



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 3477

Corresponding Measures:

De.2. Measure Title: Discharge to Community-Post Acute Care Measure for Home Health Agencies

Co.1.1. Measure Steward: CMS - DCPAC

De.3. Brief Description of Measure: The Discharge to Community-Post Acute Care Measure for Home Health Agencies (DTC-PAC HHA) measure was developed to address the resource use and other measures domain of Discharge to the Community, a domain mandated by the Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act). The measure was developed using calendar year 2012-2013 data.

This Medicare claims-based outcome measure assesses successful discharge to community from an HHA, with successful discharge to community including no unplanned hospitalizations and no death in the 31 days following discharge. Specifically, this measure reports an HHA's risk-standardized rate of Medicare fee-for-service (FFS) patients who are discharged to the community following an HHA stay, and do not have an unplanned admission to an acute care hospital or long-term care hospital (LTCH) in the 31 days following discharge to community, and who remain alive during the 31 days following discharge to community. The measure is based on Medicare FFS claims data and is calculated using two consecutive years of data. This measure submission is based on CY 2015-2016 data; i.e., HHA discharges from January 1, 2015 through December 31, 2016.

The measure was adopted by the Centers for Medicare & Medicaid Services (CMS) for the HH Quality Reporting Program finalized in the Calendar Year (CY) 2017 HH Quality Reporting Program (QRP) Final Rule and implementation began October 2016. Confidential feedback reports on measure performance were distributed to HH providers in early 2018. The measure will be publicly reported on the Home Health Compare website (<https://www.medicare.gov/homehealthcompare>) in January 2019 using CY 2016-2017 data. Four claims-based discharge to community measures were developed for IRF, LTCH, skilled nursing facility, and home health agency settings, respectively to meet the mandate of the IMPACT Act. These measures were conceptualized uniformly across the four settings, in terms of the definition of the discharge to community outcome, the approach to risk adjustment, and the measure calculation.

1b.1. Developer Rationale: Successful discharge to community from HHA is widely recognized as an important outcome for residents and their families and an indicator of HH quality of care.[1-6] The Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act of 2014) mandated the specification of a measure to address the domain of discharge to community across post-acute care (PAC) settings.⁴ Discharge to community is an important goal for both patients with potential for functional improvement, and patients who may not be expected to make functional gains given their clinical condition or disease. HHAs currently track their discharge to community outcomes for internal quality improvement purposes; however, this tracking commonly assesses initial discharge destination alone and not post-discharge readmissions or death. By assessing whether patients successfully remain in the community for 31 days following discharge, the DTC-PAC HHA measure is a more meaningful, patient- and family-centered measure of successful community discharge. Discharge to community is an actionable health care outcome, as targeted interventions have been shown to successfully increase discharge to community rates in a variety of post-acute settings, including HHAs [7-8] (see attached evidence form). The effectiveness of these interventions suggests that improvement in discharge to community rates among HH patients is possible through modifying provider-led processes and interventions. [9-11]

Measuring and publicly reporting the DTC-PAC HHA measure is expected to help differentiate HHAs based on quality of care, and drive improvement in this outcome. The DTC-PAC HHA measure would impact a large number of Medicare beneficiaries and the overall Medicare program. In 2016 Medicare spent \$18.1 billion on Medicare fee-for service (FFS) HH care; this care was provided by about 12,200 HHAs nationwide, covering more than 3.4 million beneficiaries.[5] There are no current NQF-endorsed measures

assessing successful discharge to community from HHAs.

[1] Gillsjö C, Schwartz-Barcott D, von Post I. Home: The place the older adult can not imagine living without. *BMC Geriatrics*. 2011;11(1):10.

[2] Unsworth C. Clients' perceptions of discharge housing decisions after stroke rehabilitation. *American Journal of Occupational Therapy*. 1996;50(3):207-216.

[3] Roush CV, Cox JE. The meaning of home: how it shapes the practice of home and hospice care. *Home Healthcare Now*. 2000;18(6):388-394.

[4] Improving Medicare Post-Acute Care Transformation Act of 2014. Public Law 113–185—October 6, 2014. Available at: <https://www.gpo.gov/fdsys/pkg/PLAW-113publ185/pdf/PLAW-113publ185.pdf>.

[5] Medicare Payment Advisory Commission. Report to the Congress: Medicare Payment Policy. March 2018. Available at: http://www.medpac.gov/docs/default-source/reports/mar18_medpac_entirereport_sec.pdf.

[6] Hsieh C-H, DeJong G, Groah S, Ballard PH, Horn SD, Tian W. Comparing rehabilitation services and outcomes between older and younger people with spinal cord injury. *Archives of Physical Medicine and Rehabilitation*. 2013;94(4, Supplement):S175-S186.

[7] Kushner DS, Peters KM, Johnson-Greene D. Evaluating Siebens Domain Management Model for inpatient rehabilitation to increase functional independence and discharge rate to home in geriatric patients. *Archives of Physical Medicine and Rehabilitation*. 2015;96(7):1310-1318.

[8] Kushner DS, Peters KM, Johnson-Greene D. Evaluating use of the Siebens Domain Management Model during inpatient rehabilitation to increase functional independence and discharge rate to home in stroke patients. *PM&R: the Journal of Injury, Function, and Rehabilitation*. 2015;7(4):354-364.

[9] Dobrez D, Heinemann AW, Deutsch A, Manheim L, Mallinson T. Impact of Medicare's prospective payment system for inpatient rehabilitation facilities on stroke patient outcomes. *American Journal of Physical Medicine & Rehabilitation / Association of Academic Physiatrists*. 2010;89(3):198-204.

[10] Gage B, Morley M, Spain P, Ingber M. Examining Post Acute Care Relationships in an Integrated Hospital System Final Report. RTI International; 2009.

[11] Medicare Payment Advisory Commission. Paying for sequential stays in a unified prospective payment system for post-acute care. In: Report to the Congress: Medicare and the Health Care Delivery System. June 2018. Available at: http://www.medpac.gov/docs/default-source/reports/jun18_ch4_medpacreport_sec.pdf?sfvrsn=0

S.4. Numerator Statement: The measure does not have a simple form for the numerator and denominator—that is, the risk-adjustment method does not make the observed number of community discharges the numerator, and a predicted number the denominator.

The measure numerator is the risk-adjusted predicted estimate of the number of patients who are discharged to the community, do not have an unplanned readmission to an acute care hospital or LTCH in the 31-day post-discharge observation window, and who remain alive during the post-discharge observation window.

This estimate starts with the observed number of discharges to community, defined as

- (i) discharges to home or self-care based on Patient Discharge Status Codes 01, 81, the Medicare FFS claim [1]; and
- (ii) no unplanned acute or LTCH hospitalizations in the 31-day post-discharge window; and
- (iii) no death in the 31-day post-discharge window.

Discharges to community are risk-adjusted for patient characteristics and a statistical estimate of the facility effect beyond case-mix (described below).

The numerator uses a model estimated on full national data specific to the PAC setting; it is applied to the HHA's patient stays included in the measure and includes the estimated effect of that HHA. The prediction equation is based on a logistic regression model with a two-level hierarchical structure.

The patient stays in the model have an indicator of the HHA they are discharged from; the effect of the HHA is measured as a positive or negative shift in the intercept term of the equation. The HHA effects are modeled as belonging to a normal (Gaussian) distribution centered at 0 and are estimated along with the effects of patient characteristics in the model.

The risk adjustment logistic model is re-estimated for every measurement period and model coefficients corresponding to the measurement period are used for measure calculation. Results of the hierarchical logistic regression model presented in this submission are based FY 2016-2017 data.

S.6. Denominator Statement: The target population for the measure is the group of Medicare HH FFS beneficiaries who are discharged from an HHA during the measure time window and are not excluded based on the measure exclusion criteria (see S.8. and S.9.).

The measure denominator is the risk-adjusted expected number of discharges to community. This estimate includes risk adjustment for patient characteristics with the facility effect removed. The "expected" number of discharges to community is the predicted number of risk-adjusted discharges to community if the same patients were treated at the average facility. The hierarchical logistic regression model used to calculate the denominator is developed using all non-excluded facility stays in the national data.

S.8. Denominator Exclusions: Measure exclusion criteria are based on administrative data from Medicare claims and eligibility files. Exclusion criteria were selected to maintain clinical validity of the measure by excluding stays for which discharge to community would not be appropriate, to ensure data availability and completeness, to exclude stays with problematic claims data, and to maintain relevance to the HH Quality Reporting Program (e.g., excluding HHAs not included in the HHA QRP based on regional location). Stays ending in transfers to the same level of care (i.e., HHA-to-HHA discharge) are excluded, because the HHA episode of care had not ended. We also excluded certain discharge status codes on the HHA FFS claim that indicated that the patient was not appropriate for community discharge (e.g., discharges against medical advice).

Measure exclusion criteria are as follows:

- Age under 18 years;
- Discharges to a psychiatric hospital;
- Discharges against medical advice;
- Discharges to disaster alternative care site or a federal hospital;
- Discharges to court/law enforcement;
- Discharges to hospice or patient stays with a hospice benefit in the 31-day post-discharge window;
- Stays for patients without continuous Parts A and B FFS Medicare enrollment during the 12 months prior to the HHA admission date and the 31 days after the HHA discharge;
- HHA stays preceded by a short-term acute care or psychiatric stay for non-surgical treatment of cancer;
- Stays ending in transfer to a HHA; and
- Stays with problematic claims data (e.g. anomalous records for stays that overlap wholly or in part, or are otherwise erroneous or contradictory).
- Medicare Part A benefits exhausted

De.1. Measure Type: Outcome

S.17. Data Source: Claims, Enrollment Data, Other

S.20. Level of Analysis: Facility

IF Endorsement Maintenance – Original Endorsement Date: Jun 10, 2019 **Most Recent Endorsement Date:** Jun 10, 2019

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. **Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.**

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[nqf_evidence_attachment_7.1_DTC_HH_12.18.18_updated.docx](#)

1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?

Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), *SKIP this question and answer the composite questions.*

Successful discharge to community from HHA is widely recognized as an important outcome for residents and their families and an indicator of HH quality of care.[1-6] The Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act of 2014) mandated the specification of a measure to address the domain of discharge to community across post-acute care (PAC) settings.⁴ Discharge to community is an important goal for both patients with potential for functional improvement, and patients who may not be expected to make functional gains given their clinical condition or disease. HHAs currently track their discharge to community outcomes for internal quality improvement purposes; however, this tracking commonly assesses initial discharge destination alone and not post-discharge readmissions or death. By assessing whether patients successfully remain in the community for 31 days following discharge, the DTC-PAC HHA measure is a more meaningful, patient- and family-centered measure of successful community discharge. Discharge to community is an actionable health care outcome, as targeted interventions have been shown to successfully increase discharge to community rates in a variety of post-acute settings, including HHAs [7-8] (see attached evidence form). The effectiveness of these interventions suggests that improvement in discharge to community rates among HH patients is possible through modifying provider-led processes and interventions. [9-11]

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[3] Roush CV, Cox JE. The meaning of home: how it shapes the practice of home and hospice care. Home Healthcare Now. 2000;18(6):388-394.

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[5] Medicare Payment Advisory Commission. Report to the Congress: Medicare Payment Policy. March 2018. Available at: http://www.medpac.gov/docs/default-source/reports/mar18_medpac_entirereport_sec.pdf.

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1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

The DTC-PAC HHA measure is based on national data from CY 2015-2016 Medicare FFS inpatient claims. All HHAs paid under Medicare's HH Prospective Payment System and included in the HH Quality Reporting Program (QRP) are included, provided they had eligible stays. Performance scores were calculated for 11,674 HHAs with eligible stays in CY 2015-2016. Facility-level number of HH stays ranged from 1 to 55,067 with a mean of 537.9 and standard deviation (SD) of 1222.6. Provider characteristics are presented in the testing form (Section 1.5, Table 1). All eligible HH patient stays discharged between January 1, 2015 and December 31, 2016 were included. For patients with multiple HH stays in the measurement period, all eligible stays were included. A total of 6,279,286 patient stays were included in the performance score calculation. Patient demographic and clinical characteristics are presented in the testing form (Section 1.6, Table 2) and attached excel document.

Observed and risk-standardized score distributions for the DTC-PAC HHA measure are presented in the testing form (Table 19 and Figure 4). Observed scores ranged from 0% to 100.00%, with a mean of 71.8% and SD of 17.6 percentage points. Risk-standardized performance scores maintained a wide range, 1.7% to 100% with a mean of 77.5% and SD of 16.8 percentage points.

Observed DTC scores by decile were as follows:

Minimum = 0.0%; 10th percentile (pct) = 45.6%; 20th pct = 64.4%; 30th pct = 71.7%; 40th pct = 76.5%; 50th pct = 80.1%; 60th pct = 83.2%; 70th pct = 86.1%; 80th pct 88.8%; 90th pct = 92.0%; max= 100.00%.

Risk-standardized DTC scores by decile were as follows:

Minimum = 1.7%; 10th pct = 45.3%; 20th pct = 65.0%; 30th pct = 72.4%; 40th pct = 77.0%; 50th pct = 80.4%; 60th pct = 83.2%; 70th pct = 85.8%; 80th pct = 88.3%; 90th pct = 91.3%; max = 100%.

We used bootstrapping to assess the ability of performance measure scores to identify statistically significant differences in provider performance. This analysis was restricted to providers with 20 or more stays during CY 2015-2016 to align with the minimum sample size criterion for public reporting of the measure. Details of the bootstrapping methodology are described in the testing form (Section 2b4.1). We compared the 95% confidence interval of each provider's performance score to the national stay-level observed DTC rate (77.5%) to determine if the provider's performance was significantly different from the national rate. Overall, 70% of HHAs (n = 7091) had performance scores that were significantly different from the national rate, with 24% (n = 2434) being significantly worse and 46% (n = 4657) being significantly better than the national rate.

The above variability in performance measure scores, including a range in risk-standardized scores, demonstrates a performance gap and room for improvement in the discharge to community quality domain. Further, the ability of the measure to identify statistically significant differences in scores demonstrates that the measure can discriminate providers based on quality of care.

Given the DTC-PAC HHA measure has only been implemented in January 2017 and yet to be publicly reported, we do not have data to demonstrate improvement in performance over time. In the coming years when the measure is publicly reported and data become available, we will examine score distribution and performance improvement over time.

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

The Medicare Payment Advisory Commission (MedPAC) reported on HHA's population risk-adjusted admission to an acute care hospital, a proxy for an unsuccessful discharge to community, has increased between 2013 and 2016.[5] These results suggest there is room for improvement in managing discharges to limit hospitalizations. The OASIS-based discharge to community measure has also shown an increase in rate of community discharge between 2012 and 2106, from 69.8 to 71.4% [12]. This measure does not assess remaining in community for the length of time as DTC-PAC HH measure but also suggests there is opportunity for continued improvement in rate of successful discharge to community.

[5] March 2018 Report to the Congress: Medicare Payment Policy. Medicare Payment Advisory Commission; 2018.

[12] Abt Analysis of OASIS QMs trend data, CY 2012 – CY 2016.

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. (This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.) For measures that show high levels of performance, i.e., "topped out", disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.

The DTC-PAC HHA measure does not adjust for social risk factors to avoid masking potential disparities in quality of care for vulnerable patient groups. It does adjust for age-gender subgroups and original reason for entitlement as these may be associated with the discharge to community outcome for physiological or clinical reasons.

We assessed for disparities in our sample of 11,674 HHAs and 6,279,286 patient stays using CY 2015-2016 Medicare FFS claims data. In the testing form, we used patient-level dual eligibility for social risk factor testing based on evidence that dual Medicare-Medicaid eligibility is the most important social risk factor predictive of patient outcomes (testing form, Section 2b3.3b). In supplemental analyses (see Appendix), we also tested race/ethnicity, urbanicity based on beneficiary residence, and socioeconomic status (SES). Socioeconomic status was determined using the Agency of Healthcare Research and Quality's SES Index calculated based on beneficiary residence, with a higher index indicating higher SES. We obtained social risk factor data from the following sources: CMS Enrollment Database (EDB) (dual eligibility, race, beneficiary zip code); Federal Information Processing Standard Publication (FIPS) codes[13] and Rural-Urban Continuum Codes (RUCC_2013) (urbanicity)[14] ; and ZIP Code Tabulation Area (ZCTA) and 2016 American Community Survey (5-year file) (AHRQ SES Index). We examined patient-level observed DTC rates across social risk factor subgroups. We also assessed the impact of social risk factors in our logistic regression models.

The distribution of social risk factors across our sample is shown in Appendix Table B-1. A total of 26.0% of our sample was dual eligible, with nearly 6.1% having full Medicaid benefits. The majority of our sample was white followed by African-American, and most lived in urban locations.

Some variation in patient-level DTC rates was seen across social risk factor subgroups, with the largest differences seen based on dual status and race. The successful DTC rate was 74.3% for duals with full Medicaid, 73.9% for duals without full Medicaid, and 80.0 % for non-duals. African-Americans had the lowest DTC rates and Asians had the highest rates, amongst the racial groups with substantial sample size. There was limited variation in DTC rates based on beneficiary residence location or AHRQ SES Index, with the first SES index quartile and rural location having the lowest DTC rates (Appendix, Table B-2).

In the logistic model testing dual eligibility as the only social risk factor, dual eligibility had a significant negative impact on the DTC outcome, with duals with full Medicaid having a larger negative impact than duals without full Medicaid (testing form, Table 16). Adjusting for dual status increased the model c-statistic by 0.003 only and had a minimal impact on facility-level performance scores. The difference between dual-adjusted and non-dual—adjusted scores ranged from 0.0 to 3.2 percentage points, with a mean of 0.4 and standard deviation of 0.4 percentage points (testing form, Table 17).

In the logistic model that included all social risk factors, dual eligibility continued to have the largest negative impact on the DTC outcome, with the estimate for duals with full Medicaid being twice as large as that for duals without full Medicaid (Appendix, Table B-3). Compared with whites, Asians have the largest protective effect on the DTC outcome. Non-urban beneficiary residence had a negative impact on the outcome, with rural residence having a larger negative impact than suburban residence. Finally, compared with the highest AHRQ SES index quartile, lower quartiles had a negative effect on the outcome with the lowest SES index group (quartile 1) being the most negative. Adjusting for all social risk factors increased the model c-statistic by 0.0005 only and had a minimal impact on facility-level performance scores. The difference between social risk factor-adjusted and non-social risk factor—adjusted scores ranged from -4.82 to 3.51 percentage points, with a mean of -0.00 and standard deviation of 0.64 percentage points (Appendix, Table B-4).

[13] https://www.huduser.gov/portal/datasets/usps_crosswalk.html

[14] <https://www.ers.usda.gov/data-products/rural-urban-continuum-codes/>

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4

Not applicable

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):

De.6. Non-Condition Specific(check all the areas that apply):

De.7. Target Population Category (Check all the populations for which the measure is specified and tested if any):

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

Measure specifications posted with the CY 2017 HH QRP Final Rule are publicly available at:

<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment->

[Instruments/HomeHealthQualityInits/Downloads/MeasureSpecificationsForCY17-HH-QRP-FR.pdf](#)

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

Attachment Attachment: [NQF_Model_Results_HH_DTC_QM_2018-08-01_FINAL.xlsx](#)

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

No, this is not an instrument-based measure Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) **DO NOT** include the rationale for the measure.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

The measure does not have a simple form for the numerator and denominator—that is, the risk-adjustment method does not make the observed number of community discharges the numerator, and a predicted number the denominator.

The measure numerator is the risk-adjusted predicted estimate of the number of patients who are discharged to the community, do not have an unplanned readmission to an acute care hospital or LTCH in the 31-day post-discharge observation window, and who remain alive during the post-discharge observation window.

This estimate starts with the observed number of discharges to community, defined as

- (i) discharges to home or self-care based on Patient Discharge Status Codes 01, 81, the Medicare FFS claim [1]; and
- (ii) no unplanned acute or LTCH hospitalizations in the 31-day post-discharge window; and
- (iii) no death in the 31-day post-discharge window.

Discharges to community are risk-adjusted for patient characteristics and a statistical estimate of the facility effect beyond case-mix (described below).

The numerator uses a model estimated on full national data specific to the PAC setting; it is applied to the HHA's patient stays included in the measure and includes the estimated effect of that HHA. The prediction equation is based on a logistic regression model with a two-level hierarchical structure.

The patient stays in the model have an indicator of the HHA they are discharged from; the effect of the HHA is measured as a positive or negative shift in the intercept term of the equation. The HHA effects are modeled as belonging to a normal (Gaussian) distribution centered at 0 and are estimated along with the effects of patient characteristics in the model.

The risk adjustment logistic model is re-estimated for every measurement period and model coefficients corresponding to the

measurement period are used for measure calculation. Results of the hierarchical logistic regression model presented in this submission are based FY 2016-2017 data.

S.5. Numerator Details *(All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)*

*IF an **OUTCOME MEASURE**, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).*

Discharge Destination of Community

Discharge to community is determined based on the “Patient Discharge Status Code” from the PAC claim. Discharge to community is defined as discharge to home/self-care [1][2]. Table 1 below lists the Patient Discharge Status Codes used to define community.

Discharge Status Codes Indicating Community Discharge:

- 01 Discharged to home or self-care (routine discharge)
- 81 Discharged to home or self-care with a planned acute care hospital readmission

Unplanned Admissions in the 31-Day Post-Discharge Observation Window

A patient who is discharged to the community is not considered to have a successful discharge to community outcome for this measure if they have a subsequent unplanned admission to an acute care hospital or LTCH in the post-discharge observation window, which includes the day of discharge and the 31 days following day of discharge.

We identify unplanned admissions based on the planned readmissions algorithm used in the following post-acute care readmission measures, endorsed by the National Quality Forum (NQF): (i) Skilled Nursing Facility 30-Day All-Cause Readmission Measure (SNFRM) (NQF #2510); (ii) All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facilities (NQF #2502); (iii) All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Long-Term Care Hospitals (NQF #2512) and (iv) Rehospitalization During the First 30 Days of Home Health (NQF #2380).[3][4][5][6]

These PAC readmission measures are based on the Hospital-Wide All-Cause Readmission Measure (HWR) (NQF #1789),[7] with some additions made for the SNF, IRF, and LTCH setting measures.[8] The planned readmission definition is based on the claim from the readmission having a code for a diagnosis or procedure that is considered planned; however, if a planned procedure is accompanied by a principal diagnosis in a specified list of acute diagnoses, the readmission is reclassified as unplanned. Readmissions to psychiatric hospitals or units are always classified as planned readmissions.

While the measure was initially developed with ICD-9-CM (International Classification of Diseases, Ninth Revision, Clinical Modification) procedure and diagnosis codes, it was transitioned using the ICD-9-CM to ICD-10-CM cross-walk. All analyses presented in this submission are based on both ICD-9-CM and ICD-10-CM codes.

Death in the 31-Day Post-Discharge Observation Window

A patient who is discharged to the community is not considered to have a successful discharge to community outcome for this measure if they die in the post-discharge window, which includes the day of discharge and the 31 days following day of discharge. Death in the post-discharge window is identified based on date of death from Medicare eligibility files.

Measure Time Window

The measure is calculated using two consecutive years of data to ensure adequate number of patient stays for risk adjustment modeling. All Medicare FFS HHA discharges during the two-year time window, except those that meet the exclusion criteria (see S.8. and S.9.), are included in the measure. For patients with multiple HH stays during the two-year time window, each stay is eligible for inclusion in the measure.

References

- 3- Skilled Nursing Facility 30-Day All-Cause Readmission Measure (SNFRM) (NQF #2510). <http://www.qualityforum.org/QPS/2510>
- 4- All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facilities (NQF #2502).

<http://www.qualityforum.org/QPS/2502>

5- All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Long Term Care Hospitals (NQF #2512).

<http://www.qualityforum.org/QPS/2512>

6- Rehospitalization During the First 30 Days of Home Health (NQF #2380). <http://www.qualityforum.org/QPS/2380>

7- Hospital-Wide All-Cause Readmission Measure (HWR) (CMS/Yale) (NQF #1789). www.qualityforum.org/QPS/1789

8 - Table 2-9. AHRQ CCS Single Level Procedure Codes and ICD-9 Procedure Codes Added to Yale's Planned Readmission Algorithm, for the Post-Acute Care Setting. In: Measure Specifications for Measures Adopted in the FY 2017 IRF QRP Final Rule.

<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/IRF-Quality-Reporting/Downloads/Measure-Specifications-for-FY17-IRF-QRP-Final-Rule.pdf>. Note: The ICD-9 codes listed in Table 2-9 were updated with ICD-10-CM codes for data starting October 1, 2015.

S.6. Denominator Statement *(Brief, narrative description of the target population being measured)*

The target population for the measure is the group of Medicare HH FFS beneficiaries who are discharged from an HHA during the measure time window and are not excluded based on the measure exclusion criteria (see S.8. and S.9.).

The measure denominator is the risk-adjusted expected number of discharges to community. This estimate includes risk adjustment for patient characteristics with the facility effect removed. The "expected" number of discharges to community is the predicted number of risk-adjusted discharges to community if the same patients were treated at the average facility. The hierarchical logistic regression model used to calculate the denominator is developed using all non-excluded facility stays in the national data.

S.7. Denominator Details *(All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

As previously stated, the measure does not have a simple form for the numerator and denominator. The measure denominator is the risk-adjusted expected number of discharges to community. See S.8. for details.

The target population includes all Medicare FFS beneficiaries who are discharged from a HHA during the measure time window and are not excluded based on the measure exclusion criteria. The target population for the analyses in the submission includes HHA discharges from January 1, 2015 through December 31, 2016 (i.e., CY 2015-2016).

S.8. Denominator Exclusions *(Brief narrative description of exclusions from the target population)*

Measure exclusion criteria are based on administrative data from Medicare claims and eligibility files. Exclusion criteria were selected to maintain clinical validity of the measure by excluding stays for which discharge to community would not be appropriate, to ensure data availability and completeness, to exclude stays with problematic claims data, and to maintain relevance to the HH Quality Reporting Program (e.g., excluding HHAs not included in the HHA QRP based on regional location). Stays ending in transfers to the same level of care (i.e., HHA-to-HHA discharge) are excluded, because the HHA episode of care had not ended. We also excluded certain discharge status codes on the HHA FFS claim that indicated that the patient was not appropriate for community discharge (e.g., discharges against medical advice).

Measure exclusion criteria are as follows:

- Age under 18 years;
- Discharges to a psychiatric hospital;
- Discharges against medical advice;
- Discharges to disaster alternative care site or a federal hospital;
- Discharges to court/law enforcement;
- Discharges to hospice or patient stays with a hospice benefit in the 31-day post-discharge window;
- Stays for patients without continuous Parts A and B FFS Medicare enrollment during the 12 months prior to the HHA

admission date and the 31 days after the HHA discharge;

- HHA stays preceded by a short-term acute care or psychiatric stay for non-surgical treatment of cancer;
- Stays ending in transfer to a HHA; and
- Stays with problematic claims data (e.g. anomalous records for stays that overlap wholly or in part, or are otherwise erroneous or contradictory).
- Medicare Part A benefits exhausted

S.9. Denominator Exclusion Details *(All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*

Exclusions for the DTC-PAC HHA measure are listed below, along with the rationale for each exclusion. The measure exclusion criteria are determined by processing Medicare claims and eligibility data to determine whether the individual exclusion criteria are met. All measure exclusion criteria are based on administrative data.

Exclusions for the discharge to community measure are listed below, along with the rationale for each exclusion.

1. Age under 18 years

Rationale:

- a. There is limited literature on discharge destination outcomes in this age group;
- b. Patients in this age group represent a different cohort, likely living with their parents, and may be expected to have higher discharge to community rates compared with the rest of the Medicare population; and
- c. Patients in this age group represent a small proportion of the post-acute Medicare FFS population.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

2. Discharges to psychiatric hospital

Rationale: Patients discharged to psychiatric hospital are excluded from the measure because community living at the time of discharge may be potentially inappropriate or unsafe for them due to their mental health or psychiatric condition. This exclusion is also intended to avoid the potential unintended consequence of decreased HHA access for patients discharged from psychiatric hospitals.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

3. Discharges against medical advice

Rationale: Patients who discharge themselves against medical advice are excluded because their care plan may not have been fully implemented, and the discharge destination may not reflect the facility's discharge recommendation. Additionally, patients discharged against medical advice may potentially be at higher risk of post-discharge admissions or death, depending on their medical condition, or due to potential non-adherence or non-compliance with care recommendations.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

4. Discharges to disaster alternative care sites or federal hospitals

Rationale: Patients discharged to disaster alternative care sites are excluded because these discharges are likely influenced by external emergency conditions, and may not represent discretionary discharges by the PAC provider. Discharges to federal hospitals are excluded because we will not have necessary inpatient claims for these patients.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

5. Discharges to court/law enforcement

Rationale: Patients who are discharged to court or law enforcement are likely ineligible for discharge to the community due to legal restrictions.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

6. Patients discharged to hospice and those with a hospice benefit in the post-discharge observation window

Rationale:

- a. Patients discharged to hospice care and those with a hospice benefit in the post-discharge observation window are terminally ill and have very different goals of care compared with non-hospice patients. For non-hospice patients, the primary goal of post-acute care is to return to baseline, independent living in the community; death is an undesirable outcome in the non-hospice population. For hospice patients, the goal is to provide them the opportunity to die comfortably, at home or in a facility.
- b. A large proportion of hospice patients die in the 31-day window following discharge from the post-acute setting.
- c. The hospice agency, not the post-acute care provider, makes the final decision of discharge to hospice-home or hospice-facility.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

7. Patients not continuously enrolled in Parts A and B FFS Medicare (or those enrolled in Part C Medicare Advantage) for the 12 months prior to the post-acute admission date, and at least 31 days after post-acute discharge date

Rationale: Patients not continuously enrolled in Parts A and B FFS Medicare for the 12 months prior to the PAC admission date are excluded because risk adjustment for certain comorbidities requires information on acute inpatient bills for one year prior to post-acute admission. Patients not continuously enrolled in Part A FFS Medicare for at least 31 days after post-acute discharge are excluded because admissions and death must be observable in the 31-day post-discharge period. Patients without Part A and B coverage or those who are enrolled in Part C Medicare Advantage plans will not have complete inpatient claims in the system.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

8. Patients whose prior short-term acute care or psychiatric stay was for non-surgical treatment of cancer

Rationale: Patients whose prior short-term acute care stay was for non-surgical treatment of cancer are excluded because they have a different trajectory for recovery after discharge, with a high mortality rate. Exclusion of these patients is consistent with the hospital-wide and post-acute readmission measures.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

9. Post-acute stays that end in transfer to the same level of care

Rationale: HHA stays that end in transfer to another HHA are excluded from the measure because the HHA episode has not ended. For a HHA episode that involves transfer to another HHA, only the final HHA provider is included in the measure.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

10. Post-acute stays with claims data that are problematic (e.g., anomalous records for stays that overlap wholly or in part, or are otherwise erroneous or contradictory)

Rationale: This measure requires accurate information from the post-acute stay and prior short-term acute care stay in the elements used for risk adjustment. No-pay post-acute stays involving exhaustion of Part A benefits are also excluded.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

11. Medicare Part A benefits exhausted

Rationale: Patients who have exhausted their Medicare Part A coverage during the PAC stay are excluded because the discharge destination decision may be related to exhaustion of benefits.

Data Source: Acumen Analysis of Medicare Claims File for HH, Medicare Enrollment Database, Common Medicare Environment (CME) database, CY 2015-2016.

S.10. Stratification Information (Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)

Not applicable

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

Statistical risk model

If other:

S.12. Type of score:

Rate/proportion

If other:

S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Higher score

S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)

The DTC-PAC HHA measure is risk adjusted. To develop the risk-adjustment model for this measure, we analyzed Medicare home health, inpatient claims, outpatient, and carrier claims. We applied the measure exclusion criteria to determine the sample included in the risk adjustment model. The measure is based on two consecutive fiscal years of data (CY 2015-2016).

The risk model employs the following sets of covariates:

- (1) Demographics
 - (a) Age and sex
 - (b) Enrollment status
 - (c) Activities of daily living scores
- (2) Care received during the prior proximal hospitalization (if relevant)
 - (a) Length of prior proximal hospitalization
 - (b) Clinical classification software (CCS) diagnosis and procedure categories during prior proximal hospitalization
- (3) Other care received within one year of the HH stay
 - (a) Number of prior acute discharges
 - (b) Number of outpatient emergency department visits
 - (c) Number of skilled nursing facility visits
 - (d) Number of long-term care hospital visits
 - (e) Number of inpatient dialysis sessions
 - (f) Hierarchical condition categories (HCC) comorbidities

We used a hierarchical logistic regression model to predict the probability of discharge to community. Patient characteristics related to discharge and a marker for the specific discharging HHA are included in the equation. The equation is hierarchical in that both individual patient characteristics are accounted for, as well as the clustering of patient characteristics by HHA. The statistical model estimates both the average predictive effect of the patient characteristics across all facilities, and the degree to which each facility has an effect on discharge to community that differs from that of the average facility. The facility effects are assumed to be randomly distributed around the average (according to a normal distribution).

When computing the HHA effect, hierarchical modeling accounts for the known predictors of discharge to community, on average, such as patient characteristics, the observed facility rate, and the number of HHA stays eligible for inclusion in the measure. The estimated HHA effect is determined mostly by the HHA's own data if the number of patient discharges is relatively large (as the estimate would be relatively precise) but is adjusted toward the average if the number of patient discharges is small (as that would yield a less precise estimate).

We used the following model:

Let Y_{ij} denote the outcome (equal to 1 if patient i is discharged to community, 0 otherwise) for a patient i at facility j ; Z_{ij} denotes a set of risk adjustment variables. We assume the outcome is related to the risk adjusters via a logit function with dispersion:

$$\begin{aligned}\text{logit}(\text{Prob}(Y_{ij}=1)) &= a_j + \beta^* Z_{ij} + e_{ij} \quad (1) \\ a_j &= \mu + \tau_j; \quad \tau_j \sim N(0, \tau^2)\end{aligned}$$

where $Z_{ij} = (Z_{1j}, Z_{2j}, \dots, Z_{kj})$ is a set of k patient-level risk adjustment variables; a_j represents the facility-specific intercept; μ is the adjusted average outcome across all facilities; τ^2 is the between-facility variance component; and $e \sim N(0, s^2)$ is the error term.

The hierarchical logistic regression model is estimated using SAS software (PROC GLIMMIX: SAS/STAT User's Guide, SAS Institute Inc.).

The estimated equation is used twice in the measure. The sum of the probabilities of discharge to community of all patients in the facility measure, including both the effects of patient characteristics and the facility, is the "predicted number" of discharges to community after adjusting for the facility's case mix. The same equation is used without the facility effect to compute the "expected number" of discharges to community for the same patients at the average facility.

The ratio of the predicted-to-expected number of discharges to community is a measure of the degree to which discharges to community are higher or lower than what would otherwise be expected. This standardized risk ratio is then multiplied by the mean discharge to community rate for all HHA stays for the measure, yielding the risk-standardized discharge to community rate for each HHA.

Please note that the estimation procedure is recalculated for each measurement period. Re-estimating the models for each measurement period allows the estimated effects of the patient characteristics to vary over time as patient case-mix and medical treatment patterns change.

Using a two-year reporting period, CMS intends to publicly report the performance of Medicare-certified home health agencies (with at least 20 home health stays) on the DTC-PAC HHA measure under three performance categories: "Better than Expected," "Same as Expected," and "Worse than Expected". Pursuing a categorical reporting method is consistent with the Hospital-Wide All-Cause Readmission Measure.

The following steps describe the calculation algorithm/measure logic for the DTC-PAC HHA measure:

Step 1: Identify patients meeting the criteria for the target population, after applying measure exclusions.

Step 2: Identify patients meeting the discharge to community criteria, i.e., discharge to community, no unplanned admissions on the day of home health discharge or in the 31 days following home health discharge, and no death on the day of home health discharge or in the 31 days following home health discharge.

Step 3: Identify presence or absence of risk adjustment variables for each patient.

Step 4: Calculate the predicted and expected number of discharges to community for each HHA using the hierarchical logistic regression model.

The predicted number of discharges to community for each HHA (i.e., numerator) is calculated as the sum of the predicted probability of discharge to community for each patient discharged from the HHA and included in the measure, including the HH-specific effect.

To calculate the predicted number of discharges to community, pred_j , for index HH stays at HHA $_j$, we used the following equation:

$$\text{pred}_j = \text{Slogit-1}(u + w_i + B \cdot Z_{ij}) \quad (2)$$

where the sum is over all stays in HHA $_j$, and w_i is the random intercept.

The expected number of discharges to community (i.e., denominator) is calculated as the sum of the predicted probability of discharges to community, but without the HH-specific effect included in the predictions. This produces the expected number of discharges at the average HHA.

To calculate the expected number exp_j , we used the following equation:

$$\text{exp}_j = \text{Slogit-1}(u + B \cdot Z_{ij}) \quad (3)$$

Step 5: Calculate the standardized risk ratio for each HHA, as the ratio of the predicted to expected number of discharges to community.

To calculate the HHA-wide standardized risk ratio, SRR_j , we used the following equation:

$$\text{SRR}_j = \text{pred}_j / \text{exp}_j \quad (4)$$

Step 6: Calculate the risk-standardized discharge to community rate for each HHA.

To aid interpretation, the HHA-wide standardized risk ratio, SRR_j , obtained from equation (4) is then multiplied by the overall national raw discharge to community rate for all HH stays, λ , to produce the HHA-wide risk-standardized discharge to community rate (RSR_j).

To calculate the risk-standardized discharge to community rate for each HHA, we used the following equation:

$$\text{RSR}_j = \text{SRR}_j \cdot \lambda \quad (5)$$

NOTE: It is important to clarify that the DTC-PAC HHA measure is specific to HHA providers only.

S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.

Not applicable

S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)

Specify calculation of response rates to be reported with performance measure results.

Not applicable

S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.18.

Claims, Enrollment Data, Other

S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)

IF instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.

The following are the specific files used for the DTC-PAC HHA measure and links to the documentation:

Medicare Inpatient claims (Standard Analytical Files) for hospital claims, including index HHA claims. Documentation for the Medicare claims data is provided online by the CMS contractor, Research Data Assistance Center (ResDAC), at the University of Minnesota. The following web page includes data dictionaries for the Standard analytical files:

o Home Health RIF: <http://www.resdac.org/cms-data/files/hha-rif>

- o Inpatient RIF: <http://www.resdac.org/cms-data/files/ip-rif>
- o Outpatient RIF: <http://www.resdac.org/cms-data/files/op-rif>
- Carrier (Physician Office) RIF: <http://www.resdac.org/cms-data/files/carrier-rif>

Medicare Enrollment Database:

- Information about the Enrollment Database may be found at: <https://aspe.hhs.gov/centers-medicare-medicaid-services>

AHRQ SURGICAL PROCEDURE CATEGORIES:

These were developed for the HWR measure and are available in SAS programs that are maintained and available upon request.

CMS-HIERARCHICAL CONDITION CATEGORY (HCC) MAPPINGS OF ICD-9 AND ICD-10 CODES:

The full set of CMS-HCC mappings is not currently available publicly. A subset of mappings is included in the software available at: <https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html>

S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

No data collection instrument provided

S.20. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Facility

S.21. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)

Post-Acute Care

If other:

S.22. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

2. Validity – See attached Measure Testing Submission Form

[DTC_NQF_Testing_Attachment_7.1_DTC_HH_2018-08-01_Final.docx](#)

2.1 For maintenance of endorsement

Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

2.2 For maintenance of endorsement

Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

2.3 For maintenance of endorsement

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1,2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims)

If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields) Update this field for maintenance of endorsement.

ALL data elements are in defined fields in a combination of electronic sources

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources. For maintenance of endorsement, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

Not applicable

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

Not applicable. This measure uses Medicare FFS claims from the home health, inpatient, outpatient, and physician office settings claims data, which are routinely collected for payment purposes. These data are electronically available from the Centers for Medicare & Medicaid Services (CMS) at no cost beyond that of data processing and can be used to specify, publicly report, and track the measure in a timely fashion. Since data are already collected as part of Medicare's payment process, this measure poses no additional data collection burden on providers, and because claims are used for payment, data are complete and subject to audit. In addition to Medicare claims, electronic Medicare enrollment and eligibility data are used.

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).

None

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)
Quality Improvement (Internal to the specific organization)	Public Reporting Home Health Quality Reporting Program https://www.medicare.gov/homehealthcompare/

4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

Name of program and sponsor:

This measure will be publicly reported as part of the CMS's HH QRP.

Purpose:

The HH QRP creates HH quality reporting requirements, as mandated by Section 1895(b)(3)(B)(v)(II) of the Social Security Act (SSA) requiring the Secretary to establish quality reporting requirements for HHAs. More information about the HH QRP can be found at <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits/index.html>. In addition to tracking quality of care, quality measure data are intended to help consumers make informed decisions when selecting healthcare providers. Quality measure data from the HH QRP finalized for public reporting will be publicly reported at <https://www.medicare.gov/homehealthcompare/>. HH quality measure data will also be available for download for providers, researchers, and other public at <https://data.medicare.gov/data/home-health-compare>.

Geographic area and number and percentage of accountable entities and patients included:

The HH QRP includes all HHAs paid under the HH Prospective Payment System. Measures are publicly reported for active providers in the reporting period; thus, the number of providers included in the measures can vary by reporting period. Further, the number of providers (and patients) included can vary across published measures because of differences in measure exclusion criteria and target populations. The DTC-PAC HHA measure results presented in this submission are based on 11,674 HHAs and 6,279,286 patient stays; these data represent active HHAs with 20 or more eligible stays.

Level of measurement and setting

The DTC-PAC HHA measure is reported at the home health agency-level for HH providers.

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

NA - rollout for public reporting is underway. QM will be reported on Home Health Compare beginning January 2019.

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data

aggregation and reporting.)

NA - rollout for public reporting is underway. QM will be reported Home Health Compare beginning January 2019.

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.

Confidential feedback reports on the DTC-PAC HHA measure were provided to all active HH providers under the HH QRP in January, 2018. Active providers received provider preview reports in October, 2018, prior to public reporting of the DTC-PAC HHA measure in January 2019. Providers had a 30-day preview period to check these provider preview reports and submit suppression requests if there was evidence of errors in their data. We maintain an active provider helpdesk to which providers can submit any questions about the measure, including questions about performance data and interpretation. We provide individual responses to each provider's questions. In addition, CMS conducts open door forums during which stakeholders can ask general questions about the measure. CMS also conducted training sessions for home health providers to address the implementation of this measure. [15]. Along with the publicly-reported data, we also include consumer-friendly language to help consumers interpret measure data. Finally, DTC-PAC HHA measure specifications were publicly posted along with the CY17 HH QRP final rule at <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Post-Acute-Care-Quality-Initiatives/Downloads/Proposed-Measure-Specifications-for-Measures-Proposed-in-CY-2017-HH-QRP-NPRM.pdf>. The measure specifications are detailed and precise, allowing stakeholders to replicate measure calculations if they would like.

[15] Centers for Medicare & Medicaid Services Home Health Quality Reporting Program Medicare Learning Network - Implementing the IMPACT Act: Status Update & Activities. February 23, 2017.

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

See 4a2.1.1.

Confidential feedback reports included the following data: provider number, DTC reporting period start date, DTC reporting period end date, observed number of discharges to community, number of eligible stays, observed discharge to community rate, risk-standardized discharge to community rate, national observed discharge to community rate, comparative performance category, number of HHAs that performed better than the national rate, number of HHAs that performed no different than the national rate, number of HHAs that performed worse than the national rate, and number of HHAs too small to report.

Provider preview reports included all data included in the confidential feedback reports, along with 95% confidence intervals of the risk-standardized DTC rate.

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

In addition to the processes described above, we solicited public comments on the DTC-PAC HHA measure via a 30-day public comment period during November-December 2015, and during the CY 2017 HH QRP rulemaking process.

4a2.2.2. Summarize the feedback obtained from those being measured.

We received extensive support for implementation of the DTC-PAC HHA measure in the HH QRP. Comments were received from a range of stakeholders including providers, provider associations, researchers, government agencies, information system vendors, advocacy groups, and individuals. The public comment summary report can be found at <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Post-Acute-Care-Quality-Initiatives/Downloads/Public-Comment-Summary-Report-for-the-Development-of-a-Discharge-to-Community-Measure.pdf>. The CY17 HH QRP final rule with public comments and responses can be found at <https://www.gpo.gov/fdsys/pkg/FR-2016-11-03/pdf/2016-26290.pdf>.

4a2.2.3. Summarize the feedback obtained from other users

The public comment summary report can be found at <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Post-Acute-Care-Quality-Initiatives/Downloads/Public-Comment-Summary-Report-for-the-Development-of-a-Discharge-to-Community-Measure.pdf>. The FY17 HH QRP final rule with public comments and responses can be found at <https://www.gpo.gov/fdsys/pkg/FR-2016-11-03/pdf/2016-26290.pdf>.

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

CMS and Abt Associates Inc. reviewed and considered all public comments before the measure was finalized in the CY17 HH QRP final rule.

Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

The DTC-PAC HHA measure was implemented on January 1, 2017 and will be publicly reported for the first time in January 2019 using CY 2015-2016 data. Thus, we do not have data to assess trends in performance over time. In the coming years as more data become available, we will examine score distribution and performance improvement over time.

4b2. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

No unexpected findings have been noted during implementation of this measure. No unintended impacts on patients have been detected to date.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

Not applicable.

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

No

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed

measure(s):

Are the measure specifications harmonized to the extent possible?

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

[Attachment Attachment: NQF_DTC-PAC_HHA_Appendix_2018-11-08-_FINAL.docx](#)

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): CMS - DCPAC

Co.2 Point of Contact: Tara, McMullen, McMullen, 410-786-8425-

Co.3 Measure Developer if different from Measure Steward: Abt Associates

Co.4 Point of Contact: Alrick, Edwards, Alrick_Edwards@abtassoc.com, 919-294-7735-

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

The TEP workgroup participated in three meetings, one in-person and two webinars. They provided input on measure conceptualization, definitions, specifications, exclusion criteria, unintended consequences, and other considerations related to development and implementation. The TEP included 17 members, of w one was a patient representative. The TEP summary report can be found at https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Post-Acute-Care-Quality-Initiatives/Downloads/Technical-Expert-Panel_-Discharge-to-Community-Quality-Measure.pdf

TEP members:

1. Susan Adams, PhD, BSN, RN; Vice President of Alliance Integration, Masonicare, Wallingford, CT
2. Greg Arling, PhD; Professor, School of Nursing and Research Associate for the Center for Aging and the Life Course, Purdue University, West Lafayette, IN
3. Dawn Butler, JD, MSW; Director, IU Geriatrics GRACE Training and Resource Center, Adjunct Faculty, Indiana School of Social Work, Indiana University, Indianapolis, IN
4. Michelle Camicia, MSN, CRRN, CCM; Director of Operations, Kaiser Foundation Rehabilitation Center, Nurse Consultant, Vallejo Kaiser Medical Center, Vallejo, CA
5. Susan Hinck, PhD, APRN, GCNS-BC; Director of the Quality Assurance Program, Haven Home Health and Therapy, Ozark, MO
6. Amol Karmarkar, PhD; Assistant Professor, Division of Rehabilitation Sciences, Fellow, Sealy Center on Aging, University of Texas Medical Branch, Galveston, TX

<p>7. Suzanne Kauserud, FACHE, MBA, PT; Vice President of Carolinas Rehabilitation, Surveyor, CARF, Charlotte, NC</p> <p>8. David Key, DPT; Senior Vice President of Operations for Case Management & Utilization Review, Select Medical Corporation, Mechanicsburg, PA</p> <p>9. Natalie Leland, PhD, OTR/L, BCG, FAOTA; Assistant Professor, University of Southern California, T.H. Chan Division of Occupational Science and Occupational Therapy, Davis School of Gerontology, Los Angeles, CA</p> <p>10. Cathy Lipton, MD, CMD; Senior Medical Director, Optum Complex Population Management, Adjunct Clinical Assistant Professor of Medicine, Division of Geriatric Medicine, Emory University School of Medicine, Department of Internal Medicine, Atlanta, GA</p> <p>11. Rachel Manchester, BSN, MBA, MHA; Regional Director of Home Health Quality, Providence Senior and Community Services, Seattle, WA</p> <p>12. Keyonna Mayo, BS, Patient representative, Mentor for Women Embracing Abilities Now (W.E.A.N.) and The Dana and Christopher Reeve Foundation, Baltimore, MD</p> <p>13. Subhadra Nori, MD; Regional Director of the Rehabilitation Medicine Department, Queens Health Network, Elmhurst, NY</p> <p>14. Terrence O'Malley, MD; Internist/Geriatrician, Massachusetts General Hospital, Boston, MA</p> <p>15. Lori Popejoy, PhD, APRN, GCNS-BC, FAAN; Associate Professor, Sinclair School of Nursing, University of Missouri, Columbia, MO</p> <p>16. John Votto, DO, FCCP; President & CEO of Hospital for Special Care, New Britain, CT</p> <p>17. Christy Whetsell, RN, BSN, MBA, ACM; Director of Case Management, Mid-Atlantic Regional and MountainView Rehabilitation Hospital, President, American Case Management Association, Morgantown, WV</p>
<p>Measure Developer/Steward Updates and Ongoing Maintenance</p> <p>Ad.2 Year the measure was first released:</p> <p>Ad.3 Month and Year of most recent revision:</p> <p>Ad.4 What is your frequency for review/update of this measure?</p> <p>Ad.5 When is the next scheduled review/update for this measure?</p>
<p>Ad.6 Copyright statement:</p> <p>Ad.7 Disclaimers:</p>
<p>Ad.8 Additional Information/Comments:</p>