Road map to elimination (pp. 194-239). Retrieved from: http://www.health.gov/hai/prevent_hai.asp#hai_plan7. Montoya, A., & Mody, L. (2011). Common infections in nursing homes: A review of current issues and challenges. Aging Health, 7(6), 889–899. http://dx.doi.org/10.2217/ahe.11.808. Lee, M.H., Lee GA, Lee SH, Park YH (2019). Effectiveness and core components of infection prevention and control programmes in long-term care facilities: a systematic review. Retrieved from https://pubmed.ncbi.nlm.nih.gov/30794854/

Preliminary Analysis – MUC ID: MUC20-0002 Skilled Nursing Facility Healthcare-Associated Infections Requiring Hospitalization

Criteria		Justification and Notes
Does the measure address a critical quality objective not currently adequately addressed by the measures in the program set?	Yes	This is a new measure that has not been reviewed by a MAP Workgroup or used in a CMS program. This measure overlaps with the readmissions measure currently in the program. That measure is all-cause however, while this measure is specific to HAI-based readmissions. This measure is an important new source of information on HAI occurrence in the SNF setting.
Is the measure evidence-based and either strongly linked to outcomes or an outcome measure?	Yes	This is an outcome measure, and the developer provided peer-reviewed literature that supports SNFs' ability to reduce HAIs. Interventions tied to reducing HAIs are infection prevention and control programs with core components in education, monitoring, and feedback on infection rates from surveillance programs or feedback on infection control practices from audits (Lee, et al., 2019). The developer also provided information from a 2014 OIG report estimating that 1 in 4 adverse events among SNF residents are due to HAIs and that more than half of all HAIs are potentially preventable. Reducing these HAIs directly reduces patient harm and decreases the overall cost of care.
Does the measure address a quality challenge?	Yes	This measure intends to assess all HAIs acquired in SNFs that result in hospitalizations and to identify SNF providers that have a significantly higher or lower HAI rate in comparison to the average SNF with a similar resident population. The developer presented an analysis of FY 2018 SNF claims that indicates that there is a performance gap in HAI rates across SNFs. Among 14,347 SNFs included in the 2018 sample, risk-adjusted measure scores ranged from 2.19% (min) to 19.83% (max) with a mean score of 6.15% and a standard deviation of 1.72%. The 25th percentile, median, and 75th percentile were 4.91%, 5.85%, and 7.08%, respectively. The developer also presented a literature review indicating that there is wide variation in HAI rates by provider characteristics across SNFs, indicating potential opportunities for some SNF providers to improve the quality of care they deliver.

Does the measure contribute to efficient use of measurement resources and/or support alignment of measurement across programs?	Yes	This measure has related measures in PAC/LTC programs, but none of these measures directly compete with the SNF HAI measure as they are either not specific to the SNF population (apply similar methodology across PAC settings), only capture one type of infection rather than HAIs overall, or do not incorporate an indicator for infection severity. Related measures currently in SNF programs are: • Skilled Nursing Facility 30-Day Potentially Preventable Readmission after Hospital Discharge measure (SNFPPR) (SNF VBP) • Skilled Nursing Facility 30-Day All-Cause Readmission measure (SNFRM) (SNF VBP) • Potentially Preventable 30-Day Post-Discharge Readmission Measure for Skilled Nursing Facility Quality Reporting (SNF QRP) Related measures currently in other PAC/LTC programs are: • NQF #0684 Percent of Residents with a Urinary Tract Infection (Long-Stay) (Five-Star Quality Rating Program) • NQF #0138: National Healthcare Safety Network Catheter-associated Urinary Tract Infections (CAUTI) (IRF QRP, LTCH QRP) • NQF #0139: National Healthcare Safety Network Central Line-Associated Bloodstream Infections (CLABSI) (LTCH QRP) • NQF #1717: National Healthcare Safety Network Facility-Wide Inpatient Hospital-onset Clostridium difficile Infection Outcome Measure (IRF QRP, LTCH QRP) The developer indicates that the added benefit of this proposed HAI measure is that it focuses on severe infections and captures several infection types in the SNF setting. This measure will generate actionable data on infection rates that can be used to target quality improvement in the highest impact areas. Those seeking information about where to seek care may find one overall result capturing several types of severe infections more useful than multiple, more granular measures.
Can the measure be feasibly reported?	Yes	This measure uses data from Medicare claims, which are currently collected by CMS for payment and quality purposes. This measure does not pose any additional data collection burden to SNF providers.

Is the measure applicable to and appropriately specified for the program's intended care setting(s), level(s) of analysis, and population(s)?	Yes	The measure is specified and tested at the facility- and stay-level of analysis with skilled-nursing facility as the care setting. The developers conducted an analysis examining the total number and proportion of SNFs that would have at least 25 eligible stays for this measure using one year of data. In FY 2018, 85.90% of total SNFs (n = 14,347) met this threshold. Initial reliability testing was conducted using claims data. The developer conducted a spilt-half reliability test using FY 2017 and 2018 data and demonstrated Spearman's rank correlation of 0.52. The developer provides initial face validity and empiric validity results. To test convergent validity, the developer assessed the relationship between the HAI measure and other publicly reported quality measures. The developer found that the following measures were negatively correlated with HAI: DTC (-0.42), RN Staffing (-0.23), Percentage of short-stay residents who were assessed and appropriately given the seasonal influenza vaccine (-0.13), Percentage of short-stay residents assessed and appropriately given the pneumococcal vaccine (-0.10). PPR was positively correlated with HAI (0.12). All Spearman's rank correlations were statistically significant using the alpha level of 0.05. In addition, the developer also held three Technical Expert Panel (TEP) meetings in which the TEP showed strong support for the face validity of the HAI measure. The developer analyzed the model fit statistics to determine if the HAI model can accurately predict HAI cases while controlling for differences in resident case-mix, and the C-statistic of the model was 0.72, suggesting moderate model discrimination.
If the measure is in current use, have negative unintended issues to the patient been identified? Have implementation challenges outweighing the benefits of the measure been identified?	N/A	This is a new measure, not currently in use. The developer outlined that this measure may lead SNFs to selectively enroll residents, either by encouraging or avoiding admission of certain types of residents and residents with certain characteristics. The measure specification could incentivize very short SNF stays leading to inadequate care, since the measure excludes SNF stays shorter than 4 days; however, the developers noted that the risk adjustment methodology applied to this measure will help mitigate providers' incentive to selectively enroll residents or transfer residents to hospitals early
PAC/LTC Workgroup Priorities?	No	N/A
Impact Act Domain	No	N/A

Hospice High Priority Areas	N/A	N/A
Rural Workgroup Input	[redacted]	Relative priority/utility: • Introducing measure in a pay-for-reporting program allows providers to gain experience without being penalized for performance • Reducing HAIs in SNFs is important • 86% of SNFs meet the reporting threshold of 25 cases, so low volume may not be an issue for rural SNFs Data collection issues: • None identified Calculation issues: • None identified Unintended consequences: • None identified Votes: Range is 1 – 5, where higher is more relevant to rural Average: 3.9 • 1 – 1 vote • 2 – 0 votes • 3 – 0 votes • 4 – 15 votes • 5 – 2 votes
Preliminary Analysis Recommendation	Conditional Support for Rulemaking	Conditional support for rulemaking is contingent on NQF endorsement.
Summary: What is the potential value to the program measure set?	[redacted]	This measure adds value to the program measure by adding one overall measurement of all HAIs acquired in SNFs that result in hospitalizations, information that is not currently available. This measure focuses on severe infections and captures several infection types in the SNF setting. There is variation in performance on this measure and SNFs can improve their performance.

Summary: What is the potential impact of this measure on quality of care for patients?	[redacted]	Collecting information on severe HAIs and providing SNFs with information and feedback will encourage SNFs to assess processes and perform interventions to reduce the 1 in 4 adverse events among SNF residents that are due to HAIs, more than half of which are potentially preventable. Among 14,347 SNFs included in the 2018 sample, risk-adjusted measure scores ranged from 2.19% (min) to 19.83% (max) indicating that there is wide variation in HAI rates across SNFs, and opportunities for safer and more efficient patient care. Conditional support for rulemaking is contingent on NQF endorsement.

Measure Comments

Author	Submitted Comment
Premier	"Premier conceptually supports this measure; however, we have a number of concerns with how the proposed measure is currently designed. The measure does not differentiate between types of infections, which will make it difficult for SNFs to take action and make specific improvements based on results. We recommend that the measure be segmented by infection type (e.g., CAUTI, C.Diff, etc.) similar to how HAIs are measured in the Hospital Quality Reporting programs. Additionally, HAIs should be identified by the NHSN surveillance definitions rather than by claims. All infections in the SNF should be tracked and documented regardless of hospitalization. As a result, we recommend that the measure not require that the HAI result in hospitalization. Tracking just infections that result in hospitalization will not accurately capture all HAIs, as many infections are treated at the SNF and do not require hospitalization. CMS could add infections requiring hospitalizations as a complication tracking to the infection. Additionally, the measure needs to account for differences in patient population, such as age or patient status (e.g., those receiving palliative care). This could be accomplished through either measure exclusions or risk adjustment. Any risk adjustment model should be defined and tested. Finally, this measure should be submitted and reviewed for endorsement before it is adopted."
The Society for Healthcare Epidemiology of America	"While SHEA supports efforts to improve the quality of care delivered in the long-term care setting through QRP, this measure as proposed will create a strong disincentive to transfer residents to acute care, adding even more to concerns about penalties and fines than currently exist. Our concerns fall within several domains: 1. Accuracy of using ICD-10 codes 2. Validity of coding on acute care hospital discharge 3. Use of a composite score

4. Preventability of the metrics used in the HAI composite score
5. Incomplete culture data upon admission to SNFs that inappropriately attributes infection or colonization to the SNF
6. Location of attribution
7. Incubation period for infections

This measure proposes identification of HAIs based on ICD-10 codes upon admission to the hospital. While it may seem that using ICD-10 codes in the LTC setting for quality measurement would be helpful in alleviating reporting burden, there have been many publications describing the inaccuracies of using administrative data to define HAIs. The contractor should consider the revised McGeer criteria, which assess infections in long-term care (LTC) settings. The contractor should also carefully consider using alternate thoughtfully developed definitions already used to assess infections in LTC settings which are grounded in evidence, agreed upon by experts, and already used in real-world settings.
In addition to general concerns about the accuracy of using ICD-10 codes for surveillance, the proposed approach relies on an assumption that hospitals would correctly and accurately classify symptoms and diagnoses upon discharge from their facility so that these data can be used to assess the quality of care delivered in the LTC setting. It also assumes patients being transferred from an acute care setting to a SNF are clinically stable at the time of discharge. Both of these assumptions do not bear out in practice.
The proposed HAI score includes heterogeneous types of infections, many of which are non-preventable. Using a composite score makes it difficult to target interventions toward prevention. How will SNFs decide on a targeted intervention (e.g. hand hygiene, antibiotic stewardship, etc.) if the score is high without knowing which metrics are driving the overall score?
Many of the infections listed in the IICD-10 codes inclusions are not related to management of the patients in the post-acute setting. Some examples include:
• Infection and inflammatory reaction due to other prosthetic device, implant and graft in urinary system, initial encounter. Infection and inflammatory reaction due to implanted penile prosthesis, initial encounter
• Infection of amputation stump, unspecified extremity
• Bronchiectasis with acute lower respiratory infection
• Candidal sepsis
• Community-associated infections such as meningococcal meningitis, salmonella, shigella, viral encephalitis, etc.
• Cellulitis
Urinary tract infection, site not specified. In the case of urinary tract infections (UTI), many patients are admitted with UTI due to abnormal urinalysis and are likely to have asymptomatic bacteriuria. For example, if a resident falls, is sent to the hospital and while being evaluated for injury, a urinalysis finds the resident has an ESBL in the urine. The ESBL is present on admission to the hospital, but is it considered an HAI from the SNF because a hospital provider may insist on treating the positive urine before they will proceed with further treatment? Will the administrative data be able to identify this as asymptomatic bacteriuria? Sepsis. Many patients are originally diagnosed with “sepsis” but upon further workup have a non-infectious reason for their illness.

	Clostridioides difficile infection. The definition and timing for hospital-onset, SNF-onset and undetermined C. difficile infection has been the focus of much research. Even with this single pathogen that causes one clinical syndrome and which is readily detected by tests available to SNFs, there is a great deal of discussion about the attribution of the infection. It is also very difficult to determine which provider should be ascribed responsibility for an infection that occurs post discharge. For example: If a resident develops a wound at a hospital and comes to a SNF for care for that wound, which later becomes infected with a multi-drug resistant organism infection, should the infection be attributed to the hospital? Or the SNF? The hospital created the pre-existing condition and the SNF is the place where the wound was determined to be infected. The recommendation for including a four-day after SNF admission for determination of an HAI is not reflective of the clinical events involved with an HAI. The incubation period for some of the infections are longer than four days (e.g. Hepatitis B and C)."

Measure Comments (Post-Workgroup Meeting)

Author	Submitted Comment
Federation of American Hospitals	"The FAH recommends this measure on the condition that a minimum reliability rate above 0.7 is ensured."
American Hospital Association	"There is no doubt that preventing HAIs in SNFs is a top priority, and that this measure conceptually fits CMS' Meaningful Measure priority area of "Make Care Safer by Reducing Harm Caused in the Delivery of Care: Healthcare-associated Infections." However, in the interest of achieving a streamlined and meaningful set of quality measures which will inform both care delivery and patient choice, we have some concerns regarding the specifications of this measure. In short, while we agree that measuring HAIs in SNFs is vital, the topic is so important and complex that CMS should develop a measure that will deliver timely, accurate and actionable information rather than this measure under consideration. In evaluating whether there is a performance gap regarding HAIs in SNFs, the Technical Expert Panel (TEP) Summary Report states "the literature is scarce on the epidemiology of HAIs in SNF…Most other estimates on infections for SNF residents come from studies with the broader population of nursing home residents. Even these estimates are uncertain, and many are outdated." Although we do not argue the gravity of HAIs in SNFs, the inability to define the magnitude of the issue makes it difficult to identify benchmarks and goals. The most glaring issue with the measure is its data source. Claims-based measures for health outcomes like infections are not usable for improvement, nor are they reliable indicators of performance. No current Medicare HAI measure is informed by claims. In other quality reporting programs, HAIs are reported via the National Healthcare Safety Network (NHSN) using chart-abstracted surveillance data; these data are based on certain counts of bacteria or certain test results gathered using very detailed

instructions about what cases to include or not in the denominator and clinical definitions that only an infection prevention expert can interpret. This scientific process ensures data integrity and provides analytic tools that enable each facility to assess progress and identify where additional efforts are needed. A claims-based measure would not provide this insight into clinical care for several reasons, including the multi-year lag between when claims are submitted and when data are used to inform measure performance.

CMS itself has found that administrative claims data are not reliable to inform HAI measure performance. For example, in a 2012 reliability analysis, CMS's contractor found that several claims-based hospital-acquired condition (HAI and patient safety indicator) measures had low and very low reliability; a 2012 Medicaid report on state reporting of the central line-associated blood stream infection (CLABSI) measure found that "administrative data (discharge or claims-based) substantially underestimate rates of CLABSI…effectively ruling out the use of administrative data at the current time as a legitimate approach to generating state-level, insurance-specific rates." In regards to ICD-9 (now ICD-10) coding that informs claims, the 2013 National Action Plan to Prevent Health Care-Associated Infections noted "coded diagnosis of UTI, CAUTI, and CDI is neither a sensitive nor a specific indicator of clinical diagnosis." Several other studies show that administrative data is not able to reliably predict outcomes. The literature review conducted by contractor RTI International for the TEP cited additional studies that concluded that administrative data (i.e., claims data) results in under-, over-, and misclassified reporting of health outcomes.

This measure's reliability also is questionable due to upstream data collection issues – namely, in detection of HAIs. As constructed, the measure would include only those SNF patients who go from a SNF to an acute care hospital, and for which the hospital submits a Medicare claim indicating BOTH that the HAI was the principal admitting diagnosis AND had the HAI at the time of admission (i.e., with a present on admission code). At a minimum, this construction is likely to omit some SNF patients who have an HAI simply because the HAI is not either recorded as the principal diagnosis, or present on admission. Nevertheless, the supporting documents for this measure conclude that existing HAI measures "all report on specific types on infections rather than on the overall HAI rate," and thus this measure, a composite of-sorts, would fill a gap. There is a reason that existing HAI measures are specified as such: tests for various infections are different, with different levels of sensitivity and specificity. With such varying inputs, it is difficult to see how a composite measure would provide accurate (and thus actionable) information. In addition, hospital tests of HAIs vary as well; it is possible that certain hospitals will be better able to detect HAIs than others, and thus SNF performance might be a factor of hospital data collection rather than true quality of care.

Overall, the actionability of the measure – that is, whether providers will be able to use information gleaned from this measure to improve quality – is unclear. While there are common-sense practices that lower the likelihood of

HAIs in SNFs, most specific clinical interventions are defined for the hospital setting rather than the SNF setting. Without clear clinical evidence of the relationship between the provider's actions in a SNF and the resident's health as a result of his/her stay, the measure may not be able to detect usable information.

In addition, the construction of this measure makes the assumption that the only HAIs that truly "matter" are those resulting in hospitalization. Yet, successful HAI reduction efforts depend on the rapid and timely identification of infections so that their underlying causes – infection control, environmental, physical plant, etc. – can be addressed before they result in morbidity or mortality. That is why existing HAI measures use detailed surveillance definitions we describe above, and are collected using actual medical record data. This approach ensures that providers know quickly which patients are infected, and can rapidly take infection control steps to protect other patients and staff from infection. Patients and providers cannot afford to wait two to three years to have incomplete claims-based data inform HAI reduction efforts. And for the reasons we describe below, this claims-based measure is likely to be a poor reflection of providers' actual performance.

Several factors at the patient and provider level influence outcomes, but they are not incorporated into the risk adjustment methodology for this measure. The supporting literature states "Research suggests that infection rates vary by provider characteristics" including staffing levels, staffing type (i.e., RN versus LPN), organizational structure (i.e., national chain versus independent facility), case mix, payer mix, and adoption of infection surveillance and prevention policies. Several other provider characteristics that may affect performance have not yet been investigated, including size, market (rural/urban or region) and whether the SNF is hospital-based. NHSN also collects information on patient days in admission, teaching status, and where microbial testing is done (in the facility versus a commercial reference lab).

Patient-level characteristics, which are outside of the provider's control, also influence infection rates. Literature shows that social risk factors, including income level and race/ethnicity are associated with varying infection rates due to "more disparities in access to care among patients in the community than in SNFs," suggesting that certain residents are less likely to receive preventive care in the community and are thus at increased risk of infection. A more precisely-constructed HAI measure may not need to account for social risk factors because the surveillance definitions are specific enough to ensure they are truly reflecting those infections acquired in the course of receiving health care. But this measure does not have such definitions, making it vital that the role of social risk factors in performance be assessed and accounted for if appropriate.

Because of the myriad factors affecting outcomes like HAIs, a composite measure such as this one may not provide information that providers can use to address specific risks to their patients. Even if the information gleaned

	from this measure were reliable, however, additional barriers remain to putting that data to use. While SNFs agree with the need to reduce HAIs, many operate under significant financial strain, and may not have the same depth of resources to apply to quality improvement efforts. We encourage CMS to deploy quality improvement support to help accelerate progress on reducing HAIs in SNFs. This model has worked incredibly well for hospitals, as evidenced by the rapid progress of CMS's Hospital Innovation and Improvement Networks. It is conceivable that smaller SNFs with fewer resources could appear to perform worse than their competitors through no fault of their own (i.e., based on the influence of patient-level factors or differences in hospital surveillance). In the future, this measure might be incorporated into the SNF Value-based Purchasing program, in which the described scenario would result in direct financial harm to already disadvantaged facilities. In the end, accountability measures like this one are useful only when they can accurately characterize performance. SNFs would welcome a well-designed measure that can help them understand where they are performing well, and where they can improve. However, for the reasons outlined above, we are not confident that this measure delivers on that critically important task. It is also challenging to conceptualize an evaluation of facility performance based on claims filed by a totally different facility; we understand and appreciate that CMS is seeking measures that do not pose undue burden on providers (as claims-based measures require no data submission on the part of providers), but for some topics the burden is worthwhile. Burden is outweighed by the benefits of truly meaningful measures that uncover discrepancies in performance and provide actionable data that will result in better patient outcomes. We suggest CMS scrap this measure and develop one that is timely and actionable."
The Society for Healthcare Epidemiology of America	"The Society for Healthcare Epidemiology of America (SHEA) disagrees with the Application Partnership's (MAP) preliminary recommendation of Conditional Support for Rulemaking. As an alternative, SHEA recommends consideration of a requirement like that implemented in select states that at least one person trained in infection control be available at the facility, with their hours predicated on the number of beds. While SHEA supports efforts to improve the quality of care delivered in the long-term care setting through the SNF QRP, this measure as proposed will create a strong disincentive to transfer residents to acute care, adding even more to concerns about penalties and fines than currently exist. Our concerns fall within several domains: 1. Accuracy of using ICD-10 codes 2. Validity of coding on acute care hospital admission (POA codes) 3. Use of a composite score 4. Preventability of the metrics used in the HAI composite score 5. Incomplete culture data upon admission to SNFs that inappropriately attributes infection or colonization to the SNF 6. Location of attribution 7. Incubation period for infections

CMS proposes identification of HAIs based on ICD-10 codes upon admission to the hospital. While it may seem that using ICD-10 codes in the long-term care (LTC) setting for quality measurement would be helpful in alleviating reporting burden, there have been many publications describing the inaccuracies of using administrative data to define HAIs. The contractor should consider the revised McGeer criteria using alternate thoughtfully developed definitions to assess infections in LTC settings – definitions that are grounded in evidence, agreed upon by experts, and currently in use in real-world settings.

In addition to general concerns about the accuracy of using ICD-10 codes for surveillance, the proposed approach relies on an assumption that hospitals would correctly and accurately classify symptoms and diagnoses upon discharge from their facility so that these data can be used to assess the quality of care delivered in the LTC setting. It also assumes patients being transferred from an acute care setting to a SNF are clinically stable at the time of discharge. Both of these assumptions do not bear out in practice. In addition, hospitals have incentives to code POA particularly for sepsis, leading to potentially unnecessary penalty for LTC facilties from which those patients are coming.

The proposed HAI score includes heterogeneous types of infections, many of which are non-preventable. Using a composite score makes it difficult to target interventions toward prevention. How will SNFs decide on a targeted intervention (e.g. hand hygiene, antibiotic stewardship, etc.) if the score is high without knowing which metrics are driving the overall score?

Many of the infections listed in the ICD-10 codes inclusions are not related to management of the patients in the post-acute setting. Some examples include:

- Infection and inflammatory reaction due to other prosthetic device, implant and graft in urinary system, initial encounter. Infection and inflammatory reaction due to implanted penile prosthesis, initial encounter
- Infection of amputation stump, unspecified extremity
- Bronchiectasis with acute lower respiratory infection
- Candidal sepsis
- Community-associated infections such as meningococcal meningitis, salmonella, shigella, viral encephalitis, etc.
- Cellulitis

Urinary tract infection, site not specified. In the case of urinary tract infections (UTI), many patients are admitted with UTI due to abnormal urinalysis and are likely to have asymptomatic bacteriuria. For example, if a resident falls and is sent to the hospital for injury evaluation, a urinalysis or urine culture may be done and finds the resident an has an ESBL in the urine. The ESBL is present on admission to the hospital, but is it considered an HAI from the SNF because a hospital provider may insist on treating the positive urine

	before they will proceed with further treatment? Will the administrative data be able to identify this as asymptomatic bacteriuria? Sepsis. Many patients are originally diagnosed with “sepsis” but upon further workup have a non-infectious reason for their illness. Clostridioides difficile infection. The definition and timing for hospital-onset, SNF-onset and undetermined C. difficile infection has been the focus of much research. Even with this single pathogen that causes one clinical syndrome and which is readily detected by tests available to SNFs, there is a great deal of discussion about the attribution of the infection. It is also difficult to determine which provider should be ascribed responsibility for an infection that occurs post discharge. For example: If a resident develops a wound at a hospital and comes to a SNF for care for that wound, which later becomes infected with a multi-drug resistant organism infection, should the infection be attributed to the hospital? Or the SNF? The hospital created the pre-existing condition and the SNF is the place where the wound was determined to be infected. The recommendation for including a four-day after SNF admission for determination of an HAI is not reflective of the clinical events involved with an HAI. The incubation period for some of the infections are longer than four days (e.g., Hepatitis B and C). We are concerned about using the association with COVID-19 outbreaks as a measure of quality in LTC facilities and a confirmation that HAI score is an adequate measure of infection control LTC facilities. While some studies show an association between star ratings and NH COVID-19 (Bui DP, See I, Hesse EM, et al. Association Between CMS Quality Ratings and COVID-19 Outbreaks in Nursing Homes — West Virginia, March 17–June 11, 2020. MMWR Morb Mortal Wkly Rep 2020;69:1300–1304), this is not consistent across studies, particularly when evaluating it against specific domains. To this end, Figueroa et al. found no significant association between high- vs low-performing NHs in the health inspections or quality measures domains with COVID-19 cases (Figueroa et al. Association of Nursing Home Ratings on Health Inspections, Quality of Care, and Nurse Staffing With COVID-19 Cases. JAMA. 2020;324(11):1103–1105. doi:10.1001/jama.2020.14709). In addition, studies have shown that COVID-19 incidence in healthcare facilities is driven by COVID-19 incidence in surrounding communities, and this has no bearing on HAIs.”
American Health Care Association	“The American Health Care Association and National Center for Assisted Living (AHCA/NCAL) represents more than 14,200 long term and post-acute care facilities, or 1.07 million skilled nursing facility (SNF) beds and more than 260,000 assisted living beds. With such a membership base, the Association represents the majority of SNFs and a rapidly growing number of assisted living (AL) communities as well as residences for individuals with intellectual and developmental disabilities (ID/DD).

We appreciate the opportunity to comment to the MAP regarding the claims-based quality measure of healthcare-associated infections (HAIs) for the SNF Quality Reporting Program (QRP).

The recent challenges faced nationwide and worldwide with controlling the spread of the deadly COVID-19 virus have highlighted the importance of a systemic approach to implementing infection control measures both within the SNF as well as beyond the SNF walls. AHCA recognizes and supports the use of effective measures to prevent as well as control the spread of infections, especially those that have the most detrimental impact on the health of patients and at times, as in the case of communicable diseases, their caregivers.

Several years ago AHCA/NCAL launched a Quality Initiative program that included measures to reduce hospital readmissions with current goals by 2021 of a reduction of readmissions by ten percent compared to Q1 2017 rates, or to maintain a rate of ten percent or less compared to the baseline period1. In addition, AHCA/NCAL offers an Infection Prevention Control Officer (IPCO) training certification course specially designed for healthcare professionals who desire to serve as Infection Preventionists (IPs) as established in the CMS Reform of Requirements of Participation for Long Term Care Facilities (required by November 2019)2. Most recently, AHCA/NCAL offers extensive infection control resources to help prevent the spread of COVID- 19 during the current public health emergency3.
We believe that well-developed measures should provide accurate reflections of a provider's quality of care delivery for factors within their control. For example, the current worldwide

1 https://www.ahcancal.org/Quality/Quality-Initiative/Pages/default.aspx
2 https://educate.ahcancal.org/products/infection-preventionist-specialized-training-ipco-version-2
3 https://www.ahcancal.org/Survey-Regulatory-Legal/Emergency-Preparedness/pages/coronavirus.aspx

The American Health Care Association and National Center for Assisted Living (AHCA/NCAL) represent more than 14,000 non- profit and proprietary skilled nursing centers, assisted living communities, sub-acute centers and homes for individuals with intellectual and developmental disabilities. By delivering solutions for quality care, AHCA/NCAL aims to improve the lives of the millions of frail, elderly and individuals with disabilities who receive long term or post-acute care in our member facilities each day.

COVID-19 pandemic has exposed just how critical the infection-specific incubation period can be before the onset of symptoms or positive infection test result is observed, and that in many cases, the patient was exposed to COVID-19 prior to the SNF admission. The measures should include mitigation approaches to prevent inappropriate attribution of a HAI to the SNF in such cases. Additionally, the measures should have meaningful and traceable information necessary to permit root-cause analysis and other

quality improvement activities by the provider for identified areas of suboptimal performance.

Per the MAP comment solicitation AHCA understands the project objectives as follows:

- Develop a healthcare-associated infections quality measure for the SNF QRP under the meaningful measure domain: Making Care Safer by Reducing Harm Caused in the Delivery of Care.
- Specify the target population, including the exclusion criteria.
- Identify risk adjustment variables and the approach for risk adjustment.
- Gather feedback on the importance, feasibility, usability, and potential impact of calculating a HAI measure.
- Identify additional guidance required for implementation in the SNF QRP.

AHCA and member subject matter experts have reviewed the following key documents provided by the measure development team as well as other resources independently identified.

- Draft measure specifications for the Skilled Nursing Facility (SNF) Healthcare Associated Infections (HAIs) Requiring Hospitalization4.
- Final technical expert panel summary report: Development of a healthcare-associated infections quality measure for the skilled nursing facility quality reporting program, July 2019 5

In this comment the Association would like to focus on specific key topics discussed in the proposed SNF HAI measure. In general, our comments follow the flow and related section headings used in the draft measure specifications document. In general, we support the measure with conditions laid out below, one of which should be to first have attained NQF endorsement.

4 https://www.cms.gov/files/document/development-skilled-nursing-facility-snf-healthcare-associated- infections-hais-requiring.pdf

5 https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/Downloads/SNF-HAI-Final-TEP-Report-7-15-19_508C.pdf

AHCA Detailed Comments

Target Population:

The target population identified for this proposed Healthcare-Associated Infections (HAI) measure are Medicare Fee-for-Service (FFS) beneficiaries.

AHCA Comment:

Our members appreciate the challenge in identifying quality performance for SNF residents for specific measures when SNFs provide services to both short-stay (primarily under Medicare-financed coverage) and long-stay residents (primarily under Medicaid coverage and private pay). We recognize

that the SNF QRP program was designed to focus on care covered by Medicare post-acute care benefits, and that lack of availability of standardized quality data from Medicare Advantage (MA) enrollees receiving post-acute care severely limits the target population that can be included in most SNF QRP measures. However, due to the relatively low incidence of HAIs identified in the proposed measure's numerator population, we are concerned that the continued growth in MA penetration and reduction of Medicare FFS enrollment may make this proposed measure unstable and less useful over the coming years.

For example, the Medicare Payment Advisory Commission (MedPAC) March 2020 Report to Congress6 states that "Medicare FFS–covered SNF days typically account for a small share of a facility's total patient days" and that "Between 2017 and 2018, MA enrollment increased almost 8 percent while FFS Part A enrollment decreased slightly (–0.3 percent). Additionally, the 2020 Medicare Trustees Report Table IV.C1 notes that in 2020, 39.9 percent of Medicare beneficiaries are enrolled in MA plans not included in the target population, and this percentage is projected to grow to 43.2 percent by 2029 further reducing the target population representation of the quality of Medicare covered post-acute SNF care7. Given this reality, we believe that the proposed measure name is a misnomer and should be revised to "Skilled Nursing Facility (SNF) Healthcare-Associated Infections Associated with Fee-for-Service Stays Requiring Hospitalization". To label otherwise would be misleading to providers, consumers and policymakers.

Another factor to consider is that, as reflected in a recent CMS SNF PDPM provider-specific impact file, the majority (60%) of the over 15,000 SNFs nationwide only have 1-10 total Medicare FFS admissions per month8, meaning that minor fluctuations in infection prevalence could be inappropriately magnified in a measure with a shrinking denominator population. Additionally, the July 2019 Final Technical Expert Panel Summary Report environmental scan for this measure development project indicates that while HAIs in SNF are clinically important, their occurrence only represents approximately six percent of stays. With a baseline of low overall prevalence, and a significant portion of SNFs currently having a low number of Medicare FFS admissions, as well as Medicare Trustee projections

6 MedPAC, Report to the Congress, March 2020, Chapter 8, Skilled Nursing Facility Services. http://www.medpac.gov/docs/default-source/reports/mar20_medpac_ch8_sec.pdf?sfvrsn=0

7 2020 Medicare Trustees Report. https://www.cms.gov/files/document/2020-medicare-trustees-report.pdf

8 https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/SNFPPS/therapyresearch.

that this number will continue to decline, we are concerned about the long-term viability of a SNF HAI measure that only includes Medicare FFS beneficiaries in the target population.

Risk Adjustment Variables and Approach for Risk Adjustment:

Per the draft measure specifications document, the measure developers, CMS and Acumen, LLC. indicate that the proposed HAI measure does not have a simple form for the numerator and denominator because the risk adjustment is incorporated into the measure calculation rather than applied after the observed rate is calculated. The purpose of risk adjustment is to account for risk factor differences across SNFs, when comparing quality of care between them. In other words, the measure developers claim that the proposed risk adjustment "levels the playing field" and allows for fairer quality-of-care comparisons between SNFs by controlling for differences in resident case-mix. Risk adjustment is particularly important for outcome measures because resident outcomes may be determined by factors such as age, gender, and health status that go beyond the quality of care delivered by SNFs.

AHCA Comment:
The consensus of AHCA member subject matter experts is that adequate risk adjustment is going to be the key for this measure to be fair. They voice concerns that the draft specifications for risk adjustment are incomplete and need to be revised. The following comments address specific components of the SNF HAI measure specifications outlined in the draft measure specification document.
Measure Type: AHCA members agree that a SNF HAI measure should be an "Outcome" measure to be meaningful and actionable.
Brief Measure Description: AHCA members believe the description will need to be revised to account for concerns described below.
Numerator Statement and Details:
Measure Outcome (Unadjusted Numerator): CMS and Acumen, LLC. indicate that the proposed numerator is the number of stays with a HAI acquired during SNF care and results in an inpatient hospitalization. The hospitalization must occur during the period beginning on day four after SNF admission and within three days of SNF discharge.
Emergency department visits and observation stays are excluded from the numerator.
The HAI definition was developed with input from a Technical Expert Panel and subject matter experts with clinical expertise specific to infectious diseases and the SNF population. See Appendix A Table 1. (columns A – C) in the draft specifications document for the proposed list of HAI conditions. The HAI definition includes conditions selected based on the following conceptual criteria:

- Infections that are likely to be acquired during SNF care and severe enough to require hospitalization (e.g., life-threatening methicillin-resistant Staphylococcus aureus infections)
- Infections related to invasive (not implanted) medical devices (e.g., infections associated with catheters, insulin pumps, and central lines; infection of tracheostomy stoma)

The HAI definition excludes infections that meet any of the following criteria:

- Chronic infections (e.g. chronic viral hepatitis B with or without delta-agent)

- Infections that typically require a long period of time to present (e.g. typhoid arthritis)
- Infections that are likely related to the prior hospital stay (e.g. postprocedural retroperitoneal abscess)
- Sequela and subsequent encounter codes (e.g. sequelae of inflammatory diseases of central nervous system)
- Codes that include “causing disease classified elsewhere” (e.g. meningitis in bacterial diseases classified elsewhere)
- Codes likely to represent secondary infection, where the primary infection would likely already be coded (e.g. viral endocarditis, pericarditis, myocarditis or cardiomyopathy)
- Infections likely to be community acquired (e.g. echinococcus granulosus infection of liver)
- Infections common in other countries and/or acquired through animal contact (e.g. subacute and chronic melioidosis)
- Pre-existing infections that fall within the Center for Disease Control and Prevention’s (CDC) National Healthcare Safety Network (NHSN) Repeat Infection Timeframe (RIT) of 14 days. The HAI measure applies a slight modification to the CDC NHSN’s RIT. Rather than using the date of infection identification (i.e., lab diagnosis date) as Day 1, HAI uses the prior IP discharge date as Day 1 since discharge indicates clinical stability. See Appendix A Table 1 (columns D and E) of the draft specifications document for conditions that are considered as pre-existing on the prior qualifying hospital claims when linked to the principal diagnosis codes (column B) on the re-hospitalization claim

The following categories of specific ICD-10 codes are listed in Table 1 of the draft measure specifications for inclusion in the numerator population:

- Infections related to Devices or Stumps (25 unique ICD-10 codes)
- Eye/ear infections (10 unique ICD-10 codes)
- Gastrointestinal infections (51 unique ICD-10 codes)
- Genito-urinary infections (13 unique ICD-10 codes)
- Neurological Infections (22 unique ICD-10 codes)
- Respiratory Infections (103 unique ICD-10 codes)
- Sepsis (33 unique ICD-10 codes)
- Skin Infections (37 unique ICD-10 codes)
- Unknown site and unknown bugs (5 unique ICD-10 codes)

AHCA Comment:

AHCA member subject matter experts agree that the numerator should include infections that are likely to be acquired during SNF care and severe enough to require hospitalization as well as infections related to invasive (not implanted) medical devices. However, we are concerned with the following phrase within the proposed criteria “The hospitalization must occur during the period beginning on day four after SNF admission…” would apply to all identified SNF HAI infection ICD-10 codes uniformly.

Residents newly admitted to SNFs for a Medicare FFS stay are at risk for infection related to surrounding community or acute hospital stay exposure to HAI’s that may not present symptomatically during the first three days of the SNF stay due to lengthy incubation periods. Examples of a few that are included in Appendix A of the draft specifications: Hepatitis B &C, pyelonephritis, and respiratory syncytial virus. Most recently, we are eight

months into a worldwide COVID-19 pandemic, a virus that has been devastating to SNF residents, especially in hot-spot areas of the country where high community rates of infection have spilled over into local SNFs. For example, Barnett, et al (and other studies since) have reported a high correlation between community COVID-19 infection and death rates and those observed in SNFs in those communities (see figure excerpt from Barnett,ML; Hu, L; and Martin, T. Mortality, admissions, and patient census at SNFs in 3 US cities during the COVID-19 pandemic. JAMA. 2020;324(5):507-509. doi:10.1001/jama.2020.11642 https://jamanetwork.com/journals/jama/fullarticle/2767750) 9.

We note the CDC currently states the following "The incubation period for COVID-19 is thought to extend to 14 days, with a median time of 4-5 days from exposure to symptoms onset. One study reported that 97.5% of persons with COVID-19 who develop symptoms will do so within 11.5 days of SARS-CoV-2 infection."10 We note that the proposed SNF HAI

9 Figure excerpt from Barnett,ML; Hu, L; and Martin, T. Mortality, admissions, and patient census at SNFs in 3 US cities during the COVID-19 pandemic. JAMA. 2020;324(5):507-509. doi:10.1001/jama.2020.11642 https://jamanetwork.com/journals/jama/fullarticle/2767750

10 Centers for Disease Control. Interim Clinical Guidance for Management of Patients with Confirmed Coronavirus Disease (COVID-19). https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html. Accessed October 9, 2020.

measure draft ICD-10 codes for identifying SNF HAIs requiring hospitalization (Appendix A) includes the ICD-10 code U07.1 for confirmed cases of COVID-19. Other codes for suspected but to be confirmed cases of COVID-19 with lengthy incubation periods are also Listed in Appendix A.

The SNF post-acute population is already a high-risk population, frequently with multiple comorbidities. Exposure to risk factors including pathogens and virus that are outside the SNF providers control must be better accounted for in the proposed SHF HAI measure. In the absence of specific data from CMS and Acumen, LLC. to review, AHCA/NCAL evaluated 2018 hospital admission patterns for HAIs identified in the proposed measure specifications, including 62,389 directly from SNFs.

The table below highlights that 87 percent of the proposed HAI diagnoses that would be attributed to SNFs represent the Sepis and Respiratory Infections categories while the remaining seven categories represent between 0.01 to 6.33 percent of SNF HAI discharges to hospitals. Given the significant imbalance in frequency across the proposed SNF HAI categories, local swings in community infections rates of specific contagious pathogens with lengthy incubation periods not accounted for in the measure specifications could severely skew performance rates for SNFs located in such communities during the measure performance window.

Draft SNF HAI Category	# Hospital Claims	# Entered From SNF	% From SNF	% Across SNFs
Ear/eye infections	466	7	1.50%	0.01%
Gastrointestinal infections	23,865	1,117	4.70%	1.79%
Genito-urinary infections	16,026	460	2.90%	0.74%
Infections related to devices or stumps	27,195	2,559	9.40%	4.10%
Neurological infections	1,528	22	1.40%	0.04%
Respiratory infections	345,470	17,004	4.90%	27.25%
Sepsis	450,574	37,219	8.30%	59.66%
Skin infections	157,695	3,949	2.50%	6.33%
Unknown site and unknown bugs	2,518	52	2.10%	0.08%

We suggest that the measure replace the fixed day-four from SNF admission inclusion window for numerator population, regardless of ICD-10 diagnosis, with condition-specific inclusion windows that better account for lengthy incubation periods so that the majority of ICD-10 codes included in the numerator population most likely reflect infections related to SNF infection control practices and not patient community exposure or hospital practices prior to the SNF admission.

An additional concern AHCA provider subject matter experts have regarding the list of draft ICD-10 codes for inclusion in the numerator population are the five ICD-10 codes listed under the category “Unknown site and unknown bugs”. We do not believe the inclusion of “unknown” conditions should be attributed to SNF HAI performance as the lack of information related to the specific infection will not provide actionable information to the SNF. The measure should only include known conditions with known incubation periods and known prevention and treatment approaches. Given the almost complete absence of these conditions in historical hospital claims, we do not believe that removal will reduce the stability of the draft measure

Denominator Statement and Details: If the proposed draft SNF HAI measure is to remain a Medicare FFS-only measure, then AHCA members agree with the proposal to include all Medicare FFS stays except for stays that meet specific clearly defined exclusion criteria.

Eligible Stays (Unadjusted Denominator): In general, AHCA members support the proposed unadjusted denominator parameters. Specific AHCA comments for proposed Medicare FFS stay exclusions are as follows:

1. Resident is less than 18 years old. AHCA members support the exception rationale as proposed.

2. The SNF length of stay was shorter than four days. AHCA members support the exclusion of SNF short stays (1-3 days) from the denominator population as there is low likelihood of SNF acquired HAIs demonstrating signs or symptoms during this time frame due to incubation windows.

3. Residents who were not continuously enrolled in Part A FFS Medicare during the SNF stay, 12 months prior to the measure period, and 3 days after the end of SNF stay. Given the current challenges accessing

meaningful MA enrollee information necessary for adequate risk-adjustment, AHCA members support the exception rationale as proposed.

4. Residents who did not have a short-term acute care hospital stay within 30 days prior to the SNF admission date. The short-term stay must have positive payment and positive length of stay. AHCA members support the exception rationale as proposed.

5. Residents who were transferred to a federal hospital from the SNF. AHCA members support the exception rationale as proposed.

6. Residents who received care from a provider located outside of the United States, Puerto Rico, or a U.S. territory. AHCA members support the exception rationale as proposed.

7. SNF stays in which data were missing or problematic on any variable used in the measure construction or risk adjustment. This also includes stays where Medicare did not pay for the stay. AHCA members support the exception rationale as proposed, particularly regarding late or missing hospital claim information beyond the SNFs control.

Adjusted Denominator: CMS and Acumen, LLC. indicate that the proposed measure denominator is the risk adjusted "expected" number of SNF stays with the measure outcome. The calculation of the "expected" number of stays starts with the total eligible SNF stays which is then risk adjusted for resident characteristics excluding the SNF effect. The "expected" number of stays with the measure outcome represents the predicted number of stays with the measure outcome if the same SNF residents were treated in the "average" SNF. AHCA subject matter expert members found that the draft measures document did not contain an adequate explanation or details of this process to be able to offer constructive comment on how the "expected number" is determined for the denominator population.

Statistical Risk Model and Variables

The developers, CMS and Acumen, LLC., indicate that the statistical risk model is a hierarchical logistic regression model, which predicts the probability of a HAI that is acquired during SNF care and results in hospitalization. Risk adjusters are predictor variables in the model. Resident characteristics related to each stay and a marker for the specific SNF will be included in the equation. The equation will be hierarchical in that both individual resident characteristics, as well as clustering of residents into SNFs, will be accounted for.

Proposed risk adjustment variables described in the draft specifications include:

- Age/sex categories:
- Original reason for Medicare entitlement (age and disability/ESRD):
- Surgery category (if present) on prior short-term claim (e.g., cardiothoracic, orthopedic), grouped using the Clinical Classification Software (CCS) for ICD-10 procedures developed by the Agency for Healthcare Research and Quality (AHRQ)

- Receiving dialysis but not ESRD patients (defined as beneficiaries who receive ESRD Medicare benefits):
- Principal diagnosis on prior short-term claim, grouped clinically using the CCS for ICD- 10 diagnoses developed by AHRQ
- Comorbidities from secondary diagnoses on the prior short-term claim and diagnoses from earlier short-term stays up to one year before SNF admission (these are clustered using the Hierarchical Condition Categories [HCC] software version 22 groups used by CMS)
- Length of stay in the prior short-term hospital stay (categorical to account for nonlinearity):
- Prior acute ICU/CCU utilization in the prior short-term hospital stay.
- Count of prior short-term discharges within a one-year lookback from the SNF admission date, excluding the most proximal hospitalization claim prior to the SNF admission.

AHCA members generally support the proposed risk adjustors but believe the list is incomplete. We also recommend that the developers, CMS and Acumen, LLC., consider adding the following proposed risk adjustment variables:

- Long-term care facility stays prior to the initial hospital admission. Rationale: Individuals that have had health and mobility impairments significant enough to require 24/7 nursing facility level of care prior to the initial hospital stay are at a higher risk for contracting infections than hospital admissions arising from the community, and would provide a more precise reflection of prior health risk than just counts of prior short-term discharges listed in the proposed variables.
- Community infection rates for specific infection types. Rationale: It is well-established, as noted in the 2019 TEP summary report presented with this draft measure, that for certain infections, i.e. particularly communicable airborne pathogens such COVID-19, community behavior and infection rate outside the SNF can and does impact SNF infection rates in those locations. We believe that a risk-adjustor should be added to account for community infection rates for specific ICD-10 codes to reflect the higher risk SNFs in infected communities face. We believe that the TEP may not have thoroughly considered adding this as a risk-adjustment approach as they met in early 2019 – prior to the lessons that have been learned since the onset of the COVID-19 pandemic in the United States in early 2020. We believe this is a rational request as reflected in a recent announcement of the CMS efforts at offering a form of Value Based Payment incentive to SNF providers that best prevent the spread of COVID-19 in their centers. Specifically, the Agency includes the following risk adjustment factor for infection control performance that considers community rates of infection.

  Performance measurements for each facility will be evaluated based on the population-wide rate of COVID-19 infection in the geographic area in which a facility is located. The goal is to appropriately evaluate facility performance by measuring the baseline level of infection in the community in which a facility is located.11
- Patient cognitive impairment. Rationale: It is unclear to our AHCA member subject matter experts why patient cognitive impairment is not a risk-adjustor for the draft SNF HAI measure because it is a well-known and evidence-based factor. Page 2 of the draft specifications document even

states “Addressing HAIs in SNFs is particularly important because several factors place SNF residents at high risk for infection, including increased age, cognitive [emphasis added] and functional decline, use of indwelling devices, frequent care transitions, and close contact with other residents and health care workers.” The current COVID-19 pandemic has confirmed how hard it is to contain infections with patients with cognitive impairments.

- The infection-related performance of the discharging hospital.

Rationale: As discussed above, to be a meaningful measure that adequately reflects the SNFs infection control performance, the false inclusion of hospital acquired HAIs should be minimized or mitigated. Like the increased risk associated with high community rates of infection, there is higher risk when accepting admissions form a hospital that has substandard infection control performance as compared to hospitals with standard or above standard infection control performance.

11 Department of Health and Human Services, CARES Act Provider Relief Fund: FAQs: Nursing Home Infection Control Distribution. https://www.hhs.gov/coronavirus/cares-act-provider-relief-fund/faqs/targeted-distribution/index.html#nursing-home Accessed October 9, 2020.

- Patients who have had several infections in the past. Rationale: Such patients may be at higher risk of ongoing infections (e.g. patient with multiple pneumonias may have inherent immunocompromise that may cause repetitive infections). The risk adjustment should account for previous infection incidence.
- Patients with immunocompromising conditions and medications. Rationale: Immunocompromising conditions including but not limited to cancer, chronic inflammatory conditions, and medications that may alter immunity, place certain residents at higher risk of infections as compared to others, rendering a need for adjusting for these factors.
- Healthcare disparities. Rationale: While it appears that the TEP panel, convened in May 2019 considered and agreed not to include social factors as risk adjustors but instead study their impact, our AHCA subject matter experts are well-aware that well- delineated healthcare outcome disparities have been previously documented among patients and SNFs in the socio-demographically and socioeconomically disadvantaged categories. We are not proposing to create a separate performance threshold (which could perversely incentivize lower quality of care) but are suggesting that the measure developers empirically explore social risk adjustment of this measure, otherwise the measure could have the unintended effect of further entrenching disparities in access and outcomes.

Example Member Subject Matter Expert Responses to Specific AHCA/NCAL Questions Related to the Draft SNF HAI Measure Specifications

1. What are your impressions/thoughts on the risk adjustment variables and the approach for risk adjustment?

AHCA subject matter experts generally agree that the draft SNF HAI measure risk adjustment variables and approach to risk adjustment are difficult to comment on due to incomplete descriptions of the variables and

process including the absence of any analytic information (i.e. specific numerator and denominator data) that was discussed in the July 2019 TEP summary report, but not presented for public evaluation. Below are example member statements:

- Adequate risk adjustment is going to be the key for this measure to be fair. (see above 10 above for the AHCA/NCAL subject matter expert developed list of proposed additional risk adjustors that should be added)

- The exceptions do appear to be thorough to identify factors that do influence HAI's, but I do think the age of the population exclusion should be greater than 18 years old. The age should start with 35 years old range to encompass age range for population.

- The risk adjustment is not clearly defined, states still under testing. These should have been tested and determined prior to moving to comment period and pre-rule making. To be completely transparent I am lost in the statistical analysis of the risk adjustment. Concern that the preliminary study done was with a very limited sample. If I recall correctly it was 300 or 600 records were used, this is not representative to base determination of quality in HAI prevention upon. In addition; the lack of baseline data

to determine the prevalence of HAI post-acute, CMS is determining quality of HAI prevention without knowledge of current HAI's in skilled nursing facilities.

2. Do you think this measure is important?

AHCA subject matter experts agree that a SNF HAI measure is important. Below are example member statements:

- Yes, especially considering all we have seen and dealt with through the pandemic, but I think there needs to be additional and more recent evidenced-based study around this measure looking at both acute and post-acute care. There needs to be a broader look into what occurred with the resident during the Acute stay.

- Yes, this measure supports a quality of care healthcare delivery, mitigation of complications leading to extended lengths of stay and mitigation of healthcare costs of a preventable medical condition.

- Prevention of HAI's is important, but this measure is not an accurate measurement of SNF's infection prevention. As mentioned previously the measure is determining quality without knowledge of current/actual HAI's.

3. Do you think this measure is feasible as currently defined?

AHCA subject matter responses were mixed but the consensus was that the currently defined draft HAI measure requires more refinement. Below are example member statements:

- I do believe that there are infections that could have been mitigated by the SNF with earlier detection and identification of precipitating factors.

	This review will have us looking at our Antibiotic Stewardship Programs as well as long term infections. • CMS states that claims data is accurate and reliable since they are used for payment and subject to audit. If inaccu”
Cerner Corporation	“Collection of needed data to properly identify history of infection is a challenge. It is typically not in the acute transfer data (eg: history of Sepsis, UTI, CDiff from past encounters that are resolved but indicators of risk for reinfection – sometimes with little presenting symptoms in frail co-morbid older adults). This could erroneously impact the provider who is caring for the most complex patients. Broadly, the SNF/NF adoption of technology to help with HAI tracking and reporting is inconsistent, ranging from none to basic EHR data capture to extensive targeted solutions. A very unequal playing field. No incentives for adopting technology have been historically present. Some providers may have had an opportunity to invest in technology with PHE funds in 2020, but certainly not all and again, not representative of the provider community. SNFs, unlike hospitals, use multiple labs to treat patients driven by coverage/payers. This makes collection of lab data difficult. Results are not always as timely as needed"

Measure Information

Characteristic	Submitted Information
MUCID	MUC20-0030
Other Measure Identification Numbers	
Title	Hospice Care Index
Program	Hospice Quality Reporting Program
Workgroup	PAC/LTC
In what state of development is the measure?	Fully Developed
State of Development Details	The index design of the tool addresses comments we have received from prior Measures Application Partnership (MAP) meetings and other public comments, including from national associations, to develop a quality measure that addresses the multi-disciplined nature of hospice and reflect care throughout the hospice stay. For these reasons we developed the tool for inclusion in the Hospice Quality Reporting Program and found the measure performed well in reportability, variability, and validity analyses. Because the measure is calculated using provider-level distributions, split-half reliability and interclass correlation coefficients cannot be calculated/assessed as in more traditional measures. However, we did conduct a stability analysis by comparing index scores for calculated for the same hospice using claims from Federal Fiscal Years 2017 vs. 2019. We found that 82.8% of providers' scores changed by at most 1 point (among those hospices with calculated index scores in both of those years), suggesting overall stability of the index. Additionally, the measure was presented to Federal hospice experts and separately a Technical Expert Panel for input in Spring, 2020, and generally received favorable reviews and an understanding of what the measure was seeking to achieve with an acknowledgement that its design is appropriate for those goals.
Measure Description	The Hospice Care Index monitors a broad set of leading, claims-based indicators of hospice care processes. The ten indicators reflect care throughout the hospice stay and by the care team within the domains of higher levels of care, visits by nursing staff, patterns of live discharge, and per-beneficiary spending. Index scores are calculated as the total instances a hospice meets a point criterion for each of the 10 indicators. The index thereby seeks to identify hospices which are outliers across an array of multifaceted indicators, simultaneously.
Numerator	This index numerator is based on an approved NQF approach and does not have a traditional numerator. The index score is calculated as the total number of instances a hospice meets a point criterion among ten provider-level indicators. Nine of the ten indicators are distribution-based: for example, all hospices meeting the criterion of "the bottom 90% of hospices by nursing minutes per day" would earn a point for that indicator, and their index score would be at least 1 to reflect meeting the threshold for that one instance. The remaining criterion is triggered by the provision of higher levels of service. Therefore the potential range of scores is from 0 to 10. The ten indicators that comprise the composite do have their own numerator (and denominator) statements; the indicators are listed below

	with corresponding numerator definitions [in brackets]. 1. Hospice provided no Continuous Home Care (CHC) & General Inpatient (GIP) [numerator: number of GIP and CHC days]; 2. Gaps in nursing visits greater than 7 days [numerator: number of elections a gap in nursing visits exceeds 7 days]; 3. Nurse minutes per Routine Home Care (RHC) day [numerator: total nursing minutes during RHC days]; 4. Live discharges in the first 7 days of hospice [numerator: number of live discharges within 7 days of hospice admission]; 5. Live discharges on or after the 180th day of hospice [numerator: number of live discharges after 180 days of hospice enrollment]; 6. Burdensome transitions (Type 1), live discharges from hospice followed by hospitalization within two days followed by hospice readmission within two days [numerator: number of live discharges followed by hospital admission within two days, then hospice re-admission within two days]; 7. Burdensome transitions (Type 2), live discharges from hospice followed by hospitalization within two days with the patient dying in the hospital during the inpatient stay [numerator: number of live discharges followed by hospital admission within two days with death in the hospital during the inpatient stay]; 8. Skilled nurse visits on weekends [numerator: sum of minutes during nursing visits on Saturdays or Sundays]; 9. Per-beneficiary spending [numerator: total payments received by a provider in a year]; 10. Receiving visits near death [numerator: the number of decedent beneficiaries receiving a visit by a skilled nurse or social worker in last three days of life].
Denominator	This index denominator is based on an approved NQF approach and does not have a traditional denominator. All hospices with claims data for the period of performance not otherwise excluded (see below) are assigned an index score. The ten indicators that comprise the composite do have their own denominator statements (and numerator, per above); the indicators are listed below with corresponding denominator definitions [in brackets]. 1. Hospice provided no Continuous Home Care (CHC) & General Inpatient (GIP) [denominator: all hospices service days]; 2. Gaps in nursing visits greater than 7 days [denominator: number of elections enrolled at least 30 days]; 3. Nurse minutes per Routine Home Care (RHC) day [denominator: number of RHC service days]; 4. Live discharges in the first 7 days of hospice [denominator: number of live discharges]; 5. Live discharges on or after the 180th day of hospice [denominator: number of live discharges]; 6. Burdensome transitions (Type 1), live discharges from hospice followed by hospitalization within two days followed by hospice readmission within two days [denominator: number of live discharges]; 7. Burdensome transitions (Type 2), live discharges from hospice followed by hospitalization within two days with the patient dying in the hospital during the inpatient stay [denominator: number of live discharges]; 8. Skilled nurse visits on weekends [denominator: total skilled nursing minutes during RHC service days]; 9. Per-beneficiary spending [denominator: total number of beneficiaries electing hospice with the provider that year]; 10. Receiving visits near death [denominator: the number of decedent beneficiaries].
Exclusions	Hospices with fewer than 20 discharges in the year are not assigned a calculated index score per convention of the quality reporting program (requiring sufficient data available to calculate reliable scores for publicly displayed measures).
Measure type	Composite

What is the NQF status of the measure?	Never submitted
NQF ID number	0000
Year of next anticipated NQF CDP endorsement review	
Year of most recent NQF Consensus Development Process (CDP) endorsement	
Is the measure being submitted exactly as endorsed by NQF?	
If not exactly as endorsed, describe the nature of the differences	
What data sources are used for the measure?	Claims
If EHR or Administrative Claims or Chart-Abstracted Data, description of parts related to these sources.	
At what level of analysis was the measure tested?	Facility
In which setting was this measure tested?	Hospice
What NQS priority applies to this measure?	
What one primary meaningful measure area applies to this measure?	End of life care according to preferences
What secondary meaningful measure area applies to this measure?	

What one primary healthcare priority applies to this measure?	Strengthen person and family engagement as partners in their care
What secondary healthcare priority applies to this measure?	
What area of specialty best fits the measure?	Hospice and palliative care
What is the target population of the measure?	Medicare Part A enrolled beneficiaries electing hospice services (note that all beneficiaries enrolled in Medicare Advantage convert to fee-for-service when electing the hospice benefit)
Is this measure an eCQM?	No
If eCQM, enter Measure Authoring Tool (MAT) number	No
If eCQM, does the measure have a Health Quality Measures Format (HQMF) specification?	No
Comments	
Measure steward	Centers for Medicare & Medicaid Services
Long-Term Measure Steward (if different)	
Measure Steward Contact Information	Massuda, Cindy; Centers for Medicare & Medicaid Services; (410) 786-0652; Cindy.Massuda@cms.hhs.gov
Primary Submitter Contact Information	Harrison, Zinnia; Abt Associates; (301) 347-5486; Zinnia_Harrison@abtassoc.com
Long-Term Measure Steward Contact Information	
Secondary Submitter Contact Information	Christian, Thomas; Abt Associates; (617) 520-2637; Thomas_Christian@abtassoc.com
Was this measure proposed for a	No

previous year's MUC list?	
In what prior year(s) was this measure proposed?	
What were the programs that NQF MAP reviewed the measure for in each year?	
Why was the measure not recommended in those year(s)?	
What were the MUC IDs for the measure in each year?	
NQF MAP report page number being referenced for each year	
What was the NQF MAP recommendation in each year?	
List the NQF MAP workgroup(s) in each year	
What is the history or background for including this measure on the new MUC list?	New measure never reviewed by MAP Workgroup or used in a CMS program
Range of years(s) this measure has been used by CMS Program(s)	None
What other federal programs are currently using this measure?	None
Evidence that the measure can be operationalized	The measure is constructed predominantly from claims records from the Medicare Hospice Benefit, which are already collected by CMS for payment and quality purposes. Acute inpatient claims records are also used for the two indicators capturing hospitalizations after live discharge. Claims data are considered accurate and reliable for measure development, as they are used for payment and subject to audit. Claims data are used to calculate quality measures that are implemented and

	publicly reported in other CMS quality reporting programs (QRPs), including the post-acute care QRPs. The data needed to calculate this measure are readily available and require no additional data submission beyond what is already collected on claims in the normal course of business. This measure poses no additional data collection burden to hospice providers. The data elements from Medicare FFS claims are those basic to the operation of the Medicare payment systems and include date of admission, date of discharge (and discharge status; i.e., if the patient was alive or deceased), visits received, levels of hospice care, sites of service, payments, and inpatient admissions.
How is the measure expected to be reported to the program?	Claims
Is this measure similar to and/or competing with measure(s) already in a program?	No
Which existing measure(s) is your measure similar to and/or competing with?	None
How will this measure be distinguished from other similar and/or competing measures?	N/A
Rationale for how this measure will add to the CMS program	The Hospice Care Index describes provider performance across a broad array of leading indicators of hospice service representing care thorough the hospice stay and represented by the multi-disciplinary team. The index augments the reporting program with new measurement domains that were either directly recommended for CMS to publicly report or identified as areas for improvement by the Office of Inspector General, MedPAC and academic literature. The index design monitors 10 indicators simultaneously to best ensure the reliability of the providers it assigns as consistent outliers, which identifies hospices underperforming relative to expectations of the hospice philosophy. The index feature of this measure was intentional to respond to comments received during FY2020 rulemaking noting the limitations of a claims-based measure CMS was considering (transitions from hospice, presented to the MAP in December, 2018). Public commenters believed there were limitations to a single measure's capacity to depict all circumstances. That is, there could be more explanations for a hospice's score performance for that single measure than the claims information can convey. By identifying hospices which meet the points criteria across multiple areas, the index overcomes the limitations of single-outcome measures. This method consistently supports much greater internal validity as it is unlikely a hospice would

consistently fail to earn points across multiple criteria due to practices fully beyond their control. Furthermore, most criteria are based on national distributions of indicator scores (e.g., the bottom 90% or all hospice scores). This design feature acknowledges that some prevalence of not meeting the criteria is normal and to be expected, (by definition, hospices in the top 10% of the same disctibution). Rather, the index seeks to identify failing to achieve the indicator criteria across multiple areas simultaneously. More broadly, the Hospice Care Index monitors the performance for a broad and holistic set of indicators for hospice care processes not otherwise addressed within the current quality measures of CMS's Quality Reporting Program. As defined in the 1983 final rule establishing the Medicare hospice benefit, hospice care is an approach to treatment recognizing the impending death of an individual warrants a change in focus from curative care to palliative care. The rule states that hospices will use an interdisciplinary approach to deliver medical, social, psychological, emotional, and spiritual services through the use of a broad spectrum of professional and other caregivers with the goal of making the beneficiary as physically and emotionally comfortable as possible (the rule notes that, unlike hospices in Europe, hospices in the U.S. have placed a strong emphasis on home care). The Hospice Care Index measure incorporates several hospice cares processes which the Office of Inspector General (OIG) recommended that CMS publically report, or which were mentioned as areas in need of improvement by the OIG, MedPAC, or academic literature. These domains include the provision of hospice services, live discharges, and levels of care. The measure's index design monitors its multifaceted array of domains simultaneously, and identifies hospices which consistently present in the extremes for multiple. This feature is responsive to comments received from public rulemaking (84 FR 38484; https://www.govinfo.gov/content/pkg/FR-2019-08-06/pdf/2019-16583.pdf) that expressed concerned about a previously developed live discharge/transitions from hospice measure. Commenters expressed that there were limits to what a single claims-based measure (of hospice transitions) could convey; i.e., that there could be other explanations for a hospice's poor performance than the claims information convey. By identifying hospices which do not meet the points criteria across multiple areas simultaneously, this index assigns providers as outliers with more reliability and internal validity than a single-outcome claims measures and thereby overcomes its limitations. Lastly, this measure is calculated using administrative records only, and provides information for public reporting at no additional burden to patients, their caregivers, or hospices. The index is calculated as follows. Across 10 categories of hospice utilization indicators, the measure allocates points for a particular criterion for each indicator: e.g., "the bottom 10% of hospices by nursing minutes per day". The measure then assigns the hospices a score calculated as the total number of points earned for each indicator. (If a hospice never missed a criterion its score would be 10, if it failed to meet a criterion for just one indicator, its score would be 9. Indicators assessed in the index [with thresholds in brackets] are: 1. Hospice provided Continuous Home Care (CHC) & General Inpatient (GIP) [criteria: all hospices meeting this criterion]; 2. Gaps in nursing visits greater than 7 days [criteria: bottom 90% of hospices]; 3. Nurse minutes per Routine Home Care (RHC) day [criteria:

	top 90% of hospices]; 4. Live discharges in the first 7 days of hospice [criteria: bottom 90% of hospices]; 5. Live discharges on or after the 180th day of hospice [criteria: bottom 90% of hospices]; 6. Burdensome transitions (Type 1), live discharges from hospice followed by hospitalization followed by hospice readmission [point criteria: bottom 90% of hospices]; 7. Burdensome transitions (Type 2), live discharges from hospice followed by hospitalization with the patient dying in the hospital [point criteria: bottom 90% of hospices]; 8. Skilled nurse visits on weekends [threshold: top 90% of hospices]; 9. Per-beneficiary spending [point criteria: bottom 90% of hospices]; 10. Receiving visits near death [criteria: top 90% of hospices].
If this measure is being proposed to meet a statutory requirement, please list the corresponding statute.	
Evidence of performance gap	We conducted testing following the NQF Measure Evaluation Criteria of measure-level reportability, variability, and validity. Testing used 100% Medicare hospice claims with dates of discharge in 2019. Reportability analyses found a high proportion of hospices that would yield reportable measure scores. The index yielded over 85% of hospices reporting. Variability analyses indicated sufficient ability to differentiate hospices. The index has a theoretical range of 0 to 10 and actual observed range of 3 to 10. For the distribution of scores, 37.1% of hospices have a score of 10, 30.4% have a score of 9, 17.9% have a score of 8, 9.6% have a score of 7, and 3.6% have a score of 6 or below. Validity analysis found hospices with higher index scores have higher CAHPS Hospice scores, as expected. As measured by Pearson's correlation coefficients, the correlation between the CAHPS hospice overall rating and index is +0.0675 and the correlation between the CAHPS hospice recommendation outcome and the index score is +0.0916. Finally, note that because this measure is not designed as a rate it could never become "topped-out". Moreover, because the scores flag providers in the extremes of the indicators' distributions, some hospices will always be flagged because there will always hospices that exceed distribution-based thresholds (e.g., in top or bottom 10% of an individual indicator). By design it will never occur that all hospice providers could simultaneously achieve a score of 10 (the index's equivalent of "topped-out").
Unintended consequences	The Hospice Care Index will introduce new domains and measurement concepts to the Hospice Quality Reporting Program. The potential exists for providers altering behavior in order to avoid meeting thresholds for indicators. For example, hospices could avoid discharging patients alive even when clinically appropriate to lower their live discharge rate. Another unintended consequence might be hospices avoiding higher levels of care or prematurely discharging patients alive to limit per-beneficiary spending, thereby lowering access to that population. CMS will continue to monitor trends for the index and individual indicators to ensure Medicare beneficiaries continue to have access to high-quality hospice care.

Which clinical guideline(s)?	
Briefly describe the peer reviewed evidence justifying this measure	The 10 individual indicators included in the index were selected for their relation to five domains which had been highlighted as reflective of care provided by the multi-disciplined staff and demonstrate care provided throughout the hospice stay. These are also areas raised by the Office of Inspector General (OIG), MedPAC, or academic literature as needing improvement. The index examines these domains, described below, in totality to support examination of the hospice philosophy's holistic intent (described in Row 19, above). Hospice leaders, national hospice organizations, and CMS all support and espouse this intent, and the Hospice Care Index was developed to further support the measurement of this philosophy. The 10 indicators measure programs' care processes and service provision, or suggest programs selectively enrolling patients who are expected to result in lower costs and longer elections. While many hospice programs would be expected may to exhibit 'some' degree of all indicators, the index identifies the number of instances hospice providers exceed thresholds across multiple indicators simultaneously; hence the totality concept of this index. The domains, rationales, and supporting studies, and representative indicators are as follows: 1. Provision of General Inpatient (GIP) and Continuous Home Care (CHC) days. Medicare Hospice Conditions of Participation require hospices to be able to provide both CHC and GIP level of care to manage more intense symptom crises. However, a 2013 OIG report found that 953 hospice programs did not provide any GIP level of care services, and it was unclear if dying patients at such hospices were receiving appropriate management of symptoms when in crisis (a similar concern exists for hospice services at the CHC level). Thus, the index includes an indicator of hospice programs that do not provide any GIP nor CHC service days. 2. Provision of Visits by Professional Hospice Staff. Conditions of Participation require a member of the interdisciplinary team to ensure ongoing assessment of patient and caregiver needs and the implementation of the plan of care. To assess the receipt of adequate oversight, one indicator examines hospices that have a high rate of patients who are not seen at least once a week by nursing staff. Another indicator examines the average number of minutes per day that nursing staff provide during Routine Home Care (RHC) service. To assess 24/7 availability of hospice services as required by the Conditions of Participation, this index includes minutes of care provided by skilled nurses on weekend RHC days. Finally, the end of life is typically the period in the terminal illness trajectory with the highest symptom burden. Particularly during the last few days before death, patients (and caregivers) experience many physical and emotional symptoms, necessitating close care and attention from the integrated hospice team and drawing increasingly on hospice team resources (de la Cruz 2014, Dellon 2010, Kehl 2013). Highly specific physical signs associated with death can often be identified within 3 days of death (Hui et al., 2014). Therefore, the index includes an indicator capturing staff visits during the three days prior to the beneficiary's death. 3. Rate and Patterns of Hospice Live Discharges. Prior work has identified various problematic patterns of live discharge from hospice. High rates for these patterns suggest problems in hospices' care processes, their advance care planning to prevent hospitalizations, or their

discharge processes (Teno et al., 2015). As MedPAC (2020) notes, “Hospice providers are expected to have some rate of live discharges because some patients change their mind about using the hospice benefit and dis-enroll from hospice or their condition improves and they no longer meet the hospice eligibility criteria. However, providers with substantially higher rates of live discharge than their peers could signal a potential problem with quality of care or program integrity. An unusually high rate of live discharges could indicate that a hospice provider is not meeting the needs of patients and families or is admitting patients who do not meet the eligibility criteria.” Our indicators of live discharge, like MedPAC’s, include discharges for all reasons, including both that the patient was no longer found terminally ill and for revocations due to the patient’s choice; in the same (2020) report, MedPAC wrote “Some stakeholders argue that live discharges initiated by the beneficiary—such as when the beneficiary revokes his or her hospice enrollment—should not be included in a live-discharge measure because, some stakeholders assert, these discharges reflect beneficiary preferences and are not in the hospice’s control. Because beneficiaries may choose to revoke hospice for a variety of reasons, which in some cases are related to the hospice provider’s business practices or quality of care, we include revocations in our analysis”. The index includes four indicators that capture these patterns: the rates of (i) live discharge within 7 days of hospice enrollment; (ii) live discharge that occurred 180 days or more after hospice enrollment; (iii) hospice live discharge with a hospital admission, and then hospice readmission; and (iv) hospice live discharge followed by a hospital admission with the patient’s death in the hospital. 4. Per-beneficiary spending. Estimates of per-beneficiary spending are endorsed by NQF (#2158) and publically reported by CMS for other care settings. Because the Medicare hospice benefit pays a per diem rate, an important determinant of per-beneficiary spending is the length of election. MedPAC reported that nearly half of Medicare hospice expenditures are for patients that have had at least 180 or more days on hospice (MedPAC, 2020), and expressed a concern that some programs do not appropriately discharge patients whose medical condition makes them no longer eligible for hospice services, or, that that hospices selectively enroll patients with non-cancer diagnoses and longer predicted lengths of stay in hospice. The other determinant of per-beneficiary spending is the level of care at which services are billed, and in a 2016 report the OIG has expressed concern at the potentially inappropriate billing of high-level, higher-rate services such as General Inpatient (GIP) care. For these reasons the index includes one indicator for per-beneficiary spending, calculated as the total amount of spending paid to a hospice in a year divided by the total number of beneficiaries served by the hospice. References: Department of Health and Human Services, Office of Inspector General. (2013). Medicare hospice: Use of general inpatient care. https://oig.hhs.gov/oei/reports/oei-02-10-00490.asp. Department of Health and Human Services, Office of Inspector General. (2016). Medicare hospice: Hospices Inappropriately Billed Medicare Over $250 Million for General Inpatient Care. https://oig.hhs.gov/oei/reports/oei-02-10-00491.asp. Medicare Payment Advisory Commission. 2020. Report to the Congress: Medicare payment policy. Washington, DC: MedPAC. Medicare and Medicaid Programs:

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MUC20-0030 Attachment A: Methodology for Computing Care Indicators Used to Calculate the Hospice Care Index

This attachment highlights to processes used to calculate the Hospice Care Index indicators from Medicare claims data.

A.1 Hospice provided No Continuous Home Care (CHC) or General Inpatient (GIP) services

This indicator identifies hospices that provided at least one day of hospice care under the CHC or the GIP levels of care during the year examined. The provision of CHC and GIP are identified on hospice claims by the presence of revenue center codes 0652 (CHC) and 0656 (GIP).

A.2 Gaps in nursing visits greater than seven days

This indicator identifies whether a hospice is below the 90th percentile in terms of how often hospice stays of at least 30 days contain at least one gap of eight or more days without a nursing visit. Days of hospice service are identified based on the presence of revenue center codes 0651 (RHC), 0652 (CHC), 0655 (IRC), and 0656 (GIP) on hospice claims. We identify the dates billed for RHC, IRC, and GIP by examining the corresponding revenue center date (which identifies the first day in the sequence of days by level of care) and the revenue center units (which identify the number of days (including the first day) in the sequence of days by level of care). We identify the dates billed for CHC by examining the revenue center date.[1] We define a hospice stay by a sequence of consecutive days for a particular beneficiary that are billed under the hospice benefit. A gap of at least one day without hospice ends the sequence. For this indicator, we only identified hospice stays that included 30 or more consecutive days of hospice. Once we identified those hospice stays, we examined the timing of the provision of nursing visits within those stays. We identified nursing visits if we observed any of the following criteria:

1. The presence of revenue center code 055x (Skilled Nursing) on the hospice claim. The date of the visit is recorded in the corresponding revenue center date.
2. The presence of revenue code 0652 (CHC) on the hospice claim. Days billed as CHC require more than half the hours provided be nursing hours.
3. The presence of revenue code 0656 (GIP) on the hospice claim. We assume that days billed as GIP will include nursing visits. We make that assumption instead of looking at the visits directly because Medicare does not require hospices to record all visits on the claim for the GIP level of care.

Based on the above information, if within a hospice stay we find eight or more consecutive days where no nursing visits are provided, no CHC is provided, and no GIP is provided, then we identify the hospice stay as having a gap in nursing visits greater than seven days. For each hospice, we divide the number of stays with at least one gap of eight or more days without a nursing visit (for stays of 30 or more days) by the number of stays of 30 or more days. We only consider the days within the fiscal year being examined.

[1] Hospices bill each day of CHC on a separate line item on the hospice claim.

A.3 Nurse minutes per Routine Home Care (RHC) day

This indicator identifies whether a hospice is below the 90th percentile in terms of the average number of nursing minutes provided on RHC days during the fiscal year examined. We identify RHC days by the presence of revenue code 0651 on the hospice claim. We identify the dates of RHC service by the corresponding revenue center date (which identifies the first day of RHC) and the revenue center units (which identifies the number of days of RHC (including the first day of RHC)). We identify nursing visits by the presence of revenue code 055x (Skilled Nursing) on the claim. We count skilled nursing visits where the corresponding revenue center date overlaps with one of the days of RHC previously identified. We then count the minutes of skilled nursing visits by taking the corresponding revenue center units and multiplying by 15. For each hospice, we sum together all skilled nursing minutes provided on RHC days and divide by the sum of RHC days.

A.4 Live discharges in the first seven days of hospice

This indicator identifies whether a hospice is below the 90th percentile in terms of the percentage of live discharges that occur within seven days of hospice admission during the fiscal year examined. Live discharges occur when the patient discharge status code on a hospice claim equals a value other than one included from the following list: "30", "40", "41", "42", "50", "51". We measure whether a live discharge occurs during the first seven days of hospice by looking at a patient's lifetime length of stay in hospice.[2] For each hospice, we divide the number of live discharges in the first seven days of hospice by the number of live discharges. Live discharges are assigned to a particular year based on the date of the live discharge (which corresponds to the through date on the claim indicating the live discharge).

A.5 Live discharges on or after the 180th day of hospice

This indicator identifies whether a hospice is below the 90th percentile in terms of the percentage of live discharges that occur on or after the 180th day of hospice. Live discharges occur when the patient discharge status code equals a value other than one included from the following list: "30", "40", "41", "42", "50", "51". We measure whether a live discharge occurs on or after the 180th day of hospice by looking at a patient's lifetime length of stay in hospice. For each hospice, we divide the number of live discharges that occur on or after the 180th day of hospice by the number of live discharges. Live discharges are assigned to a particular year based on the date of the live discharge (which corresponds to the through date on the claim).

A.6 Burdensome transitions (Type 1) – live discharge from hospice followed by hospitalization followed by hospice readmission

This indicator identifies whether a hospice is below the 90th percentile in terms of the percentage of live discharges that are followed by a hospitalization (within two days of hospice discharge) and then followed by a hospice readmission (within two days of hospitalization) during the fiscal year examined. Live discharges occur when the patient discharge status code equals a value other than one included from the following list: "30", "40", "41", "42", "50", "51". Hospitalizations are found by looking at all fee-for-service Medicare inpatient claims. Overlapping inpatient claims were combined to determine the full length of a hospitalization (looking at the earliest from date and latest through date from a series of

[2] That is, we are measuring the first seven days of hospice over a patient's lifetime and potentially across multiple hospice elections and fiscal years.

overlapping inpatient claims for a beneficiary). To be counted, from the date of the hospitalization had to occur no more than two days after the date of hospice live discharge.[3] From there, we found all beneficiaries that ended their hospitalization and were readmitted back to hospice no more than two days after the last date of the hospitalization. To calculate the percentage, for each hospice we divided the number of live discharges that are followed by a hospitalization (within two days of hospice discharge) and then followed by a hospice readmission (within two days of hospitalization) in a given fiscal year by the number of live discharges in that same fiscal year.

A.7 Burdensome transitions (Type 2) – live discharge from hospice followed by hospitalization with the patient dying in the hospital

This indicator identifies whether a hospice is below the 90th percentile in terms of the percentage of live discharges that are followed by a hospitalization (within two days of hospice discharge) and then the patient dies in the hospital. Live discharges occur when the patient discharge status code equals a value other than one included from the following list: “30”, “40”, “41”, “42”, “50”, “51”. Hospitalizations are found by looking at all inpatient claims. Overlapping inpatient claims were combined to determine a full length of a hospitalization (looking at the earliest from date and latest through date from a series of overlapping inpatient claims). To be counted, from the date of the hospitalization had to occur no more than two days after the date of hospice live discharge. From there, we found all beneficiaries whose date of death is listed as occurring during the dates of the hospitalization. To calculate the percentage, for each hospice we divided the number of live discharges that are followed by a hospitalization (within two days of hospice discharge) and then the patient dies in the hospital in a given fiscal year by the number of live discharges in that same fiscal year.

A.8 Medicare spending per beneficiary (MSPB)

This indicator identifies whether a hospice is below the 90th percentile in terms of the average Medicare hospice payments per beneficiary. Hospice payments per beneficiary are determined by summing together all payments on hospice claims for a particular fiscal year for a particular hospice. The number of beneficiaries a hospice serves in a particular year is determined by counting the number of unique beneficiaries on all hospice claims in the same year for a particular hospice. Medicare spending per beneficiary is then calculated by dividing the total payments by the total number of unique beneficiaries.

A.9 Percentage of nurse minutes on Routine Home Care (RHC) days performed on weekends

This indicator identifies whether a hospice is at or above the 10th percentile in terms of the percentage of skilled nursing minutes performed on weekends compared to all days during the fiscal year examined. We identify RHC days by the presence of revenue code 0651 on the hospice claim. We identify the dates of RHC service by the corresponding revenue center date (which identifies the first day of RHC) and the revenue center units (which identifies the number of days of RHC (including the first day of RHC)). We identify nursing visits by the presence of revenue code 055x (Skilled Nursing) on the claim. We count skilled nursing visits where the corresponding revenue center date overlaps with one of the days of RHC previously identified. We then count the minutes of skilled nursing visits by taking the corresponding

[3] For example, if the hospice discharge occurred on a Sunday, the hospitalization had to occur on Sunday, Monday, or Tuesday to be counted.

revenue center units and multiplying by 15. For each hospice, we sum together all skilled nursing minutes provided on RHC days that occur on a Saturday or Sunday and divide by the sum of all skilled nursing minutes provided on all RHC days.

A.10 Professional visits at the end of life

This indicator identifies whether a hospice is at or above the 10th percentile in terms of the percentage of beneficiaries with a nurse and/or medical social services visit in the last three days of life. For this measure, we first determine if a beneficiary was in hospice for at least one day during their last three days of life by comparing days of hospice enrollment from hospice claims to their date of death. We identify nursing visits and medical social service visits by the presence of revenue code 055x (Skilled Nursing) and 056x (Medical Social Services) on the claim. We identify the dates of those visits by the revenue center date for those revenue codes. Additionally, we assume that days billed as GIP (revenue code 0656) will include nursing visits. We make that assumption instead of looking at the visits directly because Medicare does not require hospices to record all visits on the claim for the GIP level of care. For each hospice, we divide the number of beneficiaries with a nursing or medical social services visit on a hospice claim during the last three days of life by the number of beneficiaries with at least one day of hospice during the last three days of life.

MUC 20-0030 Attachment B: Methodology for Computing Care Indicators Used to Calculate the Hospice Care Index

This section summarizes the individual indicators, their calculation, and their associated criteria to earn points towards the Hospice Care Index score. **Table 1** defines the indicators and lists the criteria to earn points towards the index score. **Table 2** lists each indicator's numerator and denominator.

Table 1: Hospice Care Index Individual Indicator Definitions and Point Criteria

#	Individual Indicators	Definition	Index Earned Point Criteria
1	No CHC/GIP Provided	The percentage of hospice service days that were provided at the Continuous Home Care (CHC) or General Inpatient (GIP) level of care	Hospice Score Above 0%
2	Gaps in nursing visits	The percentage of hospice beneficiaries with elections of at least 30 days who experienced at least one gap between skilled nursing visits greater than 7 days	Below 90 Percentile Rank
3	Early live discharges	The percentage of all live discharges from hospice occurring within in the first 7 days after hospice admission	Below 90 Percentile Rank
4	Late live discharges	The percentage of all live discharges from hospice occurring on or after 180 days after hospice admission	Below 90 Percentile Rank
5	Transitions (Type 1)	The percentage of all live discharges where hospice discharge was followed by hospitalization, and the hospital discharge was followed by hospice readmission	Below 90 Percentile Rank
6	Transitions (Type 2)	The percentage of all live discharges where hospice discharge was followed by hospitalization, and where the patient also died during the hospitalization	Below 90 Percentile Rank
7	Per-beneficiary spending	Average per-beneficiary Medicare payments (in U.S. dollars): the total number of payments Medicare paid to hospice providers divided by the total number of hospice beneficiaries served	Below 90 Percentile Rank
8	Nurse minutes of care per day	Average total skilled nurse minutes per Routine Home Care (RHC) day: the total number of skilled nurse minutes provided by the hospice divided by the total number of RHC days the hospice serviced	Above 10 Percentile Rank
9	Weekend visits	The percentage of skilled nurse visits minutes that occurred on Saturdays or Sundays out of all skilled nurse visits provided during all days of the week	Above 10 Percentile Rank
10	Visits near death	The percentage of beneficiaries receiving at least one visit by a skilled nurse or social worker during the last three days of the patient's life (a visit on the date death, the date prior to the date of death, or two days prior to the date of death)	Above 10 Percentile Rank

Table 2: Hospice Care Index Individual Indicator Numerator and Denominator

Indicator	Numerator	Denominator
Hospice provided no Continuous Home Care & General Inpatient	Number of GIP and CHC days	All hospice service days
Gaps in nursing visits greater than 7 days	Number of elections a gap in nursing visits exceeds 7 days	Number of elections enrolled at least 30 days
Nurse minutes per Routine Home Care	Total nursing minutes during RHC days	Number of RHC service days
Live discharges in the first 7 days of hospice	Number of live discharges within 7 days of admission	Number of live discharges
Live discharges on or after the 180th day of hospice	Number of live discharges after 180 days of enrollment	Number of live discharges
Burdensome transitions (type 1)	Number of live discharges followed by hospital admission, then hospice readmission	Number of live discharges
Burdensome transitions (type 2)	Number of live discharges followed by hospital admission with death in the hospital	Number of live discharges
Skilled nurse visits on weekends	Sum of minutes during nursing visits on Saturday or Sunday	Total skilled nursing minutes during RHC service days
Per-beneficiary spending.	Total payments received by a provider in a year	Total number of beneficiaries electing hospice with the provider that year
Receiving visits near death	Number of decedent beneficiaries receiving a visit by a skilled nurse or social worker in last 3 days of life.	The number of decedent beneficiaries

MUC20-0030Attachment C: Hospice Care Index Scoring

The objective of this attachment is to provide a numerical explain for a hypothetical hospice and now the ten indicator scores combine to produce the hospice's HCI score. A hospice's HCI score is based on their performance on ten performance indicators. The HCI's component indicators are assigned a criterion determined by statistical analysis of an individual hospice's indicator score relative to national hospice performance. **Table 3** below illustrates how a hypothetical hospice's score is determined across all ten indicators, and how the ten indicators' scores determine the overall HCI score. Each indicator has the following attributes:

- **Name (Hospice Score Units):** The name of the Hospice Care Index indicator, with the indicator's units of measurement marked in parentheses. These units apply to the Numerator and Denominator for the indicator.
- **Numerator:** The target number of units of interest measured for the hospice in the specified category.
- **Denominator:** The total number of units for the hospice in the specified category for which the measure will be calculated.
- **Hospice Observed Score:** The hospice's score on the specified indicator. For each indicator, the hospice score is calculated by dividing the hospice's Numerator by its Denominator.
- **National Average Score:** The unweighted average hospice score for the specified indicator across all hospices nationwide.
- **Percentile Rank Among Hospices Nationally:** The percentage of nationwide hospices which had lower indicator scores than this hospice. For example, a Percentile Rank of "75" indicates the Hospice Observed Score is greater than 75% of other hospices nationwide.
- **Index Earned Point Criteria:** The criteria a hospice must meet to receive a point for this indicator, contributing to the overall HCI score.
- **Points Earned**: This column states whether the hospice received points for this indicator, based on whether the hospice's performance satisfied the Index Earned Point Criterion.
- **Points Awarded:** The number of points the hospice received for the specified indicator. Hospices may receive either zero (0) points if they do *not* meet the Index Earned Point Criterion, or one (1) point if they *do* meet the Index Earned Point Criterion.

We can use the "Gaps in Nursing Visits" indicator to provide an in-depth example in the second row of the table. The "Gaps in nursing visits" indicator measures the percentage of all patients enrolled in hospice for at least 30 days who experienced a gap between nursing visits of longer than seven days. This is indicated by the "% elections" designation in the **Name (Hospice Score Units)** column. At this hospice, 12 patients (listed as the **Numerator**) out of 104 total patients (listed as the **Denominator**) experienced a gap in nursing visits. Thus, this hospice has an **Observed Score** of 11.5% for the indicator (12/104 = 11.5%). The nationwide average percentage of enrollments with gaps in nursing visits exceeding seven days was 5.9%, and the example hospice's score falls within the 92nd percentile among all nationwide hospices, meaning it has a larger percentage of elections with nursing gaps than 92% of other hospices in the country. In order to receive points for this indicator within the total HCI score, a hospice must meet the **Index Earned Point Criteria**; the criterion for this indicator requires a score below the 90th percentile rank. The example hospice does not meet this criteria, as their percentile rank is 92. Therefore, they do not earn points for the "Gaps in nursing visits" indicator and are awarded 0

points for this indicator. A hospice's total HCI score is calculated as the total number of points earned across all ten indicators. Looking at **Table 3** as a whole, the example hospice met the criteria to receive points for eight HCI indicators, and failed to meet the criteria for two indicators. Therefore, this hospice's final HCI score is 8 out of a possible 10.

Table 3: Hospice Care Index Indicator Scoring

Name (Hospice Score Units)	Numerator	Denominator	Hospice Observed Score	National Average Score	Percentile Rank Among Hospices Nationally	Index Earned Point Criteria	Points Earned?	Points Awarded
Provided CHC/GIP (% days)	48	3,904	1.2%	0.9%	83	Hospice Score Above 0%	Yes	+1
Gaps in nursing visits (% elections)	12	104	11.5%	5.9%	92	Below 90 Percentile Rank	No	0
Early live discharges (% live discharges)	3	27	11.1%	7.7%	75	Below 90 Percentile Rank	Yes	+1
Late live discharges (% live discharges)	14	27	51.9%	37.3%	84	Below 90 Percentile Rank	Yes	+1
Burdensome transitions, Type 1 (% live discharges)	4	27	13.8%	8.7%	77	Below 90 Percentile Rank	Yes	+1
Burdensome transitions, Type 2 (% live discharges)	0	27	0.0%	2.7%	1	Below 90 Percentile Rank	Yes	+1
Per-beneficiary spending (United States dollars $)	$2,322,657	256	$9,073	$12,959	22	Below 90 Percentile Rank	Yes	+1
Nurse care per day (minutes)	44,100	6,985	6.3	16.0	2	Above 10 Percentile Rank	No	0
Weekend visits (% minutes)	9,090	157,230	5.8%	9.4%	17	Above 10 Percentile Rank	Yes	+1
Visits near death (% decedents)	147	151	97.4%	94.5%	46	Above 10 Percentile Rank	Yes	+1
							Hospice Care Index Total Score =	8

Preliminary Analysis – MUC ID: MUC20-0030 Hospice Care Index

Criteria	Yes/No	Justification and Notes
Does the measure address a critical quality objective not currently adequately addressed by the measures in the program set?	Yes	This is a new measure that has not been reviewed by a MAP Workgroup or used in a CMS program. The measure is a composite of ten individual measures. Hospices start with a score of zero and the score is increased by one for each measure on which the hospice meets the point criterion. Index measure #10 (Receiving visits near death) is similar, but not identical, to the existing Hospice Visits When Death is Imminent measure. However, the other measures and the overall composite present new information not currently available. The ten index measures are: 1. Hospice provided no Continuous Home Care (CHC) & General Inpatient (GIP) 2. Gaps in nursing visits greater than 7 days 3. Nurse minutes per Routine Home Care (RHC) day 4. Live discharges in the first 7 days of hospice 5. Live discharges on or after the 180th day of hospice 6. Burdensome transitions (Type 1), live discharges from hospice followed by hospitalization followed by hospice readmission 7. Burdensome transitions (Type 2), live discharges from hospice followed by hospitalization with the patient dying in the hospital 8. Skilled nurse visits on weekends 9. Per-beneficiary spending 10. Receiving visits near death According to the developer, the index feature of this measure addresses the public comment during FY2020 (MAP 2018-2019 cycle) rulemaking cycle regarding limitations to a single measure's capacity to depict all circumstances by monitoring the performance for a broad and holistic set of indicators for hospice care processes not otherwise addressed within the current quality measures of CMS's Quality Reporting Program.

Is the measure evidence-based and either strongly linked to outcomes or an outcome measure?	Yes	The developer noted that the indicators included in the index were selected for their relation to five domains which had been highlighted as reflective of care provided by multi-disciplined staff, and demonstrate care provided throughout the hospice stay. The developer also noted that these domains are areas raised by the Office of Inspector General (OIG), MedPAC, or academic literature as needing improvement. Each component of a composite measure should be evidence-based and either strongly linked to outcomes or an outcome measure: 1. Hospice provided no Continuous Home Care (CHC) & General Inpatient (GIP). This is a process measure, and the developer provided a 2013 OIG report that found that 953 hospice programs did not provide any GIP level of care services. It was unclear if dying patients at such hospices were receiving appropriate management of symptoms when in crisis (a similar concern exists for hospice services at the CHC level). 2. Gaps in nursing visits greater than 7 days 3. Nurse minutes per Routine Home Care (RHC) day These are process measures. While the developer did not present evidence tying these measures to an outcome of care, Medicare Conditions of Participation require a member of the interdisciplinary team to ensure ongoing assessment of patient and caregiver needs and the implementation of the plan of care. This measure is intended to assess the receipt of adequate oversight. 4. Live discharges in the first 7 days of hospice 5. Live discharges on or after the 180th day of hospice 6. Burdensome transitions (Type 1), live discharges from hospice followed by hospitalization followed by hospice readmission 7. Burdensome transitions (Type 2), live discharges from hospice followed by hospitalization with the patient dying in the hospital These are process measures. The developer presented a study examining three (measures #4, 5, and 6) problematic patterns of live discharges (Teno, et al.). Measure #7 was included to capture the possible adverse event of a patient dying in the hospital prior to returning to hospice. These patients would not be captured by measure #6. The study states that a high provider rate for any of these patterns is an indicator of likely problems in that hospice's enrollment process, its advance care planning to prevent hospitalizations, and the appropriateness of its discharge process (i.e., whether hospice patients whose conditions stabilize are discharged). These measures serve as a proxy for assessing these processes directly.

		8. Skilled nurse visits on weekends This is a process measure. While the developer did not present evidence tying this measure to an outcome of care, Medicare Conditions of Participation require 24/7 availability of hospice services. This measure assesses minutes of care provided by skilled nurses on weekend RHC days. 9. Per-beneficiary spending This is a cost measure, and the developer presented information from MedPAC and OIG supporting variation, some possibly inappropriate, in per-beneficiary spending for hospice services. 10. Receiving visits near death This is a process measure. In the MAP 2019-2020 cycle, the MAP PAC/LTC Workgroup evaluated a similar measure: Hospice Visits When Death is Imminent. At that time, the developer provided evidence supporting the ability to identify end of life (near death) and that specific visits to patients at the end of life are associated with improved outcomes for both the patients and their caregivers. This indicator identifies a qualifying visit in one of the last three days of life vs. the two visits in three days identified by that measure.

Does the measure address a quality challenge?	Yes	This measure addresses a high-priority area by summarizing hospice performance on ten metrics into one result. It was created to address feedback received in previous MAP cycles that a single measure cannot fully capture performance. The developer conducted testing using 100% of Medicare hospice claims with dates of discharge in 2019. The developer reports that over 85% of hospices receive a score using the composite. The index has a theoretical range of 0 to 10 and actual observed range of 3 to 10. For the distribution of scores, 37.1% of hospices have a score of 10, 30.4% have a score of 9, 17.9% have a score of 8, 9.6% have a score of 7, and 3.6% have a score of 6 or below. The developer does not provide analysis indicating what score difference is statistically meaningful. The developer states that a Technical Expert Panel and Federal hospice experts support the face validity of the measure. In addition, the developer conducted empirical validity testing at the score level. Validity analysis found hospices with higher index scores have greater CAHPS Hospice scores, as expected. As measured by Pearson's correlation coefficients, the correlation between the CAHPS hospice overall rating and index is +0.0675 and the correlation between the CAHPS hospice recommendation outcome and the index score is +0.0916. The developer also conducted a stability analysis by comparing calculated index scores for the same hospice using claims from Federal Fiscal Years 2017 vs. 2019 and found that among those hospices with calculated index scores in both of those years, 82.8% of providers' scores changed by at most 1 point, which suggests overall stability of the index. This supports the reliability of the measure's results.
Does the measure contribute to efficient use of measurement resources and/or support alignment of measurement across programs?	Yes	The Hospice Care Index will introduce new domains and measurement concepts to the Hospice Quality Reporting Program. Combining multiple indicators into one index is a new approach to measurement for this program. Burdensome transfers/live discharges, and spending-per-beneficiary are new domains not currently covered by existing measures. The Index has some limited overlap with the existing Hospice Visits When Death is Imminent measure. The presence of the two visits measures does not add additional burden or reporting since both are claims-based. The index provides greater information about overall hospice performance.
Can the measure be feasibly reported?	Yes	The measure is constructed entirely from hospice claims records from the Medicare Hospice Benefit, which are already collected by CMS for payment and quality purposes. Therefore, this measure poses no additional data collection burden to hospice providers.

Is the measure applicable to and appropriately specified for the program's intended care setting(s), level(s) of analysis, and population(s)?	Yes	This measure is specified at hospice care setting and level of analysis. The target population for this measure is Medicare Part A enrolled beneficiaries electing hospice services (note that all beneficiaries enrolled in Medicare Advantage convert to fee-for-service when electing the hospice benefit).
If the measure is in current use, have negative unintended issues to the patient been identified? Have implementation challenges outweighing the benefits of the measure been identified?	N/A	This is a new measure that is not currently in use. However, the developer noted there is a potential for negative unintended consequences. For example, hospices could avoid discharging patients alive even when clinically appropriate to lower their live discharge rate. Another unintended consequence might be hospices avoiding higher levels of care or prematurely discharging patients alive to limit per-beneficiary spending, thereby lowering access to that population. CMS will continue to monitor trends for the index and individual indicators to ensure Medicare beneficiaries continue to have access to high-quality hospice care.
PAC/LTC Priority?		Component measures capture aspects of Care Coordination
Impact Act Domain		N/A
Hospice High Priority Areas		N/A

Rural Workgroup Input	[redacted]	Relative priority/utility: • Scores on this measure are comparable for rural and urban hospice facilities • 85-87% of hospices meet the reporting threshold, so low volume may not be an issue for rural hospices Data collection issues: • None identified Calculation issues: • None identified Unintended consequences: • None identified Votes: Range is 1 – 5, where higher is more relevant to rural Average: 3.6 • 1 – 0 votes • 2 – 1 vote • 3 – 5 votes • 4 – 12 votes • 5 – 0 votes
Preliminary Analysis Recommendation	Conditional Support for Rulemaking	Conditional support for rulemaking is contingent on NQF endorsement.
Summary: What is the potential value to the program measure set?	[redacted]	The Hospice Care Index describes provider performance across a broad array of leading indicators of hospice service representing care throughout the hospice stay and represented by the multi-discipline team. The index augments the reporting program with new measurement domains that were either directly recommended for CMS to publicly report or identified as areas for improvement by the Office of Inspector General, MedPAC, and academic literature. The index design monitors 10 indicators simultaneously to best ensure the reliability of the providers it assigns as consistent outliers, which identifies hospices underperforming relative to expectations of the hospice philosophy. By identifying hospices which meet the thresholds across multiple areas, the index overcomes the limitations of single-outcome measures. More broadly, the Hospice Care Index monitors the performance for a broad and holistic set of indicators for hospice care processes not otherwise addressed within the current quality measures of CMS's Quality Reporting Program.

Summary: What is the potential impact of this measure on quality of care for patients?	[redacted]	The Hospice Care Index will introduce new domains and measurement concepts to the Hospice Quality Reporting Program. Burdensome transfers/live discharges, and spending-per-beneficiary are new domains not currently covered by existing measures. Combining multiple indicators into one index is a new approach to measurement for this program. Patients may find a single indicator of care quality to be more useful than ten separate indicators. The proposed measure has a preliminary recommendation of Conditional Support for Rulemaking pending NQF endorsement.

Measure Comments

Author	Submitted Comment
Asante Hospice	"I believe that most of this measure is likely to add value, with the exception of ""10. Receiving visits near death"" which is linked to both Service Intensity Add-On and the visits in the last days of life quality measure. But, I lack information and time to more thoroughly consider this answer. Sixteen days which includes Christmas and New Year's holidays is inadequate time for consideration. Also, the distribution based criteria are unclear. Would hospices meet the threshold at the 10th percentile as given in the example? Or was this simply and example and the percentile could be set arbitrarily high, such as the 50th percentile depending on the percentage of hospices that CMS may have program integrity concerns regarding? This also should be a national percentile, not local, as there are strong regional differences in healthcare integrity. This was not clear. "
The Coalition to Transform Advanced Care	"We appreciate the concept of a hospice index and feel many of the components included here are helpful ones. However, we would point out that the frequency of hospice care visits, as well as which member of the hospice interdisciplinary team carries out those visits, should also be strongly informed by the patient's or family's own wishes as it relates to their individual care plan, as opposed to requiring an arbitrary number of nursing visits. We also recommend substituting "patients" for "live discharges" since that includes patients who die on hospice service as well."
Delaware Hospice	"I am writing in response to the NQF notice of Measures Under Consideration (MUC) for adoption through rulemaking under the Medicare hospice benefit: MU 02-0030, in which there are 10 proposed claims-based indicators. I request that no new hospice quality measures be implemented until after the COVID-19 Public Health Emergency (PHE) ends, and that there be a reconsideration of the specifics of the newly proposed measures. During the ongoing PHE, in order to mitigate the risk of transmission of COVID-19 infection among Delaware Hospice Inc. staff, patients and their caregivers, services to patients and their caregivers have increasingly been provided virtually - by telephone and telehealth means. Over the past 9 months, approximately 5% of total RN and Social Work visits delivered by Delaware Hospice were provided via Telehealth, and the volume of Telehealth visits made is increasing due to a recent surge in community infections. Also, the number of quarantined staff is having a negative impact on the available

	workforce. Patient and caregiver illness and/or willingness to accept visits due to fear of contracting the virus is impacting the ability to make in-home visits. Measures that rely on the number of visits or the amount of visit time as a measure of quality will be impacted by the need to balance face-to-face care with the safety of patients, caregivers and staff. Therefore, these measures should not be instituted during the pandemic. These proposed measure include: Gaps in Nursing visits greater than 7 days; Nurse minutes per Routine Home Care; Skilled nurse visits on weekends (sum of minutes during nursing visits on Saturdays or Sundays); and receiving visits near death (receiving a visit by a skilled nurse or social worker in the last 3 days of life). To indicate CMS's acknowledgement of the current environment in which hospices are operating, in the COVID-19 Emergency Declaration Blanket Waivers for Health Care Providers, CMS has waived certain requirements for hospice providers at 42 CFR §418.54 related to updating comprehensive assessments of patients. This waiver applies to the timeframes for updates to the comprehensive assessment found at §418.54(d). Hospices must continue to complete the required assessments and updates; however, the timeframes for updating the assessment may be extended from 15 to 21 days. Also, CMS waived the requirements at 42 CFR §418.76(h), which require a nurse to conduct an onsite supervisory visit every two weeks, as this may not be physically possible for a period of time. For the standards related to burdensome transitions, there needs to be some recognition of the fact that hospices do not control human behavior. Despite training provided to patients and caregivers to call hospice before proceeding to the hospital, they sometimes make these decisions without the input of hospice staff. In addition, they may decide to seek care at a facility that does not contract with hospice, requiring that the patient be discharged from hospice once admitted to that facility. Regarding the visits in the last 3 days of life, I ask that NQF consider the fact that many patients and families do not need or want two visits in the final 3 days of life, and I question if this measure truly reflects the quality of hospice care. I am sure that NQF understands the impact on all health care provider operations that have been necessitated by the COVID-19 PHE, including the need for patient and staff COVID-19 testing, tracking and reporting of test results, ordering and managing PPE, staff training, contract tracing and now providing COVID-19 vaccine to staff. This has been a challenging time under constantly changing conditions for everyone in health care. I again urge that no new quality measures be implemented until after the end of the PHE. "
National Association for Home Care & Hospice (NAHC)	"Since 1982, the National Association for Home Care & Hospice (NAHC) has been the leading association representing the interests of hospice, home health, and home care providers across the nation, including the home caregiving staff and the patients and families they serve. Our members are providers of all sizes and types -- from small rural agencies to large national companies -- and including government-based providers, nonprofit voluntary hospices, privately-owned companies and public corporations. As such, we

welcome the opportunity to comment on the CMS List of Measures Under Consideration for December 21, 2020.

MUC20-0030 Hospice Index

The Hospice Index (HI) measure is a claims-based composite measure composed of 10 indicators which would be publicly reported. It is our belief that a composite claims-based measure is better reflective of a hospice's performance than a single claims-based measure and more meaningful to the consumer and to the hospice. It is also generally more supported by the hospice community than a single claims-based measure. The purpose of publicly reporting quality data is to aid the consumer in choosing a hospice. Therefore, the data shared must be understandable and meaningful to the consumer relative to the quality of care a hospice can provide. The Meaningful Measure area for the HI is "End of life care according to preferences"; however, the indictors comprising the HI are not meaningful overall to the consumer. Some do reflect care throughout the hospice stay; however, they do not incorporate or reflect the patient's care preferences.

The following indicators:

- Hospice Provided No Continuous Home Care & General Inpatient Care, Nurse Minutes per Routine Home Care Day,
- Skilled Nurse Visits on Weekends
- Live Discharges,
- Burdensome Transitions,
- Gaps in Nursing Visits and
- Per Beneficiary Spending

are not indicative of the types and amounts of hospice care desired by the patient and the patient's role in his/her plan of care. Without any risk adjustment they do not reflect the impact of hospice patient characteristics or hospice provider characteristics on the provider's performance on the measure.

Indicators such as:

- Live Discharges (Type I and Type II),
- Higher Levels of Care Utilized, and
- Per Beneficiary Spending

are more program integrity measures than they are quality of care measures. NAHC strongly supports the sharing of program integrity data such as these and others like it with hospices. However, these are not the type of claims-based indicators that meet the intent of the HI as previously shared by CMS, which is capturing the many aspects of hospice care and the collaborative effort of the interdisciplinary care team with a broad, holistic set of claims-based quality measures.

Indicators utilized in the HI should have a high correlation with CAHPS Hospice Survey results and patient satisfaction. There is no data shared in the MUC to indicate which HI indicators have such correlation. Some of this type of information has been shared with the public via reports CMS has posted in

the past; however, this is limited to the correlation of interdisciplinary team member visits only. It is believed by the hospice community that there is not a high correlation between the use of continuous home care and the CAHPS Hospice Survey results. There is also no indication in publicly-available information on the HIwhat the data shows relative to correlation between weekend visits and CAHPS results, per beneficiary spending and CAHPS results, nurse minutes per routine home care day and CAHPS results, and live discharges and patient level of satisfaction with hospice care. In addition to the lack of data regarding the correlation of the HI indicators with CAHPS Hospice Survey results is the lack of baseline data for hospice performance in the HI indicators.

There are questions about the timeframe of the data that would be used for the HI. We strongly recommend that no 2020 or 2021 data collected during the time of the current Public Health Emergency (PHE) and for a time afterwards be utilized should the HI measure be incorporated in the Hospice Quality Reporting Program (HQRP). The PHE has greatly impacted the type and number of visits that can be made to patients and, in fact, has impacted all of the proposed indicators and will continue to do so for some time after the PHE concludes. The length of time needed to recover and return to a state of normalcy is not known but should be seriously considered for this and all measures under consideration.

NAHC provides the following comments on each of the HI indicators:

Hospice provided no Continuous Home Care (CHC) & General Inpatient (GIP)

- The use of “and” in this indicator is confusing. We believe CMS intends to use “or” to identify which hospices billed for either a general inpatient level of care OR a continuous home care level of care. NAHC understands that CMS wants to ensure that all hospice providers are able to deliver all four levels of care that are part of the Medicare Hospice Benefit and agrees that hospices must be able to deliver such at any given time. We believe that there is a significant number of hospices, though, that do not bill for all four levels of care and especially for the CHC level of care. Due to the stringent CHC billing requirements, many hospices find that they’ve provided hours of direct one-on-one, intensive care to the patient that is not billable because it does not meet all of the CHC criteria. Measuring whether CHC was or was not billed is not necessarily reflective of the intensity of service the patient is receiving.
- NAHC supports utilizing survey data in conjunction with claims data for this indicator. Simply billing or not billing for a higher level of care is not an indicator of quality of care and a focus of hospices is keeping a patient at home and not in an inpatient unit, hospital or Skilled Nursing Facility (SNF) for the general inpatient level of care. Survey data, specifically whether the hospice provides general inpatient care directly or has a contract in place to provide this level of care under arrangement combined with billing information would be most helpful to consumers. Likewise, whether the hospice has the ability to provide continuous home care if needed would be most helpful to consumers as compared with whether or not continuous home care was billed.
- Hospice provider characteristics have an impact on this indicator and it should be adjusted based on this data. For instance, hospices with inpatient units will likely utilize the general inpatient level of care more than continuous

home care and those without inpatient units may utilize continuous home care more than general inpatient care. Also, geographic data on utilization of the higher levels of care would likely indicate that there are marked geographical differences in the utilization of these two levels of care due to culture of the community served as well as possible differences due to patient characteristics (i.e. diagnosis, length of stay, etc.) and possibly hospice characteristics (i.e. inpatient care provided directly or under arrangement),

Gaps in nursing visits greater than 7 days

- It would be important to define this measure as the 7 days that comprise the accepted Medicare week of Sunday through Saturday. We believe this is CMS' intent; however, it should be defined for clarity. Also, a patient could have a visit on Tuesday one week and Wednesday the following week for a number of reasons, including for the convenience of the patient/family, without any negative impact on care.
- NAHC appreciates that CMS is proposing an indicator that looks at the number of visits over a number of days as opposed to the average number of visits per day.
- It is not clear from the MUC exactly how this indicator will be measured – if for a hospice election period and there is not a visit during one week of all the weeks included in the election period, how will this be calculated? And, the reason for not having a visit during a 7-day period is important to capture (i.e. patient request, patient not found at home, etc.).
- Any visit measures should utilize visit data for ALL core hospice interdisciplinary services (medical, nursing, psychosocial/emotional and spiritual). The core services of hospice care include a full compliment of disciplines – physician, registered nurse, and medical social worker, pastoral or other counselor. These disciplines are recognized as the core of hospice care because they address pain and symptoms that occur at the physical, emotional and spiritual level. This is the essence of hospice care. Therefore, the services provided by all of the core members of the interdisciplinary group should be included in any visit measure.
- It should be noted that there is the possibility that the majority of patients/families distinguish hospice staff visits by type, i.e. social worker or nurse, chaplain or aide, but do not distinguish further. Specifically, CMS should consider the possibility that patients/families do not distinguish between an RN and LPN but, rather, simply recognize that a "nurse" is making or made a visit. Of course, credentials of the individual making the visit are likely present on a nametag, but this is often not scrutinized by patients/families once they know the individual and, after time, the LPN versus RN versus NP license is forgotten. CMS should consider inclusion of all nursing visits.
- Hospice is an interdisciplinary benefit that includes a strong spiritual component and it is missing from claims data. Likewise, Licensed Practical Nurses (LPNs) and Nurse Practitioners (NPs) are integrated into the interdisciplinary team of some hospices and deliver nursing care according to and appropriate for the patient's plan of care. The services of these team members are important to assessing the quality of care provided by hospices and should be included. For social workers and chaplains it is not typical hospice practice, throughout the course of a patient's care, to make weekly visits. This may be seen more so at the beginning of care. Therefore, CMS should consider a timespan greater than 7 days when looking at the number of visits. NAHC had previously recommended to CMS that a timeframe of a

week (7 days) be utilized as opposed to the number of visits per day. After considering this in light of the proposed HI, NAHC recommends that visits of all core hospice interdisciplinary services be included in the indicator and that a longer period of time be considered. A 15-day period is consistent with the hospice conditions of participation and may be more meaningful and reflective of visits made in accordance with patient preferences. NAHC recognizes that additional billing codes may be necessary in order to accomplish this and encourages the development of these codes.

- Consumers have informally indicated that aide visits are essential to quality hospice care and are in many cases the types of visits that allow the family to maintain a patient at home.
- During this current pandemic the effectiveness of telehealth visits has been recognized by many providers. Hospices have been using telehealth visits to supplement in-person visits for some time and the effectiveness of this intervention should be considered as part of any visit measure. Telehealth visits are legitimate indicators of care and services provided by the hospice and are related to and ordered on the plan of care. CMS already acknowledges the use of social work phone calls in the quality of hospice care and includes these types of visits on claims. To reflect all care provided by hospices and that impacts quality of care and patient/family satisfaction, billing codes should be expanded to include telehealth visits for all disciplines on the claim and included in any visit measure.
- Quality hospice care includes visits that are consistent with patient wishes. Therefore, visits made (in person and telehealth) should be compared to patient wishes via the plan of care. NAHC appreciates the difficulty of doing this when using only claims data, and strongly recommends that there be a consideration of how patient wishes regarding visits (i.e. refusing/requesting social worker, aide, or chaplain visits; frequency of visits; etc.) could be incorporated into this indicator. An important outstanding question is whether the data CMS will eventually have from the Hospice Outcome and Patient Evaluation (HOPE) instrument will impact the proposed HI. Perhaps waiting for HOPE data or revising this HI indicator to include patient wishes would result in the most meaningful HQRP measure.

Nurse Minutes per Routine Home Care (RHC) Day

- RNs are not the only type of nursing service provided by hospices. Many have incorporated LPNs and NPs and all should be included in this indicator.
- This indicator could result in some hospices extending the length of visits unnecessarily and not consistent with patient preferences. It is also contradictory to visit indicators and raises questions as to whether meeting patient's wishes or having a higher number or length of visits is most indicative of quality of care.
- A hospice's performance on this indicator would be better with a greater number of nurse minutes per RHC day, but there is no standard for this and no baseline data that has been shared. There are different types of nurse visits that require different amounts of time, i.e. a quick follow up on a new intervention, a full assessment, administration of an intervention, medication education, etc. What number of minutes would be considered a "good quality of care/best performance/outcome"?

- This indicator, like others, is impacted by patient preferences, patient diagnosis, social determinants of health, etc. Baseline data is needed to determine adjustments necessary.
- As mentioned with respect to other indicators this indicator does not include all hospice interdisciplinary services.

Live Discharges in the first 7 Days of Hospice /Live Discharges on or after the 180th Day of Hospice

- NAHC agrees with the MAP recommendations made in 2018 on a similar hospice measure under consideration, MUC 18-101 Transitions from hospice care followed by death or acute care. Specifically, MAP recommended adding an exclusion to allow for patient choice, as there are a number of reasons a patient may choose to transition from hospice such as revocation, having to be discharge because of going outside the hospice's service area, a hospice discharge for cause. All of the reasons for discharge are coded on a claim so could easily be separated.
- MAP also suggested that CMS consider a dry run of the measure before publicly reporting results and explore the need for a survey of patients with a live discharge from hospice to better understand their reason for discharge and the potential scope of the problem. NAHC concurs with this recommendation. Changes are being considered for the CAHPS Hospice Survey but a survey of patients discharged live from the hospice is not a consideration, to NAHC's knowledge, at this time.
- Live discharges do not convey quality of care to consumers and could actually create confusion for consumers as higher live discharges and longer lengths of stay could be viewed as beneficial by consumers. It is clear that CMS and others have concerns about hospices that have a high proportion of live discharges, which is understandable. Measures addressing these concerns are more program integrity measures and not quality of care measures.
- A more telling program integrity measure would be live discharges after 180 days (181 days or more) as the 180th day is the last day of the second benefit period.

Burdensome Transitions (Type I)/Burdensome Transitions (Type II)

- A timeframe for how long after hospice discharge a patient is hospitalized should be added. Seven days was recommended by CMS in the MUC 2018 and seems reasonable.
- Likewise, a timeframe for readmission to hospice care after hospitalization and for death during the hospital stay should also be added.

Skilled Nurse Visits on Weekends

- A hospice's availability during weekends and after business hours is not only a requirement; it is a significant factor in the provision of care. Only weekend visits can be gathered from a hospice claim. However, this data is not the most meaningful. Consider that Saturday and Sunday are weekend days. A hospice may visit a patient on Friday and again on Monday resulting in two days between visits. A hospice may visit a patient on Tuesday and on

Friday (not an uncommon hospice visit schedule) resulting in two days between visits. The time between visits is not an indicator of quality of care. In fact, many hospices visit patients on Friday to ensure interventions are effective and the patient is comfortable, which may result in no calls necessary on the weekend days. Also, many hospices have a practice of contacting patients by phone or performing telehealth visits on Fridays to check on patients and ensure there is no need for a visit, and if one is required, to get it scheduled for that day (Friday).

- How many PRN ("as needed") visits were needed by a hospice's patients is perhaps a better indicator of quality than weekend visits. The reason for the visit is far more telling than whether or not a weekend visit was provided as the reason for the visit could help identify case management practices as well as symptom management/control issues.
- NAHC agrees that hospices must be available for weekend and after hours visits and cannot be a "9 to 5 Monday through Friday" service - not just because 24/7 service is required for some services (and others if necessary) but also because 24/7 availability is necessary to respond to all patient care needs. However, hospice claims data does not provide a measure of this availability. A HQRP measure that relays to the consumer the number of visits from all interdisciplinary services over a period of time is a far better indicator and provides a clearer picture of what to expect for the consumer.

Per Beneficiary Spending

- Like a number of other measures this is more of a program integrity indicator than a quality of care indicator. NAHC opposes per beneficiary spending as a quality measure and recommends CMS address concerns about program integrity outside of the HQRP.

Receiving Visits near Death

- This measure is nearly identical to the Hospice Visits in Last Days of Life (HVLDL) measure that CMS is incorporating in the HQRP beginning in 2021. It is unclear if this is intended to be a duplication of visit data or an indication that the HVLDL measure will not be part of the HOPE when it eventually replaces the HIS. As mentioned elsewhere, the impact of the HOPE should be considered on quality measure s under development now. In the context of the HQRP, the HOPE is likely not far from implementation.
- NAHC appreciates information gleaned from the Hospice Visits When Death is Imminent: Measure Validity Testing Summary and Re-Specifications Report. It has bearing on the proposed Receiving Visits near Death indicator. In the analysis outlined in this Report, CMS utilized HIS data from patients discharged between April 1, 2017 and March 31, 2018 and fiscal year (FY) 2018 claims data to determine the correlation coefficient between the number of visits from hospice interdisciplinary (IDG) staff and the CAHPS Hospice Survey outcomes. All correlation coefficients were generally low (0.28 and below), including the HVLDL measure which showed a correlation coefficient of 0.24 and 0.26 for the CAHPS Hospice Survey "would you recommend" and "rating of hospice" questions, respectively. Even though the HVLDL correlation was higher than some of the alternative visit specifications, it is still a generally low correlation. Analysis utilizing data that includes whether the patient/family desired a visit from the IDG disciplines that are part of a measure or exclusion criteria that removes patients/caregivers who refuse

visits offered by these various disciplines in the last days of life from the measure denominator would be more telling. NAHC appreciates the reasons for measurement of visits in the last days of life, and strongly urges CMS to consider visit data in the context of an individualized plan of care reflective of patient and family wishes.

- NAHC recommends that CMS consider the regional cultural variations on visit patterns and CAHPS Hospice Survey outcomes and risk adjust for such variances.

NAHC supports the expansion of the HQRP and urges CMS to continue analyzing hospice visit data and its correlation to the CAHPS hospice survey results, including analysis that incorporates visits in the context of the individualized plan of care and the patient's wishes regarding visits. If warranted based on this data, CMS should expand any visit data utilized in the HQRP to include all core disciplines.

CMS should also consider other potential indicators which may include:

- Whether a hospice is accredited by one of the approved accrediting organizations. This would require some research on whether accreditation correlates with higher quality of care.
- Publicly reporting the types of "specialty" programs/services provided by a hospice in addition to the Medicare Hospice Benefit, i.e. art therapy, massage therapy, music services, etc. This could be reported simply as a Yes/No indicator to a statement similar to "This hospice provides specialty programs in addition to required hospice services".

We thank you, as always, for the opportunity to submit comments on these pending measures. If you have any questions or if I can be of assistance in any way, please do not hesitate to contact me.

Sincerely,

Katie Wehri
Director of Home Health and Hospice Regulatory Affairs
National Association for Home Care & Hospice
Katie@nahc.org

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Measure Comments (Post-Workgroup Meeting)

Author	Submitted Comment
Federation of American Hospitals	Support
Leading Age and VNAA	"Re: Measures Under Consideration; Hospice Care Index LeadingAge and the VNAA represent more than 5,000 nonprofit aging services providers and other mission-minded organizations that touch millions of lives every day. Our membership encompasses the entire continuum of aging and disability services. We bring together the most inventive minds in aging services to make America a better place to grow old. We offer the following comments on the proposed Hospice Care Index measure.

General Comments

Overall, we appreciate CMS and Abt's work on this measure and engagement with stakeholders. We also believe that the idea of a composite measure is a good one. However, we strongly believe that there needs to be more work done on the individual indicators in this composite measure and that, as it stands, significant revisions are needed before it is ready for use. With the upcoming HOPE tool, we also wonder if claims based data might be better utilized for program integrity while waiting for that tool to develop more robust quality measures.

Much of the justification for moving forward with the measure were based on the correlation with CAHPS measures. However, the correlation coefficients between the index measure as a whole and the CAHPS are not strong. There is also no data on differentiation between hospices scoring 8, 9, or 10 which would be a critical point of distinction for consumers. This is particularly true because CMS and Abt indicated in their presentation at the MAP meeting that about 85% of hospices would score 8 or above which underscores the importance of spelling out the differences between 8, 9, and 10. In addition, we question whether adding another measure to the hospice quality reporting program in which most hospices do well – and will likely be topped out relatively soon after introduction -- is valuable for consumers and for tracking hospice quality writ large.

CMS and Abt indicated that they are not as concerned with flaws with individual indicators because the impact of individual flaws are not as large in the context of a composite index. This may be true if there were one or two small indicator level concerns and it is true that a composite measure is more reflective of quality than a single claims-based measure. However, we think there are significant concerns about many of the indicators used for this measure which makes the entire composite flawed.

Finally, the Hospice Care Index as presented is a mix of program integrity and quality measures. This will be confusing for consumers who will not understand the implications of the more program integrity focused indicators. These indicators could still impact change in poor performer behavior via inclusion in the PEPPER reports but we fear that consumers do not have the knowledge or context to interpret the results nor that all indicators that are useful for program integrity are equally valid as quality indicators.

Comments on Specific Indicators

1. Hospice provided no Continuous Home Care (CHC) & General Inpatient (GIP) [denominator: all hospices service days]

We recommend that this indicator be an "or" rather than an "and." The corresponding PEPPER indicator utilizes an "or" so the utilization of "or" here would be consistent with other parts of the program. It is a critical component of the hospice program and a sign of compliance and quality care that hospices provide more intensive care when warranted. However, it is not necessarily a sign of poor quality care if the hospice only provides continuous home care or only provides general inpatient care. Continuous home care may also be provided but not billed due to longstanding challenges with billing this level of care.

2. Gaps in nursing visits greater than 7 days [denominator: number of elections enrolled at least 30 days].

We agree with the intent of this indicator – it is an important for the nurses to have regular contact with patients and at least once every 7 days is generally a good interval (if the patient does not need more consistent with the plan of care). However, hospice is an interdisciplinary team benefit. Reducing it to the medical component (e.g. nursing) takes away from measuring quality across the entire benefit. To truly measure a high quality hospice experience, gaps in visits across the entire core hospice team should be looked at. The psychosocial component of hospice care is a critical component that should not be overlooked. This could be accomplished by looking at gaps in visits for the core team as a whole or by adding indicators that look at gaps in the core services besides nursing. If this indicator remains focused on nursing alone, it should include all types of nursing (RNs, LPNs, and NPs). It should also be consistent with the Medicare defined week of Sunday to Sunday.

There should also be consideration of patient choice. While regular nursing visits are a critical part of good care, there will be some patients and families who refuse nursing visits and this needs to be accounted for in the measure specifications. Finally, telehealth visits need to count toward the indicator. The indicator implementation, therefore, would need to be delayed until the creation of codes that indicate a visit via telehealth for all hospice disciplines (currently only the hospice social worker can indicate a remote visit on the claim).

3. Nurse minutes per Routine Home Care (RHC) day [denominator: number of RHC service days].

We reiterate here the importance of the full interdisciplinary team and ask for consideration of inclusion of the entire team in this indicator if it is ultimately included. We do not recommend its inclusion; it is unclear how this indicator can be deployed effectively since there is no standard or evidence that a certain visit length is correlated with quality. As presented, it seems like an indicator that would promote “playing to the test” in terms of capturing time spent rather than focusing on quality visits regardless of length.

4. Live discharges in the first 7 days of hospice [numerator: number of live discharges within 7 days of hospice admission]; 5. Live discharges on or after the 180th day of hospice [numerator: number of live discharges after 180 days of hospice enrollment]; and 9. Per-beneficiary spending [numerator: total payments received by a provider in a year];

All of these indicators are more appropriate as indicators of program integrity than of quality care. We do not think that consumers would view this measures in the same way as a hospice provider or oversight body. For example, why would a beneficiary think that lower per patient spending was a good thing? Additionally, how is per patient spending an indication of quality care? With the two live discharge measures, consumers will not understand why live discharges at certain points in the hospice stay may indicate problematic behavior.

Hospices should be given information on these indicators as part of the PEPPER reports and CMS and its contractors should monitor for behavior change. There also needs to be consideration for patient choice; patients have the right to revoke hospice and a hospice should not be penalized for appropriately respecting patient choice. Population level data mining to see if there are patterns of higher live discharges, including revocations to see if there are any patterns of pressured

	revocations, is an appropriate program integrity tool. Looking at variations in per patient spending and considering future policy options is also a good tool but is not an indicator of quality care. 5. Burdensome transitions (Type 1), live discharges from hospice followed by hospitalization followed by hospice readmission [numerator: number of live discharges followed by hospital admission, then hospice re-admission]. These indicators could be used to point to bad behavior by hospices as well as poor quality care. A pattern of churn between hospice and hospital would be an indication for concern for both program integrity and for quality of care. However, a time frame of 2 days is not the appropriate window to look at; we would recommend at minimum 14 days and at maximum 60 days. There also needs to be some consideration made for patient choice – some patients elect to leave hospice to go to the hospital and the hospice should not be penalized for a patient and family's decision. 10. Receiving visits near death [numerator: the number of decedent beneficiaries receiving a visit by a skilled nurse or social worker in last three days of life]. This indicator is duplicative of an existing measure in the hospice quality reporting program and we would welcome more information if it would be replacing the existing measure. If it is to be included, we ask that revisions be made such as inclusivity of LPNs and other psychosocial visitors in the measure (volunteer, chaplains). Thank for the opportunity to comment and please contact me at mgurian@leadingage.org with questions or to set up a meeting to discuss these issues further. Sincerely, Mollie Gurian Director of Hospice, Palliative, and Home Health Policy LeadingAge "
National Hospice and Palliative Care Organization	"NHPCO supports the development of hospice measures that reflect the quality of care and services to the patient and family throughout the hospice experience. However, claims do not provide sufficient information to adequately represent hospice practice and quality of patient/family care. Consequently, claims data cannot appropriately be used to inform the creation of performance measures that improve quality of care. Performance measures should guide and promote the quality of direct care received by hospice patients and families. Performance measures should not be implemented to discourage or correct undesirable organizational practices that have been identified from trends in payment. NHPCO presents the following general and specific comments and concerns about the MUC20-0030: Hospice Care Index measure. General comments: 1. Correlation coefficients are not strong.

The data presented to the MAP does not definitively provide data on the differentiation between hospices scoring 10, 9, or 8 related to index earned points. We also feel the validity data for the measure can be questioned as the example presented (caregivers recommending a hospice) averaged only a 3% difference between a score of 10 and 7 and a score of 10 was only at 85%.

2. Composite measure concerns

CMS/Abt stated a composite measure is more reflective of quality than a single claims-based measure, but we have concerns about several of the indicators used for the composite measure which are outlined individually below. Given the concern with multiple indicators, we question the integrity of the overall measure.

3. High scores

Given that the majority (85% in the data presented) of providers will score an 8 or higher hospice index score, we are concerned that the measure will top out and the measures will not indicate the true differences between hospice providers.

4. Measure content

The composite measure contains many indicators related to program integrity vs. care quality. As stated previously, measures should not be implemented to discourage or correct undesirable organizational practices that have been identified from trends in payment. Hospice providers who may be compliant with regulatory requirements can deliver poor quality care. The PEPPER report contains program indicator data that can lead to performance improvement for a hospice provider. We feel that several indicators in this quality measure are better seated in the PEPPER report than a quality measure.

5. Meaningful measures

NHPCO understands and appreciates that CMS is charged by other federal entities to develop hospice quality measures, but quality measures should be meaningful to the patient/family and hospice providers and reflect end of life outcomes. The Hospice Outcomes & Patient Evaluation (HOPE) will be a primary source for meaningful hospice measures. Implementing claims-based measures before the HOPE assessment is launched will not yield the meaningful measures CMS and the hospice community are seeking.

Comments related to indicators:

1. Indicator #1: Hospice provided no Continuous Home Care (CHC) & General Inpatient (GIP)

a. The PEPPER report uses the language “or” not “and” when reporting this data. We request CMS change the language in this indicator to, “Hospice provided no Continuous Home Care (CHC) or General Inpatient (GIP)

b. NHPCO has learned from hospice providers that they are providing acute symptom management care for patients in the home, but it is not recorded on the claim form because it does not meet current billing requirements for CHC (i.e., an RN provides symptom management care to a patient for 3.5 hours in the morning and 3.5 hours in the evening on the same date. It does not meet the 8 hours minimum and is not reported on the claim form)

2. Indicator #2: Gaps in nursing visits greater than 7 days

a. We request that CMS define when the 7 days starts and ends as it may impact how the data is interpreted.

b. We request that CMS clarify if nursing visit encompasses RN, LPN, and LVN disciplines as many hospice providers are using nurse extenders due to the national nursing shortage

c. We request that CMS include telehealth visits by nurses which will require a code on the claim form for this type of visit.
d. We request that CMS consider visits from all core disciplines as hospice is a holistic interdisciplinary approach to end-of-life care. Not all patient issues are medical at end- of-life.

3. Indicator #3: Nurse minutes per Routine Home Care (RHC) day
a. We request CMS to provide the standard associated with length of a nursing visit and how it affects quality of care. All core service discipline visits (including nursing) are based on the assessed needs of the patient/family. We feel that establishing minimums related to visit time will not improve quality of care.
b. We request that CMS measure minutes of all core service disciplines for equity as hospice is a holistic interdisciplinary approach to end-of-life care and not all patient issues are medical at end- of-life. This will require the development of a new billing code on the claim for spiritual care counselors.

4. Indicators #4 & #5: Live discharges in the first 7 days of hospice and Live discharges on or after the 180th day of hospice
a. We request CMS not include revocation in these indicators as revocation is a patient right. Carving out revocations was a recommendation in the Public Comment Report Summary (8/31/18) for the Development of the Transitions from Hospice Care, Followed by Death or Acute Care Measure for the Hospice Quality Reporting Program.
b. The reason for the discharge is a significant factor in these indicators but all reasons (hospice discharge, patient revocation, and hospice transfer) are lumped together into one category. We request that CMS considering focus on the most common reason for live discharge for these indicators.
c. We view these indicators as compliance/program integrity issues vs. quality-of-care indicators. We feel that these indicators are better seated in the PEPPER report than in a quality measure.

5. Indicators #6 & #7: Burdensome transitions (Type 1), live discharges from hospice followed by hospitalization followed by hospice readmission and Burdensome transitions (Type 2), live discharges from hospice followed by hospitalization with the patient dying in the hospital
a. We request that CMS recognize that when a patient leaves a hospice provider's care that they have no additional influence on the patient's actions. The measure penalizes a provider for patient actions that are beyond of their control.
b. CMS stated in the January 11, 2021 MAP meeting that the timeframe in these indicators is 2 days. We request clarification related to why CMS chose that timeframe.
c. We request the indicator be modified to include a 7–14-day timeframe for the numerator content in both indicators.
d. The reason for the discharge is a significant factor in these indicators but all reasons (hospice discharge, patient revocation, and hospice transfer) are lumped together into one category. We request that CMS considering focus on the most common reason for live discharge for these indicators.

6. Indicator #9: Per beneficiary spending
a. We do not support this indicator as there is no definitive data that supports higher spending equals higher quality of hospice care or vice versa.

	b. We view this indicator as program integrity issues vs. quality-of-care indicator. We feel that this indicator is better seated in the PEPPER report than in a quality measure. 7. Indicator # 10: Receiving visits near death a. CMS is implementing the Hospice Visits in The Last Days of Life Measure in 2021 which is measuring the same disciplines in this indicator (RN, SW). This appears to be a duplicative data collection. b. We request CMS delete this indicator or expand it to collect visits in the last 3 days of life from all hospice core disciplines. This will require the development of a new billing code on the claim for spiritual care counselors."
National Association for Home Care & Hospice (NAHC)	"January 20, 2021 Public Comment 2020 Measures Under Consideration Submitted via: https://share.qualityforum.org/portfolio/MeasureApplicationsPartnership/Lists/MAP%20MUC%202020%20Comment%20Period/NewForm.aspx Since 1982, the National Association for Home Care & Hospice (NAHC) has been the leading association representing the interests of hospice, home health, and home care providers across the nation, including the home caregiving staff and the patients and families they serve. Our members are providers of all sizes and types -- from small rural agencies to large national companies -- and including government-based providers, nonprofit voluntary hospices, privately-owned companies and public corporations. As such, we welcome the opportunity to comment on the CMS List of Measures Under Consideration. We are commenting on the following two measures: MUC20-0030 Hospice Index MUC20-033 ACO-Level Days at Home for Patients with Complex, Chronic Conditions MUC20-0030 Hospice Index The Hospice Index (HI) measure is a claims-based composite measure composed of 10 indicators which would be publicly reported. It is our belief that a composite claims-based measure is better reflective of a hospice's performance than a single claims-based measure and more meaningful to the consumer and to the hospice. It is also generally more supported by the hospice community than a single claims-based measure. The purpose of publicly reporting quality data is to aid the consumer in choosing a hospice. Therefore, the data shared must be understandable and meaningful to the consumer relative to the quality of care a hospice can provide. The Meaningful Measure area for the HI is "End of life care according to preferences"; however, the indictors comprising the HI are not meaningful overall to the consumer. Some do reflect care throughout the hospice stay; however, they do not incorporate or reflect the patient's care preferences. Information shared by Abt Associates and CMS during a presentation on the

Hospice Care Index concept in 2020 and shared again in the January 2021 MAP committee meeting to review the MUC, indicates that 85% of hospice providers will score well on the HI. We question why such a measure would be of value to the HQRP as it is not a great differentiator of hospice providers and will likely "top out" quickly after implementation. This has been a concern with HQRP measures from the Hospice Item Set (HIS), and it is not clear what value another measure with likely the same result brings.

The following indicators:

- Hospice Provided No Continuous Home Care & General Inpatient Care, Nurse Minutes per Routine Home Care Day,
- Skilled Nurse Visits on Weekends
- Live Discharges,
- Burdensome Transitions,
- Gaps in Nursing Visits and
- Per Beneficiary Spending

are not indicative of the types and amounts of hospice care desired by the patient and the patient's role in his/her plan of care. Without any risk adjustment they do not reflect the impact of hospice patient preferences and characteristics or hospice provider characteristics on the provider's performance on the measure.

Indicators such as:

- Live Discharges (Type I and Type II),
- Higher Levels of Care Utilized, and
- Per Beneficiary Spending

are more program integrity measures than they are quality of care measures. The other measures that are part of the HI are a mix between program integrity and quality of care. What they reveal about the quality of care delivered by hospice is left to the ultimate user of the publicly reported data, the consumer, to determine. Therefore, the quality of care information that is intended to be highlighted for the consumer by the measure may be over shadowed by the program integrity essence and result in either consumer confusion or ambivalence to the information. NAHC strongly supports the sharing of program integrity data such as these and others like it with hospices. However, these are not the type of claims-based indicators that meet the intent of the HI as previously shared by CMS, which is capturing the many aspects of hospice care and the collaborative effort of the interdisciplinary care team with a broad, holistic set of claims-based quality measures.

Indicators utilized in the HI should have a high correlation with CAHPS Hospice Survey results and patient satisfaction. There is no data shared in the MUC to indicate which HI indicators have such correlation. Some of this type of information has been shared with the public via reports CMS has posted in the past; however, this is limited to the correlation of interdisciplinary team member visits only. It is believed by the hospice community that there is not a high correlation between the use of continuous home care and the CAHPS Hospice Survey results. There is also no indication in publicly-available information on the HI what the data shows relative to correlation between weekend visits and CAHPS results, per beneficiary spending and CAHPS results, nurse minutes per routine home care day and CAHPS results, and live discharges and patient level of satisfaction with hospice care. Even assuming there is a correlation otherwise the indicators would not have been chosen by CMS, there remains the question of how strong of a correlation coefficient exists for each indicator. In addition to the lack of data regarding the correlation of the HI indicators with CAHPS Hospice Survey results is the lack of baseline data for hospice performance in the HI indicators. If there were only one

indicator of the HI that was of concern the impact on the measure may be negligible, however, that is not the case as nearly all of the ten indicators pose serious concern.

CMS is currently overseeing the alpha testing phase a the Hospice Outcome & Patient Evaluation (HOPE) instrument which is one that will capture data as hospice care is being delivered to patients, a gap in the HQRP that CMS sought to close in recent years. The amount of data and information available not only to consumers but also to CMS and hospice providers from the HQRP is relatively small. The HOPE will bring significantly more data and information to the HQRP which allows for more robust quality measures. It is anticipated that the HOPE will be in use fairly soon by hospices. NAHC urges the MAP and CMS and its quality contractors to consider the impact of the measures anticipated from the HOPE on the HI, and eliminate any possible future duplication.

There are questions about the timeframe of the data that would be used for the HI. We strongly recommend that no 2020 or 2021 data collected during the time of the current Public Health Emergency (PHE) and for a time afterwards be utilized should the HI measure be incorporated in the Hospice Quality Reporting Program (HQRP). The PHE has greatly impacted the type and number of visits that can be made to patients and, in fact, has impacted all of the proposed indicators and will continue to do so for some time after the PHE concludes. The length of time needed to recover and return to a state of normalcy is not known but should be seriously considered for this and all measures under consideration.

NAHC provides the following comments on each of the HI indicators:

Hospice provided no Continuous Home Care (CHC) & General Inpatient (GIP)

- The use of “and” in this indicator is confusing. We believe CMS intends to use “or” to identify which hospices billed for either a general inpatient level of care OR a continuous home care level of care as is used in the Hospice PEPPER (Program for Evaluating Payment Patterns Evaluation Report). NAHC understands that CMS wants to ensure that all hospice providers are able to deliver all four levels of care that are part of the Medicare Hospice Benefit and agrees that hospices must be able to deliver such at any given time. We believe that there is a significant number of hospices, though, that do not bill for all four levels of care and especially for the CHC level of care. Due to the stringent CHC billing requirements, many hospices find that they’ve provided hours of direct one-on-one, intensive care to the patient that is not billable because it does not meet all of the CHC criteria. Measuring whether CHC was or was not billed is not necessarily reflective of the intensity of service the patient is receiving.
- NAHC supports utilizing survey data in conjunction with claims data for this indicator. Simply billing or not billing for a higher level of care is not an indicator of quality of care and a focus of hospices is keeping a patient at home and not in an inpatient unit, hospital or Skilled Nursing Facility (SNF) for the general inpatient level of care. Survey data, specifically whether the hospice provides general inpatient care directly or has a contract in place to provide this level of care under arrangement combined with billing information would be most helpful to consumers. Likewise, whether the hospice has the ability to provide continuous home care if needed would be most helpful to consumers as compared with whether or not continuous home care was billed.

- Hospice provider characteristics have an impact on this indicator and it should be adjusted based on this data. For instance, hospices with inpatient units will likely utilize the general inpatient level of care more than continuous home care and those without inpatient units may utilize continuous home care more than general inpatient care. Also, geographic data on utilization of the higher levels of care would likely indicate that there are marked geographical differences in the utilization of these two levels of care due to culture of the community served as well as possible differences due to patient characteristics (i.e. diagnosis, length of stay, etc.) and possibly hospice characteristics (i.e. inpatient care provided directly or under arrangement),

Gaps in nursing visits greater than 7 days

- It would be important to define this measure as the 7 days that comprise the accepted Medicare week of Sunday through Saturday. We believe this is CMS' intent; however, it should be defined for clarity. Also, a patient could have a visit on Tuesday one week and Wednesday the following week for a number of reasons, including for the convenience of the patient/family, without any negative impact on care.
- NAHC appreciates that CMS is proposing an indicator that looks at the number of visits over a number of days as opposed to the average number of visits per day.
- It is not clear from the MUC exactly how this indicator will be measured – if for a hospice election period and there is not a visit during one week of all the weeks included in the election period, how will this be calculated? And, the reason for not having a visit during a 7-day period is important to capture (i.e. patient request, patient not found at home, etc.).
- Any visit measures should utilize visit data for ALL core hospice interdisciplinary services (medical, nursing, psychosocial/emotional and spiritual). The core services of hospice care include a full compliment of disciplines – physician, registered nurse, and medical social worker, pastoral or other counselor. These disciplines are recognized as the core of hospice care because they address pain and symptoms that occur at the physical, emotional and spiritual level. This is the essence of hospice care. Therefore, the services provided by all of the core members of the interdisciplinary group should be included in any visit measure.
- Hospice is an interdisciplinary service and assesses patient needs and preferences for care on the physical, emotional, psychosocial and spiritual levels so it is quite possible that a patient may need and prefer more non-nursing visits during the course of their hospice care or at particular times during their care. Therefore, it may be most meaningful to the HQRP to include all discipline visits. Additionally, an overall pattern of delivering care from all disciplines to a patient throughout the course of their hospice stay may be more reflective of the quality of care being provided.
- It should be noted that there is the possibility that the majority of patients/families distinguish hospice staff visits by type, i.e. social worker or nurse, chaplain or aide, but do not distinguish further. Specifically, CMS should consider the possibility that patients/families do not distinguish between an RN and LPN but, rather, simply recognize that a "nurse" is making or made a visit. Of course, credentials of the individual making the visit are likely present on a nametag, but this is often not scrutinized by patients/families once they know the individual and, after time, the LPN versus RN versus NP license is forgotten. CMS should consider inclusion of all nursing visits.

- Hospice is an interdisciplinary benefit that includes a strong spiritual component and it is missing from claims data. Likewise, Licensed Practical Nurses (LPNs) and Nurse Practitioners (NPs) are integrated into the interdisciplinary team of some hospices and deliver nursing care according to and appropriate for the patient's plan of care. The services of these team members are important to assessing the quality of care provided by hospices and should be included. For social workers and chaplains it is not typical hospice practice, throughout the course of a patient's care, to make weekly visits. This may be seen more so at the beginning of care. Therefore, CMS should consider a timespan greater than 7 days when looking at the number of visits. NAHC had previously recommended to CMS that a timeframe of a week (7 days) be utilized as opposed to the number of visits per day. After considering this in light of the proposed HI, NAHC recommends that visits of all core hospice interdisciplinary services be included in the indicator and that a longer period of time be considered. A 15-day period is consistent with the hospice conditions of participation and may be more meaningful and reflective of visits made in accordance with patient preferences. NAHC recognizes that additional billing codes may be necessary in order to accomplish this and strongly urges CMS to develop these codes.
- Consumers have informally indicated that aide visits are essential to quality hospice care and are in many cases the types of visits that allow the family to maintain a patient at home. Therefore, they should be included here.
- During this current pandemic the effectiveness of telehealth visits has been recognized by many providers. Hospices have been using telehealth visits to supplement in-person visits for some time and the effectiveness of this intervention should be considered as part of any visit measure. Telehealth visits are legitimate indicators of care and services provided by the hospice and are related to and ordered on the plan of care. CMS already acknowledges the use of social work phone calls in the quality of hospice care and includes these types of visits on claims. To reflect all care provided by hospices and that impacts quality of care and patient/family satisfaction, billing codes should be expanded to include telehealth visits for all disciplines on the claim and included in any visit measure.
- Quality hospice care includes visits that are consistent with patient wishes. Therefore, visits made (in person and telehealth) should be compared to patient wishes via the plan of care. NAHC appreciates the difficulty of doing this when using only claims data, and strongly recommends that there be a consideration of how patient wishes regarding visits (i.e. refusing/requesting social worker, aide, or chaplain visits; frequency of visits; etc.) could be incorporated into this indicator especially since it falls under the Meaningful Measure area of "End of life care according to preferences" As mentioned above, an important outstanding question is whether the data CMS will eventually have from the Hospice Outcome and Patient Evaluation (HOPE) instrument will impact the proposed HI. Perhaps waiting for HOPE data or revising this HI indicator to include patient wishes would result in the most meaningful HQRP measure.

Nurse Minutes per Routine Home Care (RHC) Day

- RNs are not the only type of nursing service provided by hospices. Many have incorporated LPNs and NPs and all should be included in this indicator.
- This indicator could result in some hospices extending the length of visits unnecessarily and not consistent with patient preferences. It is also contradictory to visit indicators and raises questions as to whether meeting patient's wishes or having a higher number or length of visits is most indicative of quality of care.

- A hospice's performance on this indicator would be better with a greater number of nurse minutes per RHC day, but there is no standard for this and no baseline data that has been shared. There are different types of nurse visits that require different amounts of time, i.e. a quick follow up on a new intervention, a full assessment, administration of an intervention, medication education, etc. What number of minutes would be considered a "good quality of care/best performance/outcome"?

- This indicator, like others, is impacted by patient preferences, patient diagnosis, social determinants of health, etc. Baseline data is needed to determine adjustments necessary.
- As mentioned with respect to other indicators this indicator does not include all hospice interdisciplinary services.

Live Discharges in the first 7 Days of Hospice /Live Discharges on or after the 180th Day of Hospice

- NAHC agrees with the MAP recommendations made in 2018 on a similar hospice measure under consideration, MUC 18-101 Transitions from hospice care followed by death or acute care. Specifically, MAP recommended adding an exclusion to allow for patient choice, as there are a number of reasons a patient may choose to transition from hospice such as revocation, having to be discharge because of going outside the hospice's service area, a hospice discharge for cause. All of the reasons for discharge are coded on a claim so could easily be separated.
- MAP also suggested that CMS consider a dry run of the measure before publicly reporting results and explore the need for a survey of patients with a live discharge from hospice to better understand their reason for discharge and the potential scope of the problem. NAHC concurs with this recommendation. Changes are being considered for the CAHPS Hospice Survey but a survey of patients discharged live from the hospice is not a consideration, to NAHC's knowledge, at this time.
- Live discharges do not convey quality of care to consumers and could actually create confusion for consumers as higher live discharges and longer lengths of stay could be viewed as beneficial by consumers. It is clear that CMS and others have concerns about hospices that have a high proportion of live discharges, which is understandable. Measures addressing these concerns are more program integrity measures and not quality of care measures.
- A more telling program integrity measure would be live discharges after 180 days (181 days or more) as the 180th day is the last day of the second benefit period.

Burdensome Transitions (Type I)/Burdensome Transitions (Type II)

- A timeframe for how long after hospice discharge a patient is hospitalized should be added. Seven days was recommended by CMS in the MUC 2018 and seems reasonable.
- Likewise, a timeframe for readmission to hospice care after hospitalization and for death during the hospital stay should also be added.

Skilled Nurse Visits on Weekends

- A hospice's availability during weekends and after business hours is not only a requirement; it is a significant factor in the provision of care. Only weekend visits can be gathered from a hospice claim. However, this data is not the most meaningful. Consider that Saturday and Sunday are weekend days. A hospice may visit a patient on Friday and again on Monday resulting in two days between visits. A hospice may visit a patient on Tuesday and on Friday (not an uncommon hospice visit schedule) resulting in two days between visits. The time between visits is not an indicator of quality of care. In fact, many hospices visit patients on Friday to ensure interventions are effective and the patient is comfortable, which may result in no calls necessary on the weekend days. Also, many hospices have a practice of contacting patients by phone or performing telehealth visits on Fridays to check on patients and ensure there is no need for a visit, and if one is required, to get it scheduled for that day (Friday).
- How many PRN ("as needed") visits were needed by a hospice's patients is perhaps a better indicator of quality than weekend visits. The reason for the visit is far more telling than whether or not a weekend visit was provided as the reason for the visit could help identify case management practices as well as symptom management/control issues.
- NAHC agrees that hospices must be available for weekend and after hours visits and cannot be a "9 to 5 Monday through Friday" service - not just because 24/7 service is required for some services (and others if necessary) but also because 24/7 availability is necessary to respond to all patient care needs. However, hospice claims data does not provide a measure of this availability. A HQRP measure that relays to the consumer the number of visits from all interdisciplinary services over a period of time is a far better indicator and provides a clearer picture of what to expect for the consumer.

Per Beneficiary Spending

- Like a number of other measures this is more of a program integrity indicator than a quality of care indicator. NAHC opposes per beneficiary spending as a quality measure and recommends CMS address concerns about program integrity outside of the HQRP.

Receiving Visits near Death

- This measure is nearly identical to the Hospice Visits in Last Days of Life (HVLDL) measure that CMS is incorporating in the HQRP beginning in 2021. It is unclear if this is intended to be a duplication of visit data or an indication that the HVLDL measure will not be part of the HOPE when it eventually replaces the HIS. As mentioned elsewhere, the impact of the HOPE should be considered on quality measure s under development now. In the context of the HQRP, the HOPE is likely not far from implementation.
- NAHC appreciates information gleaned from the Hospice Visits When Death is Imminent: Measure Validity Testing Summary and Re-Specifications Report. It has bearing on the proposed Receiving Visits near Death indicator. In the analysis outlined in this Report, CMS utilized HIS data from patients discharged between April 1, 2017 and March 31, 2018 and fiscal year (FY) 2018 claims data to determine the correlation coefficient between the number of visits from hospice interdisciplinary (IDG) staff and the CAHPS Hospice Survey outcomes. All correlation coefficients were generally low (0.28 and below), including the HVLDL measure which showed a correlation coefficient of 0.24 and 0.26 for the CAHPS Hospice Survey "would you recommend" and "rating of hospice" questions,

respectively. Even though the HVLDL correlation was higher than some of the alternative visit specifications, it is still a generally low correlation. Analysis utilizing data that includes whether the patient/family desired a visit from the IDG disciplines that are part of a measure or exclusion criteria that removes patients/caregivers who refuse visits offered by these various disciplines in the last days of life from the measure denominator would be more telling. NAHC appreciates the reasons for measurement of visits in the last days of life, and strongly urges CMS to consider visit data in the context of an individualized plan of care reflective of patient and family wishes.

- NAHC recommends that CMS consider the regional cultural variations on visit patterns and CAHPS Hospice Survey outcomes and risk adjust for such variances.

NAHC supports the expansion of the HQRP and urges CMS to continue analyzing hospice visit data and its correlation to the CAHPS hospice survey results, including analysis that incorporates visits in the context of the individualized plan of care and the patient's wishes regarding visits. If warranted based on this data, CMS should expand any visit data utilized in the HQRP to include all core disciplines and to include telehealth visit

It is important to note that the visits on claims have not impacted hospice quality scores in the past, nor have they impacted hospice payment. Therefore, some hospices do not have a robust system of confirming all visits are captured on the claim and instead have focused these efforts on Section O of the Hospice Item Set (HIS). This Section was removed in January 2021. Therefore, CMS should incorporate a reasonable period of time for adjustment to this and for claims to accurately reflect visits.

NAHC recognizes and appreciates that the HI measure was developed to help identify poor performing hospice, or "bad hospices, in other words. We reiterate that NAHC strongly supports the sharing of program integrity information that identifies such hospices. The PEPPER may be the most appropriate format for impacting hospice behavior in the indicators that tend more to program integrity behaviors than quality of care performance. The PEPPER is only available to hospices electronically and must be downloaded by the hospice. The rates of download have not been as high as would be desired for sweeping improvement in behavior. However, beginning with the 2021 PEPPER hospices will receive a notice that the PEPPER is available for downloading which is likely to result in a significant jump in the number of hospices actually receiving the information. Since the PEPPER displays a hospice's performance in CMS-identified areas vulnerable to improper payment (program integrity measures), the hospice will be most aware of its performance and likely to change behavior. Therefore, NAHC urges CMS to utilize the PEPPER instead of the HQRP for the indicators that comprise the HI. At a minimum, CMS should utilize the PEPPER before the HQRP for these indicators especially since these are new data points for hospices and the format of the PEPPER, which utilizes a comparison of performance across three fields – the hospice itself, the Medicare Administrative Contractor (MAC) jurisdiction, and the state – is most informative and meaningful to the hospice. CMS should also consider other potential indicators which may include:

- Whether a hospice is accredited by one of the approved accrediting organizations. This would require some research on whether accreditation correlates with higher quality of care.
- Publicly reporting the types of "specialty" programs/services provided by a hospice in addition to the Medicare Hospice Benefit, i.e. art therapy, massage therapy, music services, etc. This could be reported simply as a Yes/No indicator to

a statement similar to “This hospice provides specialty programs in addition to required hospice services”.
Sincerely,
Katie Wehri

Katie Wehri
Director of Home Health and Hospice Regulatory Affairs
National Association for Home Care & Hospice
Katie@nahc.org"

NPHI

“Dear Measure Application Partnership,
On behalf of the National Partnership for Healthcare and Hospice Innovation (NPHI), thank you for the opportunity to provide comment for the measure under consideration (MUC)20-0030 Hospice Care Index (HCI).
NPHI is a collaborative of nearly eighty of the nation’s most innovative, community-based, not-for-profit hospice and palliative care providers that serve as a critical safety net in communities across the United States. Our mission-driven members collectively serve approximately 120,000 patients daily. Of the almost 4,700 hospice providers in the United States, only 27 percent are not-for-profit and serve the sickest and most vulnerable patients. NPHI members are deeply embedded in their communities and have decades of experience providing the highest quality care for people facing serious illness. This includes providing a comprehensive scope of care to meet each patient’s goals, values, and wishes, regardless of the patient’s financial situation or their terminal condition.
As described through the measure specifications, the HCI seeks to identify hospices which are outliers across an array of ten multifaceted indicators. The ten indicators are intended to reflect the interdisciplinary nature of the Medicare hospice benefit (MHB). NPHI agrees that a composite index which serves to capture the full scope and breadth of the MHB would be a useful tool that would benefit both providers and beneficiaries. However, based on the HCI’s current specifications, we do not believe this measure will provide patients or providers with an accurate assessment of the quality performance of an individual hospice program. We strongly urge NQF not to adopt this measure without significant changes to the specifications of certain indicators and further statistical study on the validity and reliability of the measure.

We are generally concerned with six areas of the HCI:

- Based on an Abt Associates analysis of the correlation between projected hospice scores on the HCI and the percentage of caregivers who would “definitely” recommend a hospice, there is not a sufficient amount of differentiation between hospices that score a ten on the HCI and a seven or less. Based on the correlation, patients are only three percent more likely to recommend a hospice that scored a ten on the HCI compared to a hospice that scored a seven or less.
- Additionally, based on the same analysis, 85% of hospices would score an eight or higher on the HCI using FY 2019 data. This does not indicate that the index would be a reliable resource for beneficiaries to use to differentiate between hospice programs since the HCI is already approaching “topped-out” status.
- We have issues with a significant number of the indicators that make up the HCI. We understand that a hospice’s performance on any one indicator should not be an issue as there a total of ten; but, approximately half of the indicators need further refinement and in their absence we believe hospice performance will be significantly and negatively impacted on the HCI.

- The significance of a difference in scores between two hospices (e.g., Hospice A scores an eight and Hospice B score a seven) is not clear from a statistical perspective. This will be significant if the measure is publicly displayed as patients will be more likely to choose higher scoring hospices despite the possibility that there may be not a significant difference between a higher and lower score.
- The ten indicators included in the HCI are a combination of measures focused on patient quality of care and program integrity. The HCI would be more useful to patients if these two types of measures were separated out and applied under different contexts.
- The HCI currently seeks to measure certain aspects of patient quality of care through an analysis of claims data, when in some cases claims data may not be an appropriate source. We would like to highlight that CMS is currently testing the Hospice Outcomes and Patient Evaluation (HOPE) tool to standardize the patient assessment and outcomes information. The HOPE tool may be a more appropriate source of information to collect patient quality of care information instead of claims data.

Below we offer specific comments on certain indicators found in the HCI.

Gaps in Nursing Visits Greater Than Seven Days

We agree with the significance of measuring how often hospice stays contain gaps of eight or more days without a nursing visit. This is an essential practice to help hospices understand how to better serve patients. We recommend that telehealth visits should also be counted towards this measure due to the ongoing pandemic and the likely increased use of telehealth by hospice programs in the long-term. Currently, CMS does not allow hospices to report telehealth visits on claims which presents a barrier to measuring the frequency and adequacy of telehealth visits. This measure should include these telehealth visits.

Nurse Minutes Per Routine Home Care (RHC) Day

We agree with the significance of measuring the degree to which nurses play a role in the care of a hospice patient and their family. However, by only measuring the role of the nurse, this indicator takes on the form of a program integrity measure rather than a comprehensive assessment of patient quality of care. The MHB is an interdisciplinary benefit that uses a number of different professionals, such as social workers and chaplains. If this indicator is intended to help patients understand quality of care, we recommend that that it capture a much broader array of visit types.

Live Discharges in The First Seven Days of Hospice and Live Discharges on Or After The 180th Day of Hospice

We agree with the intent and significance of measuring the rate of live discharges hospices who are outliers may have questionable practices. However, this measure falls under the category of program integrity and would be better suited in a different context than the HCI. We would also like to recommend that revocations be excluded from this measure as revocations are the explicit right of a patient and should not be counted against the performance of an individual hospice on this measure.

Burdensome Transitions (Type 1 And Type 2)

In a similar vein, we would also recommend for this measure's specifications to also exclude patient revocations. Additionally, we believe the timeframe for transitions to a hospital and back to a hospice to be extended from two days to seven days. This would align with past NQF MAP recommendations on transitions of care.

Medicare Spending Per Beneficiary (MSPB)

We do not agree with the inclusion of this indicator as there are several factors that influence overall spending per beneficiary that are not necessarily tied to patient quality of care. Additionally, this measure is better suited for program integrity purposes rather than inclusion in a patient quality of care index. From a patient perspective, there may be a significant number of individuals who correlate higher spending with higher quality of care and thus may misinterpret the intent of this indicator.

Percentage of Nurse Minutes on Routine Home Care (RHC) Days Performed on Weekends

We agree with the intent of including this measure as hospices should make available the appropriate staff during any day of the week. However, this claims-based measure cannot capture patient preferences for when a family may not want a weekend visit because they view is a disruption. Instead, the HOPE tool may be more appropriate source of information to capture whether hospices significantly deviate because of potential failure to make staff available for weekend visits.

Thank you for the opportunity to provide comment for this measure under consideration. If you have any questions, please contact NPHI Policy Director Tzvetomir Gradevski at tgradevski@hospiceinnovations.org."

Measure Information

Characteristic	Submitted Information
MUCID	MUC20-44
Other Measure Identification Numbers	N/A
Title	MUC20-44 SARS-CoV-2 Vaccination Coverage among Healthcare Personnel
Program	Inpatient Rehabilitation Facility Quality Reporting Program
Workgroup	Measure Applications Partnership (MAP) – Post-Acute Care/Long-Term Care (PAC-LTC)
In what state of development is the measure?	Early Development
State of Development Details	Measure is in Early Development.
Measure Description	This measure tracks SARS-CoV-2 vaccination coverage among healthcare personnel (HCP) in IPPS hospitals, inpatient rehabilitation facilities (IRFs), long-term care hospitals (LTCHs), inpatient psychiatric facilities, ESRD facilities, ambulatory surgical centers, hospital outpatient departments, skilled nursing facilities, and PPS-exempt cancer hospitals. Acute care facilities include inpatient hospitals, critical access hospitals, and Prospective Payment System (PPS)-exempt cancer hospitals
Numerator	Cumulative number of HCP eligible to work in the hospital or facility for at least one day during the reporting period and who received a complete vaccination course against SARS-CoV-2 since the date vaccine was first available or on a repeated interval revaccination on a regular basis is needed. A completed vaccination course may require 1 or more doses depending on the specific vaccine used. Vaccination coverage is defined as a measure of the estimated percentage of people in a sample or population who received a specific vaccine or vaccines.
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.
Exclusions	HCP with contraindications to SARS-CoV-2 vaccination.
Measure type	Process
What is the NQF status of the measure?	Never submitted
NQF ID number	0000
Year of next anticipated NQF CDP endorsement review	N/A
Year of most recent NQF Consensus Development	N/A

Process (CDP) endorsement	
Is the measure being submitted exactly as endorsed by NQF?	N/A
If not exactly as endorsed, describe the nature of the differences	N/A
What data sources are used for the measure?	National Healthcare Safety Network
If EHR or Administrative Claims or Chart-Abstracted Data, description of parts related to these sources.	N/A
At what level of analysis was the measure tested?	N/A
In which setting was this measure tested?	None
What NQS priority applies to this measure?	N/A
What one primary meaningful measure area applies to this measure?	Preventive Care
What secondary meaningful measure area applies to this measure?	N/A
What one primary healthcare priority applies to this measure?	Promote Effective Prevention and Treatment of Chronic Disease
What secondary healthcare priority applies to this measure?	N/A
What area of specialty best fits the measure?	Preventive medicine
What is the target	IRF HCP

population of the measure?	
Is this measure an eCQM?	No
If eCQM, enter Measure Authoring Tool (MAT) number	N/A
If eCQM, does the measure have a Health Quality Measures Format (HQMF) specification?	No
Comments	N/A
Measure steward	Centers for Disease Control and Prevention
Long-Term Measure Steward (if different)	N/A
Measure Steward Contact Information	Budnitz, Daniel MD, MPH, CAPT USPHS. Director, Medication Safety Program; Division of Healthcare Quality Promotion; Centers for Disease Control and Prevention. 404-498-0634 dbudnitz@cdc.gov
Primary Submitter Contact Information	Adams, Ariel MSN, RN, AGCNS-BC Division of Chronic and Post Acute-Care (DCPAC), Centers for Medicare and Medicaid Services (CMS). 410.786.8571 Ariel.Adams@cms.hhs.gov
Long-Term Measure Steward Contact Information	N/A
Secondary Submitter Contact Information	N/A
Was this measure proposed for a previous year's MUC list?	No
In what prior year(s) was this measure proposed?	N/A
What were the programs that NQF MAP reviewed the measure for in each year?	N/A
Why was the measure not recommended in those year(s)?	N/A

What were the MUC IDs for the measure in each year?	N/A
NQF MAP report page number being referenced for each year	N/A
What was the NQF MAP recommendation in each year?	N/A
List the NQF MAP workgroup(s) in each year	N/A
What is the history or background for including this measure on the new MUC list?	New measure never reviewed by MAP Workgroup or used in a CMS program
Range of years(s) this measure has been used by CMS Program(s)	N/A
What other federal programs are currently using this measure?	N/A
Evidence that the measure can be operationalized	The data needed to calculate this measure will be collected through the COVID-19 Modules on the NHSN website (https://www.cdc.gov/nhsn/covid19/index.html).
How is the measure expected to be reported to the program?	Web Interface
Is this measure similar to and/or competing with measure(s) already in a program?	No
Which existing measure(s) is your measure similar to and/or competing with?	N/A
How will this measure be distinguished from other similar and/or competing measures?	N/A

Rationale for how this measure will add to the CMS program	N/A
If this measure is being proposed to meet a statutory requirement, please list the corresponding statute.	N/A
Evidence of performance gap	Analysis of the score distributions of other HCP vaccination measures in post-acute care, including the Influenza Vaccination among Healthcare Personnel (NQF #0431) measure adopted in the IRF QRP, demonstrate variability in the quality measure scores nationally.
Unintended consequences	IRFs may mistakenly administer the vaccine to HCP with contraindications to administration in an attempt to improve their measure score, despite such HCP being excluded from the measure calculation.
Which clinical guideline(s)?	N/A
Briefly describe the peer reviewed evidence justifying this measure	Health care practice requires close personal exposure to patients, contaminated environment, or infectious material from patients with SARS-CoV-2, putting HCP at high risk of infection and contributing to further spread of COVID-19. (Nguyen et al. 2020) In addition to infection control and early detection of COVID-19, vaccination is expected to be one of the most effective ways to prevent COVID-19 and transmission of SARS-CoV-2. Sufficient vaccination coverage of HCP can protect the health of the nation's healthcare workforce and reduce transmission of SARS-CoV-2 in health care facilities, thereby protecting the health of both HCP and patients.

MUC20-44 SARS-CoV-2 Vaccination Coverage among Healthcare Personnel

Criteria	Yes/No	Justification and Notes
Does the measure address a critical quality objective not currently adequately addressed by the measures in the program set?	Yes	This is a new measure that has not been review by a MAP Workgroup or used in a CMS program. SARS-CoV-2 vaccination is a national healthcare priority. There is a measure in the program set addressing influenza vaccination coverage (NQF #0431 *Influenza Vaccination Coverage Among Healthcare Personnel*), but no measures addressing SARS-CoV-2 vaccination. Vaccination coverage for SARS-CoV-2 is of particular importance to the vulnerable patient population served by inpatient rehabilitation facilities (IRFs).
Is the measure evidence-based and either strongly linked to outcomes or an outcome measure?	No	This is a process measure. Vaccines to prevent SARS-CoV-2 infection are considered the most promising approach to addressing the current pandemic (Jeyanathan et al., 2020). The developer provides information from a prospective, observational cohort study illustrating the increased risk of reporting a positive COVID-19 test for front-line healthcare workers (Nguyen et al., 2020). Both the National Academies of Sciences, Engineering, and Medicine and the Centers for Disease Control identify healthcare workers as the highest-priority for SARS-CoV-2 vaccination. The developer states that sufficient vaccination coverage of healthcare personnel (HCP) can protect the health of the nation's healthcare workforce and reduce transmission of SARS-CoV-2 in healthcare facilities, thereby protecting the health of both HCP and patients. Before any vaccine receives FDA approval for emergency use, the vaccine must first be shown to be safe and effective through clinical trials (CDC, 2020). Early reports for vaccines in development suggest that they may be more than 90% effective in the prevention of transmission of the SARS-CoV-2 (Mahase, 2020). While early evidence submitted to the FDA for emergency use authorization is promising, the full range of evidence is still emerging.
Does the measure address a quality challenge?	Yes	This measure covers a topic not currently addressed in the IRF QRP. It will be among a set of the first quality measures to address prevention of COVID-19. In late November 2020, the Johns Hopkins Coronovirus Resource Center reported almost 12.6 million COVID-19 cases with almost 260,000 deaths in the United States. Both numbers were increasing rapidly. At the time of drafting this preliminary analysis (November 2020), no SARS-CoV-2 vaccines have been approved by the Federal Drug Administration (FDA). Performance on the measure is therefore essentially zero, maximizing the performance gap. Existing healthcare personnel vaccinations measures demonstrate variation in performance across facilities.

Does the measure contribute to efficient use of measurement resources and/or support alignment of measurement across programs?	Unclear	This measure provides important information not currently available for this setting or level of analysis. MUC20-0044 is intended for eight federal programs for non-long-term care settings. This measure will be submitted using the COVID-19 Modules on the NHSN website. This is the same submission method used for the existing influenza vaccination measure. The durability of immunological response is not currently well understood but may weaken quickly, suggesting that COVID-19 vaccination rates may be a long-term measurement issue.
Can the measure be feasibly reported?	Unclear	Given the current uncertainties around specifications and data collection strategies, the feasibility of reporting this measure is unclear.
Is the measure applicable to and appropriately specified for the program's intended care setting(s), level(s) of analysis, and population(s)?	Unclear	Specifications are incomplete pending approved vaccines and vaccination protocols, but what is available is applicable and appropriately specified.
If the measure is in current use, have negative unintended issues to the patient been identified? Have implementation challenges outweighing the benefits of the measure been identified?	N/A	This is a new measure that is not currently in use. The measure developer theorizes that IRFs could mistakenly vaccinate individuals with contraindications in an attempt to maximize their score. Individuals with contraindications are excluded from the measure.
PAC/LTC Workgroup Priority?		N/A
Impact Act Domain		N/A
Hospice High Priority Areas	N/A	N/A

Rural Workgroup Input	[redacted]	Relative priority/utility: • Strong support for vaccination coverage for health care workers • Vaccine access and distribution may be an issue • Access and distribution issues may resolve by the time this measure is fully implemented in 2022 • Appropriate for the rural community Data collection issues: • None identified Calculation issues: • None identified Unintended consequences: • None identified Votes: Range is 1 – 5, where higher is more relevant to rural Average: 4.1 • 1 – 0 votes • 2 – 0 votes • 3 – 2 votes • 4 – 12 votes • 5 – 3 votes
Preliminary Analysis Recommendation	Do not support with potential for mitigation	The mitigation points for this measure prior to implementation are that the evidence should be well documented, and that the measure specifications should be finalized, followed by testing and NQF endorsement. The proposed measure represents a promising effort to advance measurement for an evolving national pandemic. The incomplete specifications require immediate mitigation and further development should continue.
Summary: What is the potential value to the program measure set?	[redacted]	This measure would add value to the program measure set by providing visibility into an important intervention to limit COVID-19 infections in healthcare personnel and the patients for whom they provide care.

Summary: What is the potential impact of this measure on quality of care for patients?	[redacted]	Collecting information on SARS-CoV-2 vaccination coverage among healthcare personnel and providing feedback to IRFs will allow facilities to benchmark coverage rates and improve coverage in their facility. Reducing rates of COVID-19 in healthcare personnel will reduce transmission among patients and reduce instances of staff shortages due to illness. Prior to use in IRF QRP, this important measure should have the supporting evidence well-documented, and be fully developed, followed by testing and receipt of NQF endorsement.

Measure Comments

Author	Submitted Comment
American Medical Rehabilitation Providers Association (AMRPA)	"The American Medical Rehabilitation Providers Association (AMRPA) appreciates the opportunity to submit comments in response to the Measure Under Consideration (MUC) MUC20-0044 "SARS-CoV-2 Vaccination among Healthcare Personnel" for inclusion in the Inpatient Rehabilitation Facility (IRF) Quality Reporting Program (QRP). AMRPA is the national trade association representing more than 650 freestanding inpatient rehabilitation facilities and rehabilitation units of acute-care general hospitals (IRFs). The vast majority of our members are Medicare participating providers. In 2018, IRFs served 364,000 Medicare beneficiaries with more than 408,000 IRF stays. AMRPA recognizes the importance of including diverse and well-designed quality measures that distinguish high-quality care in the IRF QRP. We also recognize how critical vaccination against COVID-19 is to mitigate the pandemic and the importance of ensuring IRFs receive top prioritization for vaccine distribution. However, for a number of policy and implementation-related concerns, we urge NQF to recommend CMS delay inclusion of MUC20-0044 in the IRF QRP for at least a year and provide considerably more detail on its planned approach in the intervening months. AMRPA believes a number of questions must be addressed before the aforementioned measure can adequately differentiate high-quality rehabilitation care, provide meaningful information to discharge planners, patients and caregivers, and not unfairly penalize a hospital for circumstances outside its control (for example, if the surveillance occurred shortly before an employee was to receive their next dose). A list of summary recommendations related to the MUC are below: • Vaccination against SARS-CoV-2 should not be included in the IRF QRP until the vaccine(s) are widely and equitably available to IRFs in all states, tribes, and territories. • Vaccination against SARS-CoV-2 should not be included in the IRF QRP until the vaccine(s) receive full FDA approval, not including Emergency Use Authorization (EUA) which requires informed consent. • In calculating the measure, CMS should provide clarification for the language used in the Measure Specifications. • CMS must further define how the measure will be calculated as more vaccines – particularly those with differing dosage requirements - are approved.

- IRFs must be given adequate time to build the necessary IT platforms to properly report SARS-CoV-2 vaccination.

These reasons are detailed further below:
COVID-19 Vaccines Should be Widely and Equitably Available to all IRFs before Implementation of Related Quality Measures
At the time of these comments, two vaccines developed for use against SARS-CoV-2 have been granted EUA approval for use in the United States; however, the vaccines have not been consistently distributed or administered across states, territories, and tribes. With each jurisdiction having varying distribution and administration guidelines, IRFs in many parts of the country do not have adequate access to vaccines to ensure compliance with this MUC. Using a measure that is linked to an array of issues outside the control of the IRF fails to achieve the underlying purpose of the measure – distinguishing the high-quality care provided within individual IRFs. For these reasons, AMRPA recommends mandatory inclusion of "SARS-CoV-2 Vaccination among Healthcare Personnel" should be delayed until the vaccine is widely and equitably available to all IRFs – both freestanding and units – across the country.

COVID-19 Vaccines Should Have Full FDA Approval before Implementation of Related Quality Measures
Vaccines available for use against COVID-19 currently only have EUA approval. AMRPA believes inclusion of a permanent quality measure based on an experimental approval is premature and ill-advised. AMRPA believes there is legal uncertainty as to whether hospitals can mandate vaccinations that only have EUA approval, creating potential issues for IRFs depending on the age/health status of their workforce and other factors (e.g., the occurrence of allergic reactions in their communities). AMRPA instead recommends that MUC20-0044 be delayed until a number of SARS-CoV-2 vaccines have full FDA approval.

Language Used in Calculating the Numerator and Denominator of the Measure Should be Clearly Defined
In reviewing CMS' provided Measure Specifications, AMRPA is concerned that many of the terms used are not clearly defined. For example, CMS defines the numerator as "Cumulative number of HCP eligible to work in the hospital or facility for at least one day during the reporting week and who received a complete vaccination course against SARS-CoV-2 since the date vaccine was first available or on a repeated interval revaccination on a regular basis is needed." We question how CMS defines "for at least one day," and if it is equivalent to an eight hour shift, or if the staff member worked at all within a seven day period. To ensure consistent measurement across providers, it is critical that the language used for the measure is clearly defined. AMRPA also urges further clarification on "eligible to work in the healthcare facility." Specifically, CMS should clarify if this language includes personnel who may be eligible to work within the facility but did not (e.g., those who are working remotely or conducting virtual visits). Further, AMRPA recommends CMS clarify if outpatient departments and non-clinical staff are also included in calculation in the numerator. Lastly, AMRPA has concerns with the usage of the term "estimated" related to vaccination coverage in calculating the numerator for the MUC. Usage of the term fails to accurately capture personnel who are protected against COVID-19, as

immunity takes a period of time develop after receipt of the vaccine. Instead, AMRPA recommends the measure eliminate the word “estimated” and more clearly define vaccination coverage as those who have completed the recommended vaccination series. For the reasons listed above, AMRPA urges the Measure Specifications for MUC20-0044 be clarified and more robustly defined.

Providers Must Not be Penalized for Personnel Who Are in Process of Completing a COVID-19 Vaccine Series
As NQF and workgroup members are likely aware, a number of vaccines for COVID-19 are in the development pipeline – each with differing administration guidelines. If this measure is to be implemented, consideration will need to be given as to how such differences will be accounted for in calculating the measure. In the instance of vaccinations that require two doses, it must be clarified if the numerator of the measure should include personnel who have completed the vaccination series or if it also includes those who have begun, yet not completed the recommended series. While AMRPA recognizes the importance of personnel receiving the complete series for full protection, penalizing providers for complying with vaccine guidelines and waiting the appropriate amount of days between doses is counterintuitive. Further, AMRPA recommends the likelihood that facilities will be administering several types of SARS-CoV-2 vaccines in the future – some which may require one dose while others require two or more – and the associated tracking difficulties be taken into account and addressed before giving any formal recommendation for implementation of the measure into the IRF QRP.

Provider Burden Associated with Measure Compliance Should be Considered
As mentioned above, tracking COVID-19 vaccination among personnel will become more challenging as more vaccines are granted approval. Because of this IRFs will need to devote significant time and resources to building IT platforms that appropriately capture the required data in order to comply with the measure. Providers – including IRFs - across the country are currently meeting the demands of significant surges of acute COVID-19 infections, as well as the longer-term recovery needs of survivors. As evidenced by CMS’ waiver and delays of a number of regulatory requirements throughout the public health emergency (PHE), it is impracticable to recommend providers devote resources to rebuild their quality reporting infrastructure – particularly as the requirements are likely to continue evolving and the reporting systems would need to evolve alongside them.

AMRPA Urges NQF to Lengthen the Public Comment Period
Lastly, AMRPA appreciates the opportunity to comment on such an important aspect of the IRF QRP. From an operational standpoint and given the critical importance of quality measures to the rehabilitation field, we urge NQF to lengthen the first comment period for MUCs going forward. Increasing the comment period would grant stakeholders the ability to give the MUCs more thoughtful consideration and provide more robust comments to NQF in advance of the workgroup meetings.

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	AMRPA thanks the National Quality Forum for allowing us the opportunity to provide feedback on the inclusion of COVID-19 vaccination among healthcare personnel in the IRF QRP. In sum, AMRPA supports the measure's premise but believes the measure must be further developed and its recommendation for implementation should be delayed until a more appropriate time. AMRPA stands ready to work with NQF to help ensure meaningful quality measures continue to be included in the IRF QRP. Should you wish to discuss these comments further, please contact Kate Beller, JD, AMRPA Executive Vice President for Government Relations and Policy Development (kbeller@amrpa.org / (973) 224-4501) or Remy Kerr, AMRPA Health Policy and Research Manager (rkerr@amrpa.org / (423-431-8401). Sincerely, Anthony Cuzzola Chair, AMRPA Board of Directors Vice President/Administrator, JFK Johnson Rehabilitation Institute, Hackensack Meridian Health Suzanne Kauserud, FACHE, MBA, PT Chair, AMRPA Quality of Care Committee Member, AMRPA Board of Directors Vice President, Atrium Health "
University of Colorado Medicine	Do not support
Pfizer	"We concur that this vaccination measure would add value, given the current shortages in the healthcare workforce, in ensuring that the personnel are available to provide patient care. In the numerator, the definition of healthcare personnel is broadly defined. In contrast, ACIP defines healthcare personnel to include all paid and unpaid persons as serving in settings who have the potential for direct or indirect exposure to patients or infectious materials. NQF should consider this definition."
American Medical Association	"The AMA seeks clarification on whether this measure is for MIPS or IQR. The MUC list listed the measure under IQR. We encourage the CDC to revise and/or update the measure as new evidence comes forward and based on feedback received from the field."
Premier	"Premier believes that adoption of this measure is premature. At this time, it unclear if this is a one-time measure for the duration of the ongoing public health emergency or if it will become an annual vaccination. CMS has the authority to request this information outside of quality programs. For example, rates of vaccination could be captured through other COVID-19 reporting mechanisms. Additional clarity is also needed on how health care professionals are defined for purposes of this measure."

Measure Comments (Post-Workgroup Meeting)

Author	Submitted Comment

Federation of American Hospitals	Support
American Medical Rehabilitation Providers Association (AMRPA)	"The American Medical Rehabilitation Providers Association (AMRPA) appreciates the opportunity to submit second round comments in response to the Measure Under Consideration (MUC) MUC20-0044 "SARS-CoV-2 Vaccination among Healthcare Personnel" following the MAP Post-Acute Care/Long-Term Care Workgroup meeting earlier this week. AMRPA is the national trade association representing more than 650 freestanding inpatient rehabilitation facilities and rehabilitation units of acute-care general hospitals (IRFs). The vast majority of our members are Medicare participating providers. In 2018, IRFs served 364,000 Medicare beneficiaries with more than 408,000 IRF stays. AMRPA appreciates the Workgroup's consideration of our initial comments submitted on January 6, 2021 and the recognition of many of the points we raised in your January 11 Workgroup meeting. AMRPA therefore strongly supports the subsequent vote for "do not support with potential for mitigation" with respect to MUC20-0044. AMRPA recognizes the importance of including diverse and well-designed quality measures that distinguish high-quality care in the IRF QRP. We also acknowledge how critical vaccination against COVID-19 is to mitigate the pandemic and the importance of ensuring IRFs receive top prioritization for vaccine distribution. However, for a number of policy and implementation-related concerns, AMRPA believes CMS must delay inclusion of MUC20-0044 in the IRF QRP for at least a year and provide considerably more detail on its planned approach in the intervening months. AMRPA believes a number of questions must be addressed before the aforementioned measure can adequately differentiate high-quality rehabilitation care, provide meaningful information to discharge planners, patients and caregivers, and not unfairly penalize a hospital for circumstances outside its control (for example, if the surveillance occurred shortly before an employee was to receive their next dose). We would appreciate the opportunity to engage with NQF as it undertakes this analysis and applaud the current direction of your work in this area. *** AMRPA thanks the National Quality Forum for allowing us the opportunity to provide feedback on the inclusion of COVID-19 vaccination among healthcare personnel in the IRF QRP. AMRPA stands ready to work with NQF to help ensure meaningful quality measures continue to be included in the IRF QRP. Should you wish to discuss these comments further, please contact Kate Beller, JD, AMRPA Executive Vice President for Government Relations and Policy Development (kbeller@amrpa.org / (973) 224-4501) or Remy Kerr, AMRPA Health Policy and Research Manager (rkerr@amrpa.org / (423-431-8401). Sincerely, Anthony Cuzzola Chair, AMRPA Board of Directors Vice President/Administrator, JFK Johnson Rehabilitation Institute, Hackensack Meridian Health

	Suzanne Kauserud, FACHE, MBA, PT Chair, AMRPA Quality of Care Committee Member, AMRPA Board of Directors Vice President, Atrium Health 1)Inpatient rehabilitation facilities (IRFs) – both freestanding and units located within acute-care hospitals – are fully licensed hospitals that must meet Medicare Hospital Conditions of Participation (COPs) and provide hospital-level care to high acuity patients. IRFs' physician-led care, competencies, equipment and infection control protocols are just some of the features that distinguish the hospital-level care provided by IRFs from most other PAC providers. 2)MEDICARE PAYMENT ADVISORY COMM., REPORT TO THE CONGRESS, MEDICARE PAYMENT POLICY xiii-xxvi (2020)."
The Society for Healthcare Epidemiology of America	"The Society for Healthcare Epidemiology of America (SHEA) generally agrees with the Measure Application Partnership's (MAP) preliminary recommendation of Do Not Support with Potential for Mitigation. As expressed in a recent policy statement, SHEA believes that all health care personnel (HCP) should be immunized pursuant to CDC and ACIP recommendations and that only medical contraindications should be accepted as a reason for not receiving such vaccinations. However, we support the preliminary recommendation against MUC20-0044's use in any CMS programs – MIPS, IRF QRP, LTCH QRP, SNF QRP, ASCQR, ESRD QIP, Hospital IQR, Hospital OQR, IPR, or PCHQR – at this stage of vaccine deployment. The vaccine's cold-chain storage requirements often limit it to major centers, confounding measurement efforts. Although the measure specifications imply the vaccine should be universally administered, its safety is unproven in certain populations (e.g., pregnant women and immunocompromised patients) and an EUA-authorized vaccine cannot be mandated. Based on our experience, a significant percentage of HCPs are not receiving the vaccine, which could be reflective of vaccine hesitancy or future appointments, among other factors. Furthermore, HIPAA may present a barrier to compiling the data needed to meet the measure. Vaccine administration, while logged in state immunization registries, may not be recorded in EHRs and retrievable by providers responsible for the measure."

Measure Information

Characteristic	Submitted Information
MUCID	MUC20-44
Other Measure Identification Numbers	N/A
Title	MUC20-44 SARS-CoV-2 Vaccination Coverage among Healthcare Personnel
Program	Long-Term Care Hospital Quality Reporting Program
Workgroup	Measure Applications Partnership (MAP) – Post-Acute Care/Long-Term Care (PAC-LTC)
In what state of development is the measure?	Early Development
State of Development Details	Measure is in Early Development.
Measure Description	This measure tracks SARS-CoV-2 vaccination coverage among healthcare personnel (HCP) in IPPS hospitals, inpatient rehabilitation facilities, long-term care hospitals (LTCHs), inpatient psychiatric facilities, ESRD facilities, ambulatory surgical centers, hospital outpatient departments, skilled nursing facilities, and PPS-exempt cancer hospitals.
Numerator	Cumulative number of HCP eligible to work in the hospital or facility for at least one day during the reporting period and who received a complete vaccination course against SARS-CoV-2 since the date vaccine was first available or on a repeated interval revaccination on a regular basis is needed. A completed vaccination course may require 1 or more doses depending on the specific vaccine used. Vaccination coverage is defined as a measure of the estimated percentage of people in a sample or population who received a specific vaccine or vaccines.
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.
Exclusions	HCP with contraindications to SARS-CoV-2 vaccination.
Measure type	Process
What is the NQF status of the measure?	Never submitted
NQF ID number	0000
Year of next anticipated NQF CDP endorsement review	N/A
Year of most recent NQF Consensus Development	N/A

Process (CDP) endorsement	
Is the measure being submitted exactly as endorsed by NQF?	N/A
If not exactly as endorsed, describe the nature of the differences	N/A
What data sources are used for the measure?	National Healthcare Safety Network
If EHR or Administrative Claims or Chart-Abstracted Data, description of parts related to these sources.	N/A
At what level of analysis was the measure tested?	None
In which setting was this measure tested?	None
What NQS priority applies to this measure?	N/A
What one primary meaningful measure area applies to this measure?	Preventive Care
What secondary meaningful measure area applies to this measure?	N/A
What one primary healthcare priority applies to this measure?	Promote Effective Prevention and Treatment of Chronic Disease
What secondary healthcare priority applies to this measure?	N/A
What area of specialty best fits the measure?	Preventive medicine

What is the target population of the measure?	LTCH HCP
Is this measure an eCQM?	No
If eCQM, enter Measure Authoring Tool (MAT) number	N/A
If eCQM, does the measure have a Health Quality Measures Format (HQMF) specification?	No
Comments	N/A
Measure steward	Centers for Disease Control and Prevention
Long-Term Measure Steward (if different)	N/A
Measure Steward Contact Information	Budnitz, Daniel MD, MPH, CAPT USPHS. Director, Medication Safety Program; Division of Healthcare Quality Promotion; Centers for Disease Control and Prevention. 404-498-0634 dbudnitz@cdc.gov
Primary Submitter Contact Information	Hughes, Christy, MHA Division of Chronic and Post Acute Care (DCPAC), Centers for Medicare & Medicaid Services (CMS). 410-786-5662 Christy.Hughes@cms.hhs.gov
Long-Term Measure Steward Contact Information	N/A
Secondary Submitter Contact Information	N/A
Was this measure proposed for a previous year's MUC list?	No
In what prior year(s) was this measure proposed?	N/A
What were the programs that NQF MAP reviewed the measure for in each year?	N/A

Why was the measure not recommended in those year(s)?	N/A
What were the MUC IDs for the measure in each year?	N/A
NQF MAP report page number being referenced for each year	N/A
What was the NQF MAP recommendation in each year?	N/A
List the NQF MAP workgroup(s) in each year	N/A
What is the history or background for including this measure on the new MUC list?	New measure never reviewed by MAP Workgroup or used in a CMS program
Range of years(s) this measure has been used by CMS Program(s)	N/A
What other federal programs are currently using this measure?	N/A
Evidence that the measure can be operationalized	The data needed to calculate this measure will be collected through the COVID-19 Modules on the NHSN website (https://www.cdc.gov/nhsn/covid19/index.html).
How is the measure expected to be reported to the program?	Web Interface
Is this measure similar to and/or competing with measure(s) already in a program?	No
Which existing measure(s) is your measure similar to and/or competing with?	N/A

How will this measure be distinguished from other similar and/or competing measures?	N/A
Rationale for how this measure will add to the CMS program	N/A
If this measure is being proposed to meet a statutory requirement, please list the corresponding statute.	N/A
Evidence of performance gap	Analysis of the score distributions of other HCP vaccination measures in post-acute care, including the Influenza Vaccination among Healthcare Personnel (NQF #0431) measure adopted in the LTCH QRP, demonstrate variability in the quality measure scores nationally.
Unintended consequences	LTCHs may mistakenly administer the vaccine to HCP with contraindications to administration in an attempt to improve their measure score, despite such HCP being excluded from the measure calculation.
Which clinical guideline(s)?	N/A
Briefly describe the peer reviewed evidence justifying this measure	Health care practice requires close personal exposure to patients, contaminated environment, or infectious material from patients with SARS-CoV-2, putting HCP at high risk of infection and contributing to further spread of COVID-19. (Nguyen et al. 2020) In addition to infection control and early detection of COVID-19, vaccination is expected to be one of the most effective ways to prevent COVID-19 and transmission of SARS-CoV-2. Sufficient vaccination coverage of HCP can protect the health of the nation's healthcare workforce and reduce transmission of SARS-CoV-2 in health care facilities, thereby protecting the health of both HCP and patients.

MUC20-44 SARS-CoV-2 Vaccination Coverage among Healthcare Personnel

Criteria	Yes/No	Justification and Notes
Does the measure address a critical quality objective not currently adequately addressed by the measures in the program set?	Yes	This is a new measure that has not been review by a MAP Workgroup or used in a CMS program. SARS-CoV-2 vaccination is a national healthcare priority. There is a measure in the program set addressing influenza vaccination coverage (NQF #0431 *Influenza Vaccination Coverage Among Healthcare Personnel*), but no measures addressing SARS-CoV-2 vaccination. Vaccination coverage for SARS-CoV-2 is of particular importance to the vulnerable patient population served by long-term care hospitals (LTCHs).
Is the measure evidence-based and either strongly linked to outcomes or an outcome measure?	No	This is a process measure. Vaccines to prevent SARS-CoV-2 infection are considered the most promising approach to addressing the current pandemic (Jeyanathan et al., 2020). The developer provides information from a prospective, observational cohort study illustrating the increased risk of reporting a positive COVID-19 test for front-line healthcare workers (Nguyen et al. 2020). Both the National Academies of Sciences, Engineering, and Medicine and the Centers for Disease Control identify healthcare workers as the highest-priority for SARS-CoV-2 vaccination. The developer states that sufficient vaccination coverage of healthcare personnel (HCP) can protect the health of the nation's healthcare workforce and reduce transmission of SARS-CoV-2 in healthcare facilities, thereby protecting the health of both HCP and patients. Before any vaccine receives FDA approval for emergency use, the vaccine must first be shown to be safe and effective through clinical trials (CDC, 2020). Early reports for vaccines in development suggest that they may be more than 90% effective in the prevention of transmission of the SARS-CoV-2 (Mahase, 2020). While early evidence submitted to the FDA for emergency use authorization is promising, the full range of evidence is still emerging.
Does the measure address a quality challenge?	Yes	This measure covers a topic not currently addressed in the LTCH QRP. It will be among a set of the first quality measures to address prevention of COVID-19. In late November 2020, the Johns Hopkins Coronovirus Resource Center reported almost 12.6 million COVID-19 cases with almost 260,000 deaths in the United States. Both numbers were increasing rapidly. At the time of drafting this preliminary analysis (November 2020), no SARS-CoV-2 vaccines have been approved by the Federal Drug Administration (FDA). Performance on the measure is therefore essentially zero, maximizing the performance gap. Existing healthcare personnel vaccinations measures demonstrate variation in performance across facilities.

Does the measure contribute to efficient use of measurement resources and/or support alignment of measurement across programs?	Unclear	This measure provides important information not currently available for this setting or level of analysis. MUC20-0044 is intended for eight federal programs for non-long-term care settings. This measure will be submitted using the COVID-19 Modules on the NHSN website. This is the same submission method used for the existing influenza vaccination measure. The durability of immunological response is not currently well understood but may weaken quickly, suggesting that COVID-19 vaccination rates may be a long-term measurement issue.
Can the measure be feasibly reported?	Unclear	Given the current uncertainties around specifications and data collection strategies, the feasibility of reporting this measure is unclear.
Is the measure applicable to and appropriately specified for the program's intended care setting(s), level(s) of analysis, and population(s)?	Unclear	Specifications are incomplete pending approved vaccines and vaccination protocols, but what is available is applicable and appropriately specified.
If the measure is in current use, have negative unintended issues to the patient been identified? Have implementation challenges outweighing the benefits of the measure been identified?	N/A	This is a new measure that is not currently in use. The measure developer theorizes that LTCHs could mistakenly vaccinate individuals with contraindications in an attempt to maximize their score. Individuals with contraindications are excluded from the measure.
PAC/LTC Core Concept?		N/A
Impact Act Domain		N/A
Hospice High Priority Areas	N/A	N/A

Rural Workgroup Input	[redacted]	Relative priority/utility: • Strong support for vaccination coverage for health care workers • Vaccine access and distribution may be an issue • Access and distribution issues may resolve by the time this measure is fully implemented in 2022 • Appropriate for the rural community Data collection issues: • None identified Calculation issues: • None identified Unintended consequences: • None identified Votes: Range is 1 – 5, where higher is more relevant to rural Average: 4.1 • 1 – 0 votes • 2 – 0 votes • 3 – 2 votes • 4 – 12 votes • 5 – 3 votes
Preliminary Analysis Recommendation	Do not support with potential for mitigation	The mitigation points for this measure prior to implementation are that the evidence should be well document, and the measure specifications should be finalized, followed by testing and NQF endorsement. The proposed measure represents a promising effort to advance measurement for an evolving national pandemic. The incomplete specifications require immediate mitigation and further development should continue.
Summary: What is the potential value to the program measure set?	[redacted]	This measure would add value to the program measure set by providing visibility into an important intervention to limit COVID-19 infections in healthcare personnel and the patients for whom they provide care.

Summary: What is the potential impact of this measure on quality of care for patients?	[redacted]	Collecting information on SARS-CoV-2 vaccination coverage among healthcare personnel and providing feedback to LTCHs will allow facilities to benchmark coverage rates and improve coverage in their facility. Reducing rates of COVID-19 in healthcare personnel will reduce transmission among patients and reduce instances of staff shortages due to illness. Prior to use in LTCH QRP, this important measure should have the supporting evidence well-documented, and be fully developed, followed by testing and receipt of NQF endorsement.

Measure Comments

Author	Submitted Comment
University of Colorado Medicine	Do not support
Pfizer	"We concur that this vaccination measure would add value, given the current shortages in the healthcare workforce, in ensuring that the personnel are available to provide patient care. In the numerator, the definition of healthcare personnel is broadly defined. In contrast, ACIP defines healthcare personnel to include all paid and unpaid persons as serving in settings who have the potential for direct or indirect exposure to patients or infectious materials. NQF should consider this definition."
American Medical Association	"The AMA seeks clarification on whether this measure is for MIPS or IQR. The MUC list listed the measure under IQR. We encourage the CDC to revise and/or update the measure as new evidence comes forward and based on feedback received from the field."
Premier	"Premier believes that adoption of this measure is premature. At this time, it unclear if this is a one-time measure for the duration of the ongoing public health emergency or if it will become an annual vaccination. CMS has the authority to request this information outside of quality programs. For example, rates of vaccination could be captured through other COVID-19 reporting mechanisms. Additional clarity is also needed on how health care professionals are defined for purposes of this measure."

Measure Comments (Post-Workgroup Meeting)

Author	Submitted Comment
Federation of American Hospitals	Support
The Society for Healthcare Epidemiology of America	"The Society for Healthcare Epidemiology of America (SHEA) generally agrees with the Measure Application Partnership's (MAP) preliminary recommendation of Do Not Support with Potential for Mitigation. As expressed in a recent policy statement, SHEA believes that all health care personnel (HCP) should be immunized pursuant to CDC and ACIP recommendations and that only medical contraindications should be accepted as a reason for not receiving such vaccinations.

	However, we support the preliminary recommendation against MUC20-0044's use in any CMS programs – MIPS, IRF QRP, LTCH QRP, SNF QRP, ASCQR, ESRD QIP, Hospital IQR, Hospital OQR, IPR, or PCHQR – at this stage of vaccine deployment. The vaccine's cold-chain storage requirements often limit it to major centers, confounding measurement efforts. Although the measure specifications imply the vaccine should be universally administered, its safety is unproven in certain populations (e.g., pregnant women and immunocompromised patients) and an EUA-authorized vaccine cannot be mandated. Based on our experience, a significant percentage of HCPs are not receiving the vaccine, which could be reflective of vaccine hesitancy or future appointments, among other factors. Furthermore, HIPAA may present a barrier to compiling the data needed to meet the measure. Vaccine administration, while logged in state immunization registries, may not be recorded in EHRs and retrievable by providers responsible for the measure."

Measure Information

Characteristic	Submitted Information
MUCID	MUC20-0044
Other Measure Identification Numbers	N/A
Title	MUC20-0044 SARS-COV-2 Vaccination Coverage among Healthcare Personnel
Program	Skilled Nursing Facility Quality Reporting Program
Workgroup	Measure Applications Partnership (MAP) – Post-Acute Care/Long-Term Care (PAC-LTC)
In what state of development is the measure?	Early Development
State of Development Details	Measure is in Early Development.
Measure Description	This metric tracks SARS-CoV-2 vaccination coverage among healthcare personnel (HCP) in long-term care facilities (LTCFs).
Numerator	Cumulative number of HCP eligible to work in the hospital or facility for at least one day during the reporting period and who received a complete vaccination course against SARS-CoV-2 since the date vaccine was first available or on a repeated interval revaccination on a regular basis is needed. A completed vaccination course may require 1 or more doses depending on the specific vaccine used. Vaccination coverage is defined as a measure of the estimated percentage of people in a sample or population who received a specific vaccine or vaccines.
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.
Exclusions	HCP with contraindications to SARS-CoV-2 vaccination.
Measure type	Process
What is the NQF status of the measure?	Never submitted
NQF ID number	N/A
Year of next anticipated NQF CDP endorsement review	N/A
Year of most recent NQF Consensus Development Process (CDP) endorsement	N/A
Is the measure being submitted exactly as	N/A

endorsed by NQF?	
If not exactly as endorsed, describe the nature of the differences	N/A
What data sources are used for the measure?	National Healthcare Safety Network
If EHR or Administrative Claims or Chart-Abstracted Data, description of parts related to these sources.	N/A
At what level of analysis was the measure tested?	None
In which setting was this measure tested?	None
What NQS priority applies to this measure?	Promote effective prevention and treatment of chronic disease
What one primary meaningful measure area applies to this measure?	Preventive Care
What secondary meaningful measure area applies to this measure?	N/A
What one primary healthcare priority applies to this measure?	Promote effective prevention and treatment of chronic disease
What secondary healthcare priority applies to this measure?	N/A
What area of specialty best fits the measure?	Preventive medicine
What is the target population of the measure?	LTCF HCP
Is this measure an eCQM?	No

If eCQM, enter Measure Authoring Tool (MAT) number	N/A
If eCQM, does the measure have a Health Quality Measures Format (HQMF) specification?	N/A
Comments	N/A
Measure steward	Centers for Disease Control and Prevention
Long-Term Measure Steward (if different)	N/A
Measure Steward Contact Information	Budnitz, Daniel MD, MPH, CAPT USPHS. Director, Medication Safety Program; Division of Healthcare Quality Promotion; Centers for Disease Control and Prevention. 404-498-0634 dbudnitz@cdc.gov
Primary Submitter Contact Information	Magladry, Heidi, RN Division of Chronic and Post Acute-Care (DCPAC), Centers for Medicare and Medicaid Services (CMS). 410.786.6034 Heidi.Magladry@cms.hhs.gov
Long-Term Measure Steward Contact Information	N/A
Secondary Submitter Contact Information	N/A
Was this measure proposed for a previous year's MUC list?	No
In what prior year(s) was this measure proposed?	N/A
What were the programs that NQF MAP reviewed the measure for in each year?	N/A
Why was the measure not recommended in those year(s)?	N/A
What were the MUC IDs for the measure in each year?	N/A

NQF MAP report page number being referenced for each year	N/A
What was the NQF MAP recommendation in each year?	N/A
List the NQF MAP workgroup(s) in each year	N/A
What is the history or background for including this measure on the new MUC list?	New measure never reviewed by MAP Workgroup or used in a CMS program
Range of years(s) this measure has been used by CMS Program(s)	N/A
What other federal programs are currently using this measure?	N/A
Evidence that the measure can be operationalized	The data needed to calculate this measure will be collected through the COVID-19 Module for LTCFs on the NHSN website (https://www.cdc.gov/nhsn/ltc/covid19/index.html).
How is the measure expected to be reported to the program?	Web interface
Is this measure similar to and/or competing with measure(s) already in a program?	No
Which existing measure(s) is your measure similar to and/or competing with?	N/A
How will this measure be distinguished from other similar and/or competing measures?	N/A
Rationale for how this	N/A

measure will add to the CMS program	
If this measure is being proposed to meet a statutory requirement, please list the corresponding statute.	N/A
Evidence of performance gap	Analysis of the score distributions of other HCP vaccination measures in post-acute care, including the Influenza Vaccination among Healthcare Personnel (NQF #0431) measure adopted in the Inpatient Rehabilitation Facility (IRF) and Long Term Care Hospital (LTCH) Quality Reporting Program (QRP), demonstrate variability in the quality measure scores nationally.
Unintended consequences	LTCFs may mistakenly administer the vaccine to HCP with contraindications to administration in an attempt to improve their measure score, despite such HCP being excluded from the measure calculation.
Which clinical guideline(s)?	N/A
Briefly describe the peer reviewed evidence justifying this measure	The virus causing Coronavirus Disease 2019 (COVID-19) can cause outbreaks in LTCFs. Many of the residents in LTCFs are older adults with underlying chronic conditions, and therefore are highly susceptible to illness and disease. COVID-19 disproportionately affects nursing home populations due to closed environment and sharing common spaces. HCP in LTCFs have frequent and close contact with residents. In addition to infection control and early detection of COVID-19, vaccination is expected to be one of the most effective ways to prevent COVID-19 and its transmission. Sufficient HCP vaccination coverage of HCP can protect the health of the nation's healthcare workforce and reduce transmission of SARS-CoV-2 in LTCFs, thereby protecting the health of both HCP and residents.

Preliminary Analysis – MUC ID: MUC20-0044 SARS-CoV-2 Vaccination Coverage among Healthcare Personnel

Criteria	Yes/No	Justification and Notes

Does the measure address a critical quality objective not currently adequately addressed by the measures in the program set?	Yes	This is a new measure that has not been review by a MAP Workgroup or used in a CMS program. SARS-CoV-2 vaccination is a national healthcare priority. There are no measures addressing vaccination coverage currently in the SNF QRP set. Other programs within PAC/LTC have a measure addressing influenza vaccination coverage (NQF #0431 *Influenza Vaccination Coverage Among Healthcare Personnel*), but no measures addressing SARS-CoV-2 vaccination. Vaccination coverage for SARS-CoV-2 is of particular importance to the vulnerable patient population served by skilled nursing facilities (SNFs). COVID-19 disproportionately affects nursing home populations due to the closed environment and shared common spaces.
Is the measure evidence-based and either strongly linked to outcomes or an outcome measure?	No	This is a process measure. Vaccines to prevent SARS-CoV-2 infection are considered the most promising approach to addressing the current pandemic (Jeyanathan et al., 2020). The developer provides information from a prospective, observational cohort study illustrating the increased risk of reporting a positive COVID-19 test for front-line healthcare workers (Nguyen et al. 2020). Both the National Academies of Sciences, Engineering, and Medicine and the Centers for Disease Control identify healthcare workers as the highest-priority for SARS-CoV-2 vaccination. The developer states that sufficient vaccination coverage of healthcare personnel (HCP) can protect the health of the nation's healthcare workforce and reduce transmission of SARS-CoV-2 in healthcare facilities, thereby protecting the health of both HCP and patients. Before any vaccine receives FDA approval for emergency use, the vaccine must first be shown to be safe and effective through clinical trials (CDC, 2020). Early reports for vaccines in development suggest that they may be more than 90% effective in the prevention of transmission of the SARS-CoV-2 (Mahase, 2020). While early evidence submitted to the FDA for emergency use authorization is promising, the full range of evidence is still emerging.
Does the measure address a quality challenge?	Yes	This measure covers a topic not currently addressed in the SNF QRP. It will be among a set of the first quality measures to address prevention of COVID-19. In late November 2020, the Johns Hopkins Coronovirus Resource Center reported almost 12.6 million COVID-19 cases with almost 260,000 deaths in the United States. Both numbers were increasing rapidly. At the time of drafting this preliminary analysis (November 2020), no SARS-CoV-2 vaccines have been approved by the Federal Drug Administration (FDA). Performance on the measure is therefore essentially zero, maximizing the performance gap. Existing healthcare personnel vaccinations measures demonstrate variation in performance across facilities.

Does the measure contribute to efficient use of measurement resources and/or support alignment of measurement across programs?	Yes	This measure provides important information not currently available for this setting or level of analysis. This measure will be submitted using the COVID-19 Module on the NHSN website. Although SNF QRP does not contain a vaccination coverage measure, NSHN is used by SNFs to voluntarily report HCP Influenza Vaccination Coverage. The durability of immunological response is not currently well understood but may weaken quickly, suggesting that COVID-19 vaccination rates may be a long-term measurement issue.
Can the measure be feasibly reported?	Unclear	Given the current uncertainties around specifications and data collection strategies, the feasibility of reporting this measure is unclear.
Is the measure applicable to and appropriately specified for the program's intended care setting(s), level(s) of analysis, and population(s)?	Unclear	Specifications are incomplete pending approved vaccines and vaccination protocols, but what is available is applicable and appropriately specified.
If the measure is in current use, have negative unintended issues to the patient been identified? Have implementation challenges outweighing the benefits of the measure been identified?	N/A	This is a new measure that is not currently in use. The measure developer theorizes that SNFs could mistakenly vaccinate individuals with contraindications in an attempt to maximize their score. Individuals with contraindications are excluded from the measure.
PAC/LTC Workgroup Priority?		N/A
Impact Act Domain		N/A
Hospice High Priority Areas	N/A	N/A

Rural Workgroup Input	[redacted]	Relative priority/utility: • Strong support for vaccination coverage for health care workers • Vaccine access and distribution may be an issue • Access and distribution issues may resolve by the time this measure is fully implemented in 2022 • Appropriate for the rural community Data collection issues: • None identified Calculation issues: • None identified Unintended consequences: • None identified Votes: Range is 1 – 5, where higher is more relevant to rural Average: 4.1 • 1 – 0 votes • 2 – 0 votes • 3 – 2 votes • 4 – 12 votes • 5 – 3 votes
Preliminary Analysis Recommendation	Do not support with potential for mitigation	The mitigation points for this measure prior to implementation are that the evidence should be well documented and that the measure specifications should be finalized, followed by testing and NQF endorsement. The proposed measure represents a promising effort to advance measurement for an evolving national pandemic. The incomplete specifications require immediate mitigation and further development should continue.
Summary: What is the potential value to the program measure set?	[redacted]	This measure would add value to the program measure set by providing visibility into an important intervention to limit COVID-19 infections in healthcare personnel and the patients for whom they provide care.

Summary: What is the potential impact of this measure on quality of care for patients?	[redacted]	Collecting information on SARS-CoV-2 vaccination coverage among healthcare personnel and providing feedback to SNFs will allow facilities to benchmark coverage rates and improve coverage in their facility. Reducing rates of COVID-19 in healthcare personnel will reduce transmission among patients and reduce instances of staff shortages due to illness. Prior to use in SNF QRP, this important measure should have the supporting evidence well-document, and be fully developed, followed by testing and receipt of NQF endorsement.

Measure Comments

Author	Submitted Comment
University of Colorado Medicine	Do not support
Pfizer	"We concur that this vaccination measure would add value, given the current shortages in the healthcare workforce, in ensuring that the personnel are available to provide patient care. In the numerator, the definition of healthcare personnel is broadly defined. In contrast, ACIP defines healthcare personnel to include all paid and unpaid persons as serving in settings who have the potential for direct or indirect exposure to patients or infectious materials. NQF should consider this definition."
American Medical Association	"The AMA seeks clarification on whether this measure is for MIPS or IQR. The MUC list listed the measure under IQR. We encourage the CDC to revise and/or update the measure as new evidence comes forward and based on feedback received from the field."
Premier	"Premier believes that adoption of this measure is premature. At this time, it unclear if this is a one-time measure for the duration of the ongoing public health emergency or if it will become an annual vaccination. CMS has the authority to request this information outside of quality programs. For example, rates of vaccination could be captured through other COVID-19 reporting mechanisms. Additional clarity is also needed on how health care professionals are defined for purposes of this measure."

Measure Comments (Post-Workgroup Meeting)

Author	Submitted Comment
The Society for Healthcare Epidemiology of America	"The Society for Healthcare Epidemiology of America (SHEA) generally agrees with the Measure Application Partnership's (MAP) preliminary recommendation of Do Not Support with Potential for Mitigation. As expressed in a recent policy statement, SHEA believes that all health care personnel (HCP) should be immunized pursuant to CDC and ACIP recommendations and that only medical contraindications should be accepted as a reason for not receiving such vaccinations. However, we support the preliminary recommendation against MUC20-0044's use in any CMS programs – MIPS, IRF QRP, LTCH QRP, SNF QRP, ASCQR, ESRD QIP, Hospital IQR, Hospital OQR, IPR, or PCHQR – at this stage of vaccine deployment. The vaccine's cold-chain storage requirements

	often limit it to major centers, confounding measurement efforts. Although the measure specifications imply the vaccine should be universally administered, its safety is unproven in certain populations (e.g., pregnant women and immunocompromised patients) and an EUA-authorized vaccine cannot be mandated. Based on our experience, a significant percentage of HCPs are not receiving the vaccine, which could be reflective of vaccine hesitancy or future appointments, among other factors. Furthermore, HIPAA may present a barrier to compiling the data needed to meet the measure. Vaccine administration, while logged in state immunization registries, may not be recorded in EHRs and retrievable by providers responsible for the measure.”