Draft Methodology Report

Follow-Up After Psychiatric Hospitalization

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HSAG HEALTH SERVICES ADVISORY GROUP

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Table of Contents

List of Tables

Executive Summary

Background

The Inpatient Psychiatric Facility Quality Reporting (IPFQR) program, which is a pay-for-reporting program mandated by section 1886(s)(4) of the Social Security Act, requires the Centers for Medicare & Medicaid Services (CMS) to develop measures that improve the quality of inpatient psychiatric care and to communicate quality information to consumers to help them make informed decisions about their healthcare options. Health Services Advisory Group, Inc. (HSAG) was contracted by CMS to identify new measures that could be considered for use in the IPFQR program and to maintain measures after they are implemented in the program. As part of this contract, HSAG is proposing the *Follow-Up After Psychiatric Hospitalization* (FAPH) measure to assess the rate of follow-up for mental illness or substance use disorder (SUD). This measure is an expansion and enhancement of the *Follow-Up After Hospitalization for Mental Illness* (IPFQR FUH) measure currently in use in the IFPQR program and is proposed as a replacement for that measure.

Methods

The specifications from three existing quality measures served as the starting point for development to ensure alignment to the extent possible. The measures were the IPFQR FUH, *Follow-Up After Hospitalization for Mental Illness* (HEDIS® FUH), and *Follow-Up After Emergency Department Visit for Alcohol and Other Drug Abuse or Dependence* (HEDIS FUA). Measure development and testing were informed by an Expert Workgroup and a Technical Expert Panel (TEP) composed of patient representatives, psychiatrists, nurses, quality improvement specialists, and informaticists.

- Denominator development consisted of expanding the list of qualifying principal diagnoses and reevaluating the inclusion and exclusion criteria to ensure they are appropriately specified for the patient population and harmonized with other measures.
- Numerator development consisted of reevaluating the list of qualifying follow-up visit types and determining how best to operationalize the numerator calculation and follow-up period.
- The importance of the measure was evaluated by assessing the gap and variation in performance among IPFs nationally.
- Measure rate reliability was evaluated based on a signal-to-noise analysis.
- Measure rate validity was evaluated based on the correlation to two related measures.
- The TEP reviewed the final measure specifications and testing results to assess the validity of the measure as an indicator of differences in facility quality.

Key Findings

- Importance
    - Among Medicare fee-for-service (FFS) discharges from inpatient psychiatric facilities (IPFs) for mental illness or SUD between July 1, 2016 and June 30, 2017, 35.5% were followed by an outpatient visit within 7 days of discharge and 61.0% were followed by an outpatient visit within 30 days of discharge. The facility-level range of follow-up rates within 7 days of discharge was 0.7% – 94.7% and the range within 30 days of discharge was 12.2% – 95.7%.

  - Increasing rates of follow-up visits after IPF discharge benefits patients by ensuring continuity of treatment between the inpatient and outpatient settings and reducing the likelihood of readmission.
  - There is evidence to support that IPFs can influence rates of follow-up.
  - Patients and caregivers who reviewed the measure indicated that it assesses an aspect of care that is important to them.
- Scientific Acceptability
  - The measure specifications are precisely defined.
  - Measure performance rates had a high degree of reliability with a minimum sample of 40 discharges per facility based on signal-to-noise analysis, which indicates that the measure can differentiate performance between facilities.
  - Facility-level rates on the FAPH measure were correlated with related measure rates as expected based on their conceptual relationships.
- Usability
  - The measure is claims-based and is highly feasible to implement with minimal burden to facilities.
  - CMS can use the measure in pay-for-reporting programs to achieve the goal of high-quality and efficient healthcare.
- Alignment/Harmonization
  - The measure is aligned with existing endorsed measures where feasible and appropriate.

Conclusion

In summary, if the FAPH measure were to replace the IPFQR FUH measure in the IPFQR program, it would encourage improvements to discharge planning and continuity of care between the inpatient and outpatient settings for a broader psychiatric patient population. Improving the rates of follow-up care for a broader psychiatric patient population would contribute to reducing the likelihood of readmission. As specified, the measure addresses a clear performance gap in the IPF setting, can be reliably calculated from administrative claims, and is a valid measurement of facility performance. Both providers and patients agree that the measure addresses an important aspect of care.

1. Introduction

The Centers for Medicare & Medicaid Services (CMS) has contracted with Health Services Advisory Group, Inc. (HSAG) to develop, maintain, reevaluate, and support the implementation of quality process and outcome measures for the CMS Inpatient Psychiatric Facility Quality Reporting (IPFQR) Program. As part of this contract, HSAG is proposing a process measure to assess the rate of follow-up after a psychiatric hospitalization for mental illness or substance use disorder (SUD).

The proposed measure is an expansion of the existing IPFQR program *Follow-Up After Hospitalization for Mental Illness* (IPFQR FUH) measure that was adapted from the National Quality Forum (NQF) endorsed HEDIS® measure with the same name (NQF #0576). The expansion broadens the measure population to include patients with principal SUD diagnoses and additional principal mental illness diagnoses like dementia. The measure inclusion and exclusion criteria were reevaluated to ensure applicability to the expanded measure population and the numerator was re-specified to ensure all appropriate follow-up visits were captured by the measure and harmonized to the extent feasible with existing measures.

This report provides a description of the measure development process and the final measure specifications. The introductory section summarizes the literature that supports the measure focus and delineates the anticipated impact of measure implementation in the inpatient psychiatric facility (IPF) setting. Section 2 describes the methodology for the development and testing of the measure. Section 3 presents results of measure testing. The report concludes with the final assessment of the measure in Section 4. The proposed measure specifications are listed in Appendix A.

1.1 Background

The IPFQR Program initiated public reporting of the IPFQR FUH measure in December 2016 to promote care coordination with the outpatient setting. The measure assesses the percentage of IPF hospitalizations for treatment of select mental illness diagnoses that were followed by an outpatient mental health care encounter. Discharges with the select mental illness diagnoses in the measure represented 79% of all IPF discharges based on Medicare fee-for-service (FFS) data from October 1, 2015 through September 30, 2016.

During the 2017 comprehensive review of NQF #0576, the NQF Behavioral Health Standing Committee (BHSC) recommended expanding the measure population to include patients hospitalized for drug and alcohol disorders because those patients also require follow-up care post-discharge.[1] In 2018, CMS decided to explore expanding the IPFQR FUH measure population to include patients with principal SUD diagnoses to address the NQF BHSC recommendation and the CMS Meaningful Measures priority to promote treatment of SUDs[2]. The measure developer conducted a comprehensive reevaluation of the IPFQR FUH measure to ensure that the measure captures principal discharge diagnoses related to mental illness or SUD that would require follow-up after discharge from an IPF, that appropriate follow-up visits are captured by the measure numerator, and that measure specifications are harmonized to the extent feasible with existing measures. The expanded measure was renamed *Follow-Up After Psychiatric Hospitalization* (FAPH).

1.2 Measure Importance

Clinical practice guidelines emphasize the importance of continuity of care between settings for patients with mental illness and SUD.[3-7] For patients with SUD, the practice guideline from the American Psychiatric Association notes the importance of intensifying monitoring during periods when the patient is at a high risk of relapsing, including times of care transition.[7] Evidence supports that outpatient follow-up care and interventions after hospital discharges are associated with decreased risk of readmissions for patients with mental illness.[8,9] A

2017 study by Marcus et al. found that receipt of a follow-up visit within 30 days of hospital discharge lowered the readmission risk during days 31 to 120 for patients with schizophrenia (adjusted odds ratio [OR] 0.88, 95% confidence interval [CI] 0.81-0.96) and bipolar disorder (OR 0.91, 95% CI 0.85-0.98) [8]. Similarly, a 2018 study by Kurdyak et al. observed that among patients discharged with schizophrenia, psychiatric readmission rates on days 31-180 were 22% if the patient saw a primary care physician or psychiatrist within 30 days of discharge and 26% if the patient did not receive follow-up care.[9] To obtain the patient perspective, HSAG conducted semi-structured interviews with patients and caregivers of patients who were admitted to an IPF within the last five years (n=30). All individuals interviewed agreed that a follow-up communication or appointment as close to the discharge date as possible was extremely important to prevent relapse or another crisis.

IPFs can influence rates of follow-up care for patients hospitalized for mental illness or SUD. Interventions that have been shown effective in the literature include following up with letters or telephone calls, discussing barriers to attending the first outpatient post-discharge appointment with the patient, and serving as a contact for questions or concerns between discharge and the first outpatient appointment.[10,11] Three studies reported that with certain interventions facilities achieved follow-up rates of 88% or more, which is substantially higher than the national 30-day follow-up rate of approximately 54% observed in the current IPFQR FUH measure for Medicare FFS discharges between July 1, 2015 and June 30, 2016.[10-12] These findings are supported by feedback from the interviews conducted with 30 patients and caregivers of patients who were admitted to an IPF within the last five years, which indicated that there are several actions that IPFs could take to make it easier for patients to obtain follow-up after discharge. The suggestions include providing a list of providers that see patients with their insurance, setting up the first appointment at discharge, and contacting the patient after discharge to check on their recovery.

1.3 Measure Impact

Implementation of the FAPH measure has the potential to improve care related to the discharge and care transition for a large number of patients admitted to IPFs. The FAPH measure expands the number of discharges in the denominator by approximately 35% over the current IPFQR FUH measure. Performance on the FAPH measure indicates that follow-up rates for patients hospitalized with mental illness or SUD are less than optimal and that there is ample room for improvement. Medicare FFS data from July 1, 2016 to June 30, 2017 show the national 7-day follow-up rate was 35.5% and the national 30-day follow-up rate was 61.0%. The data demonstrate wide variation in follow-up rates across facilities, with a 16.9% absolute difference between the 25th and 75th percentiles for the 7-day rate and a 17.4% absolute difference between the 25th and 75th percentiles for the 30-day rate. If all facilities achieved the benchmark follow-up rates for their Medicare FFS patients calculated using the AHRQ Achievable Benchmarks of Care (ABC) method, 53,841 additional discharges would have a 7-day follow-up visit and 47,552 additional discharges would have a 30-day follow-up visit.[13]

The expanded measure will address the CMS Meaningful Measures areas of *Prevention, Treatment, and Management of Mental Health* and *Prevention and Treatment of Opioid and Substance Use Disorders*. HSAG anticipates increasing outpatient follow-up care will lead to improved outcomes for patients and potential cost savings to Medicare due to reduced utilization of high-cost care related to relapse and complications from unmanaged symptoms. Furthermore, the measure can promote shared accountability for patient outcomes and coordination across different care settings and providers.

2. Methods

The FAPH measure development and testing project is unique in that it is an expansion and enhancement of the IPFQR FUH measure. Therefore, the testing process had a strong focus on using data elements and features of existing measures to promote harmonization and alignment. The specifications from three existing quality measures served as the starting point for development. The key features that served as the basis of the enhanced measure are as follows:

1) *Follow-Up After Hospitalization for Mental Illness* (IPFQR FUH)[a]
    - Data sources
    - Definition of denominator criteria for discharges with principal mental illness
    - Definition of appropriate outpatient follow-up visits following discharges with mental illness
2) *Follow-Up After Hospitalization for Mental Illness* (HEDIS® FUH)[b]
    - Definition of denominator criteria for discharges with principal mental illness
    - Definition of appropriate outpatient follow-up visits following discharges with mental illness
3) *Follow-Up After Emergency Department Visit for Alcohol and Other Drug Abuse or Dependence* (HEDIS FUA)[c]
    - Definition of denominator criteria for discharges with principal SUD
    - Definition of appropriate outpatient follow-up visits following discharges with SUD

An Expert Workgroup was convened to provide subject matter expertise and feedback on each of the measure components to determine whether modifications should be made in the expanded measure. The Expert Workgroup consisted of five subject matter experts (SME), including: three clinical SMEs with experience treating patients for mental illness and SUD in inpatient and outpatient settings, one coding and billing SME, and one measure development SME. The measure development SME from the National Committee for Quality Assurance (NCQA), which is the measure steward of HEDIS FUH and HEDIS FUA, provided input focused on harmonization and alignment. Expert Workgroup recommendations and testing results were then reviewed with the 20-member Technical Expert Panel (TEP), which consisted of clinicians, measure development SMEs, and patients/caregivers.

The remainder of Section 2 describes the detailed processes for evaluating each measure component and the expanded measure as a whole including the data sources used to test and calculate the measure; the approach to defining the measure population and follow-up visits; reliability and validity testing; sensitivity analyses; and an evaluation of disparities. For the tables, all percentages are rounded to the first decimal place and abbreviations are defined in the text.

2.1 Data Sources

Like the existing IPFQR FUH measure, the FAPH measure uses Medicare FFS data to calculate the rate of outpatient follow-up after IPF discharge. The FAPH measure was developed and tested using Medicare FFS Part A and Part B claims data from July 1, 2016 to July 30, 2017. To align with other CMS claims-based measures, inpatient claims that met any of the following criteria were removed during processing prior to testing:

[a] IPFQR FUH refers to Version 2.0 of the measure specifications
[b] HEDIS FUH refers to the 2018 version of the measure specifications
[c] HEDIS FUA refers to the 2018 version of the measure specifications

- Bill Type Code = '110': Hospital Inpatient Part A Nonpayment/Zero Claims – facilities determine an inpatient admission is not medically necessary after discharge

The testing dataset included 407,919 discharges across 1,656 facilities. Approximately 68% of IPFs in this dataset were units within a hospital. The IPFs ranged in size from 4 to 771 inpatient beds.

If implemented, facilities will not be required to collect and submit data for the measure. CMS will calculate the measure results for facilities using the Part A and Part B claims data that are received by Medicare for payment purposes.

2.2 Denominator Development

2.2.1 Inclusion Criteria

HSAG evaluated each of the inclusion criteria in the IPFQR FUH measure for applicability to the expanded FAPH measure:

- Discharged with a principal diagnosis of select mental illnesses that would require follow-up care
- Discharged alive to ensure eligibility for follow-up care
- Enrolled in Medicare FFS Part A and Part B during the month of the discharge date and at least one month after the discharge date to ensure data are available to capture the index admission and follow-up visits
- Six years of age or older on the date of discharge because follow-up with a mental health professional may not always be recommended for younger children

HSAG determined that the criteria requiring that patients are discharged alive and enrolled in Medicare FFS during the measurement timeframe are appropriate for the FAPH measure without modification. The methods for re-evaluating the remaining inclusion criteria are described below.

2.2.1.1 Principal discharge diagnosis

To re-evaluate this criterion, the Expert Workgroup was convened and tasked with creating a comprehensive list of principal mental illness and SUD diagnoses that require outpatient follow-up care after an IPF stay. A list of all diagnosis codes in ICD-10-CM Chapter 5 "Mental, Behavioral and Neurodevelopmental disorders (F01-F99)" was provided to the Expert Workgroup for evaluation. Information on whether each code is in the denominator of the IPFQR FUH or HEDIS FUA measures was included for reference. The Expert Workgroup was asked to consider the following:

- Are there diagnosis codes on the list that do not always require follow-up care within 30 days of discharge from an inpatient setting?
- Are there diagnosis codes that are not on the list that always require follow-up care within 30 days of discharge from an inpatient setting?

Each of the five Expert Workgroup members provided feedback on the codes independently. In instances where there was not majority consensus, there was a subsequent discussion to arrive at consensus. The changes recommended by the Expert Workgroup were reviewed by the TEP.

2.2.1.2 Age

To re-evaluate the age requirements, HSAG considered the age requirements for the existing measures. The IPFQR FUH measure includes patients with mental illness age 6 years and older at discharge and HEDIS FUA includes patients with SUD 13 years and older at discharge. HSAG evaluated the count, minimum,

median, and maximum age for patients with mental illness or SUD in the Medicare FFS population. The Expert Workgroup reviewed the results and provided input on which minimum age threshold would be most appropriate for a measure that includes both patients with mental illness and patients with SUD. The recommendation was reviewed by the TEP.

2.2.2 Exclusion Criteria

HSAG evaluated each of the exclusion criteria in the IPFQR FUH measure for applicability to the expanded FAPH measure:

- Admitted or transferred to acute or non-acute care facilities within the 30-day follow-up period because admission or transfer to other institutions may prevent an outpatient follow-up visit from occurring
- Discharged or transferred to other institutions within the 30-day follow-up period because those patients may not have the opportunity for an outpatient follow-up visit
- Died during the 30-day follow-up period because patients who expire may not have the opportunity for an outpatient follow-up visit.
- Enrolled in hospice services during the performance period

HSAG identified and evaluated additional exclusion criteria from other related measures for applicability to the expanded FAPH measure:

- Left the facility against medical advice (AMA) (IPF Readmission measure)
- Unreliable demographic or death data (IPF Readmission measure)

The methods for evaluating each exclusion criterion are described below.

2.2.2.1 Admission or transfer to acute and non-acute inpatient facilities within the 30-day follow-up period

HSAG reviewed the exclusion codes in the IPFQR FUH to determine if the specifications could be further aligned with the HEDIS FUH and HEDIS FUA measures. Given that the HEDIS FUH measure is specified for all inpatient facilities and the HEDIS FUA measure is specified for emergency departments, the operationalization of the admission and transfer exclusion will differ slightly for use in the IPFQR FUH and FAPH measures, which are specified for the IPF setting. Discrepancies in codes were reviewed with the measure development team and the Expert Workgroup member from NCQA to determine where further harmonization would be appropriate.

2.2.2.2 Discharge or transfer to other healthcare institutions within the 30-day follow-up period

To determine whether the IPFQR FUH, HEDIS FUH, and HEDIS FUA measures could be harmonized further, HSAG and the Expert Workgroup member from NCQA considered whether use of inpatient discharge status codes to identify discharge or transfer to other healthcare institutions was aligned with the intent of HEDIS FUH and HEDIS FUA, which do not use inpatient discharge status codes.

2.2.2.3 Death during 30-day follow-up period

At the request of one of the TEP members, HSAG evaluated the frequency of patients who expire during the follow-up period. While the TEP member agreed that it would be appropriate to exclude patients who expire during the follow-up period for reasons unrelated to the care provided during the IPF stay, they were concerned that some deaths may have been preventable and excluding them could mask an important quality signal. HSAG considered whether cause of death would be discernable in the claims data to allow for discharges that resulted in preventable deaths to be parsed out from the exclusion and remain in the FAPH measure denominator.

2.2.2.4 Discharged AMA

HSAG evaluated the frequency of AMA discharges and asked the Expert Workgroup and TEP to consider whether it would be appropriate to exclude those discharges from the FAPH measure denominator. While these discharges are not excluded from the IPFQR FUH, HEDIS FUH, or HEDIS FUA measures, AMA discharges are excluded from the other claims-based measure in the IPFQR program, IPF Readmission, because the facility may not have had the opportunity to complete the discharge planning process.

2.2.2.5 Unreliable data

HSAG evaluated the frequency of discharges with unreliable data and asked the Expert Workgroup and TEP to consider whether it would be appropriate to exclude those discharges from the FAPH measure denominator. While these discharges are not excluded from the IPFQR FUH, HEDIS FUH, or HEDIS FUA measures, discharges with unreliable data are excluded from the IPF Readmission measure because there is a high likelihood that there is an error in the data. Unreliable data are defined as:

- Age greater than 115 years
- Missing gender
- Discharge status of "dead" but with subsequent admissions
- Death date prior to admission date
- Death date within the admission and discharge dates but the discharge status was not "dead"

2.3 Numerator Development

HSAG reviewed the numerator definitions of the IPFQR FUH, HEDIS FUH, and HEDIS FUA measures to create a single numerator definition that could be applied to the expanded denominator population in the FAPH measure. When there were differences in numerator definitions between the existing measures, HSAG evaluated the clinical validity for the expanded denominator population and recommended the approach that would give the most credit for follow-up visits. The methods for evaluating each of the numerator criteria are described.

2.3.1 Follow-Up Visit Types

The Expert Workgroup was convened and tasked with creating a comprehensive list of codes that indicate a patient received an appropriate level of follow-up care after an acute inpatient stay for either mental illness or SUD. All of the existing measures define appropriate follow-up as an outpatient visit, intensive outpatient encounter, or partial hospitalization. However, the specific visit type codes vary slightly by measure.

HSAG created a comprehensive list of CPT®, HCPCS, and Revenue Codes from the existing measures and additional codes from a manual review of the code systems for other potentially relevant follow-up visit types. Codes used in the existing measures were noted for the Expert Workgroup. The Expert Workgroup was asked to consider the following for each code:

1. Are there follow-up visits on the list that are not sufficient follow-up care after discharge from an inpatient encounter? If so, what is the rationale?
2. Are there follow-up visits NOT on the list that would indicate follow-up care after discharge from an inpatient encounter?

For patients with SUD, the Expert Workgroup was asked specifically whether medication assisted treatment (MAT) should count as follow-up on its own or whether it must always be accompanied by counseling and behavioral therapies that would be captured by other follow-up visit codes. Each of the five Expert Workgroup members provided independent feedback on the codes. Instances where there was not majority consensus, there was a subsequent discussion to arrive at consensus. The changes recommended by the Expert Workgroup were reviewed by the TEP.

2.3.2 Operationalization

The existing measures require each follow-up visit type code to be accompanied by additional data to confirm the clinical validity of the visit as treatment of mental illness or SUD. The existing IPFQR FUH and HEDIS FUH measures require that the follow-up visit be provided by a mental health practitioner to count toward the numerator. The HEDIS FUA measure does not specify the type of practitioner providing the follow-up care and instead requires that the follow-up visit have a primary diagnosis of SUD for patients discharged with principal diagnoses of SUD.

HSAG calculated the numerator using each method to evaluate the impact on follow-up rates and determine how many discharges met the numerator in either method. For the method requiring a primary diagnosis of mental illness or SUD, the list of diagnoses aligned exactly with the list of diagnoses used to define the denominator. Given that patients may have comorbid conditions that are also treated during follow-up visits and reimbursement policy may determine which diagnosis is billed as the primary diagnosis for the visit, HSAG considered whether the diagnosis method should allow for both primary and secondary diagnoses of mental illness or SUD or only allow for a primary diagnosis to align with the HEDIS FUA measure. The Expert Workgroup was convened and asked to consider which method would be most appropriate for the FAPH measure. The TEP reviewed the method recommended by the Expert Workgroup.

2.3.3 Follow-Up Period

All the existing measures were originally specified to count follow-up visits from the day of discharge (Day 0) through 7- and 30-days post-discharge. The HEDIS FUH measure was recently updated to start the follow-up period on the day after discharge (Day 1). The update was made at the request of stakeholders who were concerned that if the only follow-up a patient received within a 7- or 30-day period post-discharge was on the day of discharge, this would not meet the intent of the measure to encourage continuity of care in the outpatient setting. HSAG calculated the impact of this change on follow-up rates and asked the Expert Workgroup and TEP to consider which approach was most appropriate for the FAPH measure.

HSAG re-evaluated the duration of the follow-up period to ensure 7- and 30-days post-discharge were appropriate for the FAPH measure. The Expert Workgroup was presented with 7-, 14-, 30-, 60-, and 90-day follow-up rates and asked which should be applied to the measure. The TEP reviewed the Expert Workgroup recommendation.

2.4 Reliability and Validity Testing

2.4.1 Measure Rate Reliability

To examine the reliability of the measure rates, HSAG used the approach proposed by Adams[14] and Scholle et al.[15] to assess the precision of provider-level performance rates. The following is quoted from the tutorial published by Adams:

> Reliability is a key metric of the suitability of a measure for [provider] profiling because it describes how well one can confidently distinguish the performance of one physician from another. Conceptually, it is the ratio of signal to noise. The signal in this case is the proportion of the variability in measured performance that can be explained by real differences in performance. There are three main drivers of reliability: sample size, differences between physicians, and measurement error. At the physician level, sample size can be increased by increasing the number of patients in the physician's data as well as increasing the number of measures per patient.

For this measure, the signal-to-noise ratio was calculated as a function of the variance between IPFs (signal) and the variance within an IPF (noise). Reliability was estimated using a beta-binomial model. This approach has two basic assumptions:

1. Each measured entity has a true pass rate, p, which varies; and,
2. The measured entity's score is a binomial random variable conditional on the measured entity's true value, which comes from the beta distribution.

Reliability scores vary from 0.0 to 1.0. A score of 0.0 implies that all variation is attributed to measurement error (noise); whereas, a reliability of 1.0 implies that all variation is caused by a real difference in performance across IPFs. In a simulation, Adams showed that differences between physicians started to be seen at a reliability score of 0.7, and significant differences could be seen at a reliability score of 0.9. For our analysis, we set a minimum reliability score of 0.7 to indicate sufficient signal strength to discriminate performance between IPFs.

Using methodology described by Scholle et al., reliability estimates were computed separately, based on the minimum denominator size for IPFs within each denominator category. As Scholle described in the article, the reliability estimate at the minimum denominator for each category should reflect the worst-case reliability for the category. Based on these analyses, HSAG selected the smallest denominator that yielded a 0.7 reliability score as the minimum denominator for this measure.

2.4.2 Validity

2.4.2.1 Data element validity

To verify that Medicare FFS claims capture follow-up visits in the numerator, HSAG evaluated the frequencies of each visit type in the Medicare FFS test dataset. HSAG consulted with CMS payment specialists to determine whether Medicare covered the visit types that did not appear as paid claims in the dataset. Feedback from the CMS payment specialists was reviewed with the Expert Workgroup to confirm the validity of the Medicare FFS claims as the source for information on whether or not a follow-up visit occurred during the follow-up period.

2.4.2.2 Measure rate validity

To empirically test the validity of the measure rates, HSAG compared the facility-level performance on the FAPH measure to the facility-level performance on two conceptually related measures. A measure is considered to be conceptually related if it evaluates similar processes or outcomes. The measures with facility-level data available for testing and that were determined to be conceptually related to the FAPH measure were the *30-Day All-Cause Unplanned Readmission after Psychiatric Discharge from an IPF* (IPF Readmission) measure and the *Medication Continuation Following Inpatient Psychiatric Discharge* (Medication Continuation) measure.

Thirty-day readmission rates are expected to be negatively correlated with follow-up rates because both readmissions and lack of outpatient follow-up may indicate poor care coordination during the discharge process.

Medication continuation rates are expected to be positively correlated with follow-up rates because both continuation of medications and receipt of follow-up indicate good quality care coordination during the discharge process.

To assess whether each of these relationships held true and that the follow-up rates were valid, HSAG tested the measure distributions for normality at each unit of analysis, selected the appropriate statistical test for the distribution, and assessed the significance of the Spearman's rank correlation coefficient. Given that the FAPH measure is an expansion of existing measures that are considered valid, HSAG evaluated whether the FAPH correlations to the IPF Readmission and Medication Continuation measures were similar or stronger than the correlations to the existing IPFQR FUH measure.

In addition to empirical validity testing, HSAG asked the TEP to assess the face validity of the measure rates to obtain key stakeholder feedback. Specifically, the TEP members were asked whether they agree, disagree, or were

unable to rate the following statement:

> The performance scores resulting from the *Follow-Up After Psychiatric Hospitalization* measure, as specified with a follow-up period of Day 0 through Day 7 and Day 30 can be used to distinguish good from poor facility-level quality related to promoting care coordination and continuity of care.

2.5 Measure Rate

To evaluate whether there was a performance gap and variation in performance across facilities, HSAG applied all inclusion and exclusion criteria and used the final numerator to calculate facility-level measure rates. HSAG calculated the distribution of follow-up rates and the difference between IPFs in the 75th percentile and IPFs in the 25th percentile. To identify statistically significant differences in performance, HSAG calculated 95% confidence intervals (95% CI) around the measure rates for each IPF and compared the 95% CI to the overall follow-up rate across all IPFs. If the confidence interval overlapped with the national rate, facility performance was considered no different than the national rate. If the national rate was lower than the facility confidence interval, then the facility performance was considered statistically better than the national rate. If the national rate was higher than the facility confidence interval, then the facility performance was considered statistically worse than the national rate.

The potential impact of the FAPH measure was assessed by calculating the number of additional discharges that would result, nationally, if all IPFs achieved at least the benchmark rate for their Medicare FFS patients. The benchmark rate was estimated by a method based on the Achievable Benchmarks of Care (ABC) method.[13] To calculate the benchmarks for the 7-day and 30-day rates, the mean measure rate was computed for all top performing IPFs with at least 40 denominator members that, in total, account for at least 10% of the entire population of discharges from this group of IPFs. The achievable rate for each IPF in the total sample, regardless of denominator size, was set to the greater of either the benchmark rate or the actual facility rate. The additional number of discharges for each IPF that would receive follow-up was estimated by the difference between the actual facility rate and the achievable rate multiplied by the facility denominator. The number of additional discharges at the national level was taken as the sum of the additional discharges across IPFs.

2.6 Disparities Analyses

In order to assess whether disparities in measure performance exist between subpopulations of the measure cohort, HSAG used the method employed by the Agency for Healthcare Research and Quality (AHRQ) for the National Healthcare Quality and Disparities Report.[13] This method is also similar to the method used in the CMS 2018 National Impact Assessment report that assesses quality measures across CMS programs.[16] Two criteria were applied to determine meaningful differences between the performance for a reference group and another population group. A group's results may be interpreted as:

- Better than the reference group by at least a 10% relative difference and with a $p<0.05$
- Worse than the reference group by at least a 10% relative difference and with a $p<0.05$
- Same as the reference group with less than a 10% relative difference and with a p-value <0.05 or ≥ 0.05

Relative differences were calculated by subtracting the reference group from each demographic group and dividing it by the reference group. Statistical significance was determined using a chi-square test of association.

3. Results

This section provides the results of analyses that informed the final measure specifications, confirmed the scientific acceptability of the measure, and evaluated current performance including disparities between subpopulations.

3.1 Denominator

3.1.1 Inclusion Analysis

3.1.1.1 Principal discharge diagnosis

The Expert Workgroup and TEP recommended expanding the list of diagnoses included in the FAPH measure denominator. They agreed with including the full list of mental illness codes from the IPFQR FUH and HEDIS FUH measures and the full list of SUD diagnosis codes from the HEDIS FUA measure. The Expert Workgroup identified several other mental illness diagnoses, including codes that fell outside of ICD-10-CM Chapter 5, that would require follow-up post-discharge. Codes related to injury and self-harm were added to harmonize with updates planned for the 2019 version of the HEDIS FUH measure. The TEP agreed with the Expert Workgroup recommendations for the FAPH measure denominator diagnoses. Table 1 contains the diagnosis types that the Expert Workgroup and TEP recommended adding to the FAPH measure that are not included in the current versions of the IPFQR FUH, HEDIS FUH, or HEDIS FUA measures. The full list of principal discharge diagnosis codes included in the denominator are found in Appendix A. Final Measure Specifications, Table A.1.

Table 1. 2018 ICD-10-CM diagnosis codes unique to the FAPH measure

ICD-10 Heading/Code Block	Codes Added
F01 Vascular dementia	2
F02 Dementia in other diseases classified elsewhere	2
F03 Unspecified dementia	2
F04 Amnestic disorder due to known physiological condition	1
F05 Delirium due to known physiological condition	1
F06 Other mental disorders due to known physiological condition	10
F40 Phobic anxiety disorders	5
F41 Other anxiety disorders	5
F44 Dissociative and conversion disorders	9
F45 Somatoform disorders	10
F48 Other nonpsychotic mental disorders	2
F50 Eating disorders	8
F95 Tic disorder	5
G30 Alzheimer's disease	4
G31 Other degenerative diseases of nervous system, not elsewhere classified	4
T14 Injury of unspecified body region	3
T36-T50 Poisoning by, adverse effect of and underdosing of drugs, medicaments and biological substances	510
T51-T65 Toxic effects of substances chiefly nonmedicinal as to source	402
T66-T78 Other and unspecified effects of external causes	24
Total diagnosis codes added	**1,009**

3.1.1.2 Age

The Expert Workgroup and TEP supported the use of six years and older for the FAPH measure. They noted that while there are few patients under age 18 in the Medicare FFS population, it would be beneficial to harmonize with existing measures. They also acknowledged that there are likely few patients with principal SUD diagnoses under age 13 in general but that there was no harm in setting a lower age threshold for the FAPH measure since it includes other mental illnesses that could occur at younger ages. Table 2 shows the age ranges for the Medicare FFS population discharged from IPFs between July 1, 2016 and June 30, 2017.

Table 2. Range of ages among Medicare FFS discharges with mental illness or SUD

Principal Diagnosis	Discharges	Minimum Age	Median Age	Maximum Age
Mental Illness	374,139	13	57	107
SUD	25,856	18	53	92

3.1.2 Exclusion Analysis

3.1.2.1 Admission or transfer to acute and non-acute inpatient facilities within the 30-day follow-up period

After review of the specifications for the admission and transfer exclusion in the HEDIS FUH and HEDIS FUA measures, HSAG simplified the measure exclusion by aligning with the HEDIS Inpatient Stay Value Set used in both the HEDIS FUH and HEDIS FUA measures to identify acute and non-acute inpatient stays. A discharge will be excluded from the FAPH measure if it is followed by an admission or transfer with one of the codes in the value set (Table A.5). While each of the HEDIS measures has a slightly different algorithm for determining which discharges are excluded based on the presence of an admission or transfer, the FAPH specification aligns with the intent of the measures to exclude discharges if an admission or transfer would preclude a follow-up visit from taking place. Note that admissions or transfers to another IPF will be evaluated independently of the preceding excluded discharge and will be included in the denominator if they meet the other denominator inclusion and exclusion criteria.

3.1.2.2 Discharge or transfer to other healthcare institutions within the 30-day follow-up period

The exclusion identifying discharge to or transfer to other healthcare institutions by using inpatient discharge status codes in the IPFQR FUH measure was removed from the FAPH measure to better align with the intent of the HEDIS FUH and HEDIS FUA measures. These measures exclude only admissions or transfers that had a claim indicating that the admission or transfer actually occurred. If the patient was not actually discharged to or transferred to other healthcare institutions, they should have had the opportunity to obtain outpatient follow-up care after discharge from the hospital and should not be excluded from the denominator. If the patient was discharged or transferred to other healthcare institutions, they would be excluded from the denominator if they meet the specifications for the exclusion criterion—*Admitted or transferred to acute and non-acute inpatient facilities*.

This change would mean that patients with discharge status code 21 (Discharge or transfer to court/law enforcement) would no longer be excluded from the denominator. Given that discharge status code 21 is not used frequently, the change would have minimal impact on measure rates, with 90% of IPFs having an absolute change to their 30-day follow-up rates of 0.3% or less. The TEP discussed whether these patients should be excluded from the denominator because Medicare would not cover their care while in custody. The TEP ultimately agreed that concerns about the reliability of the use of discharge status code 21 and the minimal impact on measure rates using existing data did not justify the exclusion for patients discharged or transferred to court/law enforcement.

3.1.2.3 Death during 30-day follow-up period

Given that the cause of death cannot be discerned in the claims data, it is not be possible to parse out deaths that could have been prevented by the inpatient facility from those that could not have been prevented by the inpatient facility for the purposes of the measure exclusion. Therefore, the Expert Workgroup and TEP agreed that it is appropriate to continue to exclude all discharges that resulted in death during the 30-day follow-up period to ensure that facilities are not held accountable for follow-up visits that could not occur because the patient expired. Approximately 1% of discharges have a patient death during the follow-up period.

3.1.2.4 Discharged AMA

The Expert Workgroup and TEP agreed with the exclusion of AMA discharges from the FAPH measure denominator. If a patient leaves AMA and the facility is not able to complete the discharge planning process, including a review of follow-up treatment plans, it would not be fair to hold the facility accountable for the follow-up visit. AMA discharges are rare, representing approximately 1.4% of all eligible discharges in the FAPH measure.

3.1.2.5 Unreliable data

The Expert Workgroup and TEP agreed with the exclusion of discharges that have unreliable data from the FAPH measure denominator. Discharges with unreliable data are rare, with only five discharges out of all eligible discharges in the FAPH measure test dataset.

3.1.3 Final Denominator

There were 372,999 eligible IPF discharges that met the inclusion criteria. Table 3 shows the count and percent of discharges that met each exclusion criterion. Note that discharges may meet multiple exclusion criteria. After applying all exclusions, the final denominator consisted of 237,725 IPF discharges. The final FAPH denominator represents 63.7% of IPF discharges during the performance period compared to 46.4% for the existing IPFQR FUH measure.

Table 3. Denominator Discharges

Exclusion	Count	% Eligible Discharges
Total Number of Eligible IPF Discharges After Inclusion Criteria Were Applied	372,999	100.0%
Exclusions		
Utilized hospice services during the performance period	17,809	4.8%
Admitted or transferred to acute or non-acute inpatient facility within the 30-day follow-up period	127,093	34.1%
Died during the 30-day follow-up period	2,894	0.8%
Discharged AMA	5,080	1.4%
Had unreliable data	5	0.0%
Total Number of IPF Discharges in Denominator	**237,725**	**63.7%**

3.2 Numerator

3.2.1. Follow-Up Visit Types

The Expert Workgroup and TEP agreed with including most of the follow-up types from the IPFQR FUH, HEDIS FUH, and HEDIS FUA measures in the numerator for the FAPH measure. They also agreed that for patients with SUD, a claim for MAT alone during the follow-up period is not sufficient to meet the definition of an outpatient follow-up visit because those medications should always be administered in conjunction with another type of treatment to monitor use and symptoms. Therefore, to align with the approach for the HEDIS FUA measure, the follow-up code that will count toward the numerator is the code for the mental health or SUD visit and not the code for MAT.

There were three types of follow-up visits that appeared in at least one of the existing measures that the Expert Workgroup and TEP recommended removing (Table 4). The first is a code for educational services rendered in a group setting that is not used for the treatment of mental illness or SUD. The second is a set of codes for observation stays because they do not represent planned follow-up care after discharge from an inpatient setting. The third is a code for activity/play therapy because while this type of treatment can be a valuable part of a broader treatment plan, activity/play therapy alone would not be sufficient follow-up after discharge from an inpatient setting for mental illness or SUD.

Table 4. Visit types removed from list of valid follow-up visit types in the FAPH measure numerator

Visit Type	Code
Educational services rendered to patient in group setting	CPT 99078
Observation stay	CPT 99217-99220, 99224-99226
Activity/Play Therapy	HCPCS G0176 UB Revenue 0903, 0904

The Expert Workgroup identified several types of follow-up visits that are not in any of the existing measures that would be considered appropriate follow-up after discharge from an inpatient setting for mental illness or SUD (Table 5). The TEP agreed with the Expert Workgroup recommendations to expand the types of follow-up that count toward the numerator. The full list of follow-up visit type codes included in the numerator are found in Appendix A. Final Measure Specifications, Table A.1.

Table 5. Visit types added to list of valid follow-up visit types in the FAPH measure numerator

Visit Type	Code
Health and behavior assessment/intervention	CPT 96152-96154
Domiciliary, rest home, or custodial care services	CPT 99334-99337
Case management services	CPT 99366
Preventive medicine services	CPT 99391, 99392
Care management services	CPT 99487, 99490;
	HCPCS G0511-G0512 (new to HCPCS in 2018), S0220, S0221
Psychiatric collaborative care management	CPT 99492-99493 (new to CPT in 2018)
Behavioral and mental health services	HCPCS G0469, G0470, H0046, T1040, T1041
Training and education	HCPCS H0034
Substance use services	HCPCS H0012-H0014, H0050, S9475, T1007
Office or other outpatient services	HCPCS G0466, G0467

3.2.2 Operationalization

In analyses using draft specifications before the measure was finalized, HSAG found that the IPFQR FUH and HEDIS FUH approach requiring the follow-up visit to be with a specific provider type resulted in 104,028 discharges meeting the 30-day numerator criteria whereas the HEDIS FUA approach requiring the follow-up visit to be accompanied by a primary mental illness or SUD diagnosis resulted in 111,504 discharges meeting the 30-day numerator criteria. Among the 10,880 discharges that did not meet the provider-type criteria but that had an appropriate follow-up visit with a primary diagnosis of mental illness or SUD, the most frequent provider types were family or general practice physicians, internal medicine physicians, nurse practitioners, and physician assistants. The Expert Workgroup and TEP agreed that these provider types should be credited by the measure for treating mental illness and SUD. The TEP confirmed that this is aligned with integrated care models that aim to treat the whole patient. They noted that in areas where there are shortages of mental health or SUD providers, other types of providers are often the only choice for follow-up treatment.

To evaluate the diagnosis requirement for the FAPH measure, HSAG calculated the impact of allowing mental illness or SUD diagnoses in any position on the follow-up visit claim to count toward the numerator rather than requiring it to be in the primary position. This approach increases the number of discharges meeting the 30-day numerator criteria from 111,504 discharges to a total of 126,584 discharges. The Expert Workgroup agreed with specifying the FAPH measure numerator to count appropriate follow-up visits with a mental illness or SUD diagnosis in any position on the claim. Even though this approach is not harmonized with the HEDIS FUA measure, it accommodates the variation in billing requirements regarding coding sequencing and gives more credit for follow-up visits.

3.2.3 Follow-Up Period

Aligning with the HEDIS FUH measure and starting the follow-up period on the day after discharge (Day 1) instead of the day of discharge (Day 0) reduces the national 7-day FAPH rate from 35.5% to 33.5% and the national 30-day FAPH rate from 61.0% to 60.0%. The Expert Workgroup noted that a follow-up visit on the day of discharge from the IPF without another visit during the follow-up period would not reflect adequate continuation of care in the outpatient setting. However, members of the TEP expressed concern about removing same-day follow-up visits from the numerator because same-day visits can be important in making connections to the outpatient setting and indicate that the IPF coordinated care for the patient. While IPFs would receive credit for subsequent follow-up visits on Days 1 to 30 if the follow-up visit on Day 0 was effective at making connections to the outpatient setting, the TEP indicated that the risk of inadvertently creating a disincentive for same day follow-up visits outweighed the risks of including them in the numerator and not aligning with the HEDIS FUH measure. The decision was made to start the follow-up period on Day 0.

To confirm the duration of the follow-up period, the Expert Workgroup reviewed the FAPH measure rates at different post-discharge intervals (Table 6). They agreed that 7-days and 30-days were the most appropriate follow-up periods. They noted that seven days is important because patients are sometimes prescribed seven days of medications at discharge to provide continuity until they are seen by an outpatient provider. They suggested that durations longer than 30 days would not be appropriate because patients should receive follow-up care soon after leaving the inpatient setting and follow-up beyond 30 days may not be attributable to inpatient care. This approach aligns with the IPFQR FUH, HEDIS FUH, and HEDIS FUA measures.

Table 6. Follow-up rates post-discharge

Days Post-Discharge	Follow-up rate
7	35.5%
14	48.5%
30	61.0%
60	69.5%
90	73.5%

3.3 Reliability and Validity

3.3.1 Measure Rate Reliability

Reliability was calculated using Beta-Binomial reliability. The measure had acceptable reliability (0.70) for both the 7-day and the 30-day rate with a minimum denominator size of 40 discharges. These analyses indicate that the measure can reliably distinguish differences in performance between IPFs with adequate denominator size. The FAPH measure will be specified for IPFs with 40 or more discharges during the performance period.

3.3.2 Validity

3.3.2.1 Data Element Validity

HSAG identified 58 codes among the 207 codes in the numerator that did not have any paid claims in the test dataset. CMS payment specialists confirmed that if a patient with Medicare FFS has a follow-up visit, the code should always appear in the Medicare claims regardless of whether Medicare covers that service because providers are required to submit all services rendered. The Expert Workgroup agreed that the numerator should count all codes that appear in the Medicare FFS claims regardless of whether they were eventually paid by Medicare. This approach is aligned with the intent of the measure to give credit for follow-up visits that occur and mitigates the influence of Medicare coverage policies on measure rates in this population. This confirms the Medicare FFS claims data as a valid source of information to assess follow-up visits for this patient population.

3.3.2.2 Measure Rate Validity

The FAPH measure is weakly negatively correlated with the IPF Readmission measure, as expected (Table 7). Low readmission rates and high follow-up rates both indicate quality of care. This relationship has a similar magnitude to that observed between the IPF Readmission measure and the IPFQR FUH measure.

Table 7. Correlation with the conceptually related IPF Readmission measure

Measure	7-day rate	30-day rate
FAPH and IPF Readmission	-0.11	-0.18
IPFQR FUH and IPF Readmission	-0.09	-0.14

The 7-day FAPH measure rate is weakly positively correlated with the Medication Continuation measure and the 30-day FAPH measure rate is moderately positively correlated with the Medication Continuation, as expected (Table 8). High medication continuation rates and high follow-up rates both indicate quality of care. This relationship has a similar magnitude to that observed between the Medication Continuation measure and the IPFQR FUH measure.

Table 8. Correlation with the conceptually related Medication Continuation measure

Measure	7-day rate	30-day rate
FAPH and Medication Continuation	0.32	0.42
IPFQR FUH and Medication Continuation	0.31	0.44

The TEP members voted on their agreement with the face validity statement which included the follow-up visits starting on the day of discharge.

> "The performance scores resulting from the *Follow-Up After Psychiatric Hospitalization* measure, as specified with a follow-up period of Day 0 through Day 7 and Day 30 can be used to distinguish good from poor facility-level quality related to promoting care coordination and continuity of care."

Thirteen voting members attended the meeting. Thirteen members, 100%, voted in agreement with face validity.

3.4 Measure Rate

The distribution of facility-level FAPH 7-day and 30-day follow-up rates among IPFs with at least 40 discharges between July 1, 2016 and June 30, 2017 is shown in Table 9. The median 7-day rate is 34.5% and the absolute difference between the 25th and 75th percentiles is 16.9%. The median 30-day rate is 61.1% and the absolute difference between the 25th and 75th percentiles is 17.4%.

Table 10 shows the count and percent of IPFs that perform statistically better, worse, or no different than the national 7- and 30-day follow-up rates. Approximately 20% of IPFs perform better than the national 7-day rate and approximately 24% of IPFs perform better than the national 30-day rate. Approximately 26% of IPFs perform worse than the national 7-day rate and approximately 21% perform worse than the national 30-day rate.

If all IPFs achieved at least the benchmark 7-day follow-up rate of 58.2%, 53,841 additional discharges would be followed up by a qualifying outpatient visit. If all IPFs achieved a benchmark 30-day follow-up rate of at least 81.1%, 47,552 additional discharges would be followed up by a qualifying outpatient visit.

The wide variation in performance across facilities and large numbers of discharges that would be impacted if facilities met the benchmark 7- and 30-day follow-up rates indicates that there is ample opportunity for improvement on the FAPH measure.

Table 9. Distribution of facility performance among IPFs with at least 40 discharges during performance period

Rate	# IPFs	Mean	SD	Min	10th Pctl	Lower Quartile	Median	Upper Quartile	90th Pctl	Max
7-day	1.432	35.1	12.6	0.7	19.8	26.1	34.5	43.0	51.4	94.7
30-day	1,432	61.3	12.7	12.2	44.4	53.0	62.1	70.4	77.2	95.7

Table 10. IPF performance relative to the national 30-day rate

Performance Categorization	7-day rate		30-day rate	
	Count IPFs	Percent IPFs	Count IPFs	Percent IPFs
Total IPFs	1,645	100%	1,645	100%
Better than national rate	327	19.9%	402	24.4%
No different than national rate	686	41.7%	683	41.5%
Worse than national rate	419	25.5%	347	21.1%
Fewer than 40 discharges during the performance period	213	12.9%	213	12.9%

3.5 Disparities

The disparities analyses for demographic groups in the measure population are shown in Table 11. Groups are considered better or worse than the reference group if they have at least a 10% relative difference and a p-value less than 0.05. A disparity was identified between males and females for both the 7- and 30-day follow-up rates,

with males receiving follow-up care at lower rates than females. Disparities were identified between both Black and Hispanic patients and White patients for both the 7- and 30-day follow-up rates. Both groups receive follow-up care at lower rates than White patients. Disparities were identified for the 7- and 30-day follow-up rates between patients age 18-44 and patients over age 65, with the younger patients receiving follow-up care at lower rates. Note that there were too few patients under age 18 in the dataset to assess disparities for that age group. Finally, a disparity was identified for the 7-day rate between dually enrolled patients and patients who only have Medicare but there is no disparity for the 30-day rate. Further research is needed to determine the causes of disparities in follow-up rates and to identify strategies to reduce or eliminate those disparities to ensure that all patients are able to receive adequate follow-up care after discharge from an IPF.

Table 11. Disparities by demographic group for 7-day and 30-day follow-up

Group	Count	% (n= 237,725)	7-day rate				30-day rate			
			Rate	Relative Difference	p-value	Disparity	Rate	Relative Difference	p-value	Disparity
Gender										
Male	116,195	48.9%	31.7	Reference			55.0	Reference		
Female	121,530	51.1%	39.1	23.2%	<.0001	Yes	66.5	21.0%	<.0001	Yes
Race/Ethnicity										
White	178,472	75.1%	37.8	Reference			64.3	Reference		
Black	41,542	17.5%	26.2	-30.7%	<.0001	Yes	47.5	-26.2%	<.0001	Yes
Hispanic	8,221	3.5%	32.1	-15.2%	<.0001	Yes	55.7	-13.4%	<.0001	Yes
Other	9,490	4.0%	35.7	-5.7%	<.0001	No	60.9	-5.4%	<.0001	No
Age										
0-17	6	<0.01%	33.3	--	--	--	83.3	--	--	--
18-44	73,845	31.10%	33.1	-12.7%	<.0001	Yes	57.1	-11.8%	<.0001	Yes
45–64	93,494	39.30%	35.6	-5.9%	<.0001	No	61.1	-5.8%	<.0001	No
65+	70,380	29.60%	37.9	Reference			64.8	Reference		
Dual Enrolled										
Medicare only	99,977	42.1%	38.0	Reference			63.2	Reference		
Dual enrolled	137,748	57.9%	33.7	-11.2%	<.0001	Yes	59.3	-6.1%	<.0001	No

4. Summary

The FAPH measure is an expansion and enhancement of the existing IPFQR FUH measure and is being proposed as a replacement for that measure in the IPFQR program. The measure assesses whether Medicare FFS patients receive follow-up care in the outpatient setting after being discharged from an IPF with a principal diagnosis of mental illness or SUD.

As specified, the measure addresses a clear performance gap in the IPF setting. Measure rates for follow-up visits are low and there is wide variation in performance across facilities. Medicare FFS data from July 1, 2016 to June 30, 2017 show the national 7-day follow-up rate was 35.5% and the national 30-day follow-up rate was 61.0%. The median facility-level 7-day rate was 34.5% and the absolute difference between the 25th and 75th percentiles was 16.9%. The median facility-level 30-day rate was 62.1% and the absolute difference between the 25th and 75th percentiles was 17.4%. Approximately 20% of IPFs perform better than the national 7-day rate and approximately 24% of IPFs perform better than the national 30-day rate. Approximately 26% of IPFs perform worse than the national 7-day rate and approximately 21% perform worse than the national 30-day rate. These findings further demonstrate wide variation in performance across facilities.

In addition to the wide variation in performance among facilities, evidence from peer reviewed studies provide further support for the focus of the measure. The studies indicate that IPFs can influence rates of follow-up care for patients hospitalized for mental illness or SUD. Interventions that have been shown effective include following up with letters or telephone calls, discussing barriers to attending the first outpatient post-discharge appointment with the patient, and serving as a contact for questions or concerns between discharge and the first outpatient appointment.[10,11] Improving the rates of follow-up care for a broader psychiatric patient population contributes to reducing the likelihood of readmission.[8,9]

The FAPH measure meets the scientific standards for quality measures established by CMS and NQF. The measure specifications are aligned to the extent feasible with related measures used in other programs and settings. The measure addresses the CMS Meaningful Measures priority areas that promote the prevention and treatment of mental health and opioid and substance use disorders. Both providers and patients agree that the measure supports an important aspect of care and clinical practice guidelines emphasize the importance of continuity of care between settings for patients with mental illness and SUD.[3-7] Implementation of this measure in the IPFQR Program in lieu of the existing IPFQR FUH measure will provide more comprehensive information to providers and patients on IPF quality related to transitions to the outpatient setting.

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Appendix A

Follow-Up After Psychiatric Hospitalization Measure Specifications – Version 1.0

Description of Measure

The *Follow-Up After Psychiatric Hospitalization* (FAPH) measure assesses the percentage of inpatient discharges with principal diagnoses of select mental illness or substance use disorders (SUD) for which the patient received a follow-up visit for treatment of mental illness or SUD. Two rates are reported:

- The percentage of discharges for which the patient received follow-up within 7 days of discharge
- The percentage of discharges for which the patient received follow-up within 30 days of discharge

The performance period used to identify cases in the denominator is 12 months. Data from the performance period and 30 days after the performance period are used to identify follow-up visits in the numerator.

FAPH is a claims-based measure. There is no action required by facilities to collect and submit data for the measure. CMS will calculate the measure outcome using Part A and Part B claims data that are received by Medicare for payment purposes. CMS will calculate the measure by linking Medicare fee-for-service (FFS) claims submitted by IPFs and subsequent outpatient providers for Medicare FFS IPF discharges. This approach requires no additional data collection or reporting by IPFs. Completion of this measure does not affect an IPF's payment determination.

Numerator Statement

The numerator includes discharges from a psychiatric facility that are followed by an outpatient visit for treatment of mental illness or SUD within 7 and 30 days. Outpatient visits are defined as outpatient visits, intensive outpatient encounters, or partial hospitalization and are defined by the Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS), and Uniform Billing (UB) Revenue codes. The type of visits that qualify as outpatient follow-up are listed in Table A.1 and must be paired with one of the qualifying diagnoses used to define the denominator as listed in Table A.4. The qualifying diagnosis can be in any position on the claim.

Claims with codes for emergency room visits do not count toward the numerator. Emergency room visits are defined by UB revenue, CPT, Berenson-Eggers type of service (BETOS), and Place of Service codes in Table A.2.

Table A.1. Codes to identify outpatient visits, intensive outpatient encounters, and partial hospitalizations

CPT with or without GT telehealth modifier (Part A or B claims)		
90832, 90833, 90834, 90836, 90837, 90838, 90839, 90840, 90867, 90868, 90869, 96152, 96153, 96154, 98960, 98961, 98962, 98966, 98967, 98968, 98969, 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, 99366, 99383, 99384, 99385, 99386, 99387, 99391, 99392, 99393, 99394, 99395, 99396, 99397, 99401, 99402, 99403, 99404, 99408, 99409, 99411, 99412, 99441, 99442, 99443, 99444, 99487, 99490, 99492, 99493, 99495, 99496, 99510		
HCPCS with or without GT telehealth modifier (Part A or B claims)		
G0155, G0177, G0396, G0397, G0409, G0410, G0411, G0443, G0463, G0466, G0467, G0469, G0470, G0511, G0512, H0001, H0002, H0004, H0005, H0007, H0014, H0015, H0016, H0022, H0031, H0034, H0035, H0036, H0037, H0039, H0040, H0046, H0047, H0050, H2000, H2001, H2010, H2011, H2012, H2013, H2014, H2015, H2016, H2017, H2018, H2019, H2020, H2035, H2036, S0201, S0220, S0221, S9475, S9480, S9484, S9485, T1006, T1007, T1012, T1015, T1040, T1041		
CPT with or without GT telehealth modifier (Part B claims)		**Place of Service**
90791, 90792, 90845, 90847, 90849, 90853, 90863, 90870, 90875, 90876, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99381, 99382, 99383, 99384, 99385, 99386, 99387	with	02, 03, 05, 07, 09, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 24, 33, 49, 50, 52, 53, 71, 72
90791, 90792, 90832, 90833, 90834, 90836, 90837, 90838, 90839, 90840, 90845, 90847, 90849, 90853, 90875, 90876	with	02, 03, 05, 07, 09, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 33, 49, 50, 52, 53, 57, 71, 72
99221, 99222, 99223, 99231, 99232, 99233, 99238, 99239, 99251, 99252, 99253, 99254, 99255	with	02, 52, 53
CPT with or without GT telehealth modifier (Part B claims)		**Type of Service/Facility Type Classification (TYPSVC/FACTYP)**
90791, 90792, 90845, 90847, 90849, 90853, 90863, 90870, 90875, 90876, 99221, 99222, 99223, 99231, 99232, 99233, 99238, 99239, 99251, 99252, 99253, 99254, 99255, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99381, 99382, 99383, 99384, 99385, 99386, 99387	with	TYPSVC = 2 or 3 if FACTYP = 1-6 or 9 Or FACTYP = 7 or 8
UB Revenue (Part A claims)		
0510, 0513, 0515, 0516, 0517, 0519, 0520, 0521, 0522, 0523, 0526, 0527, 0528, 0529, 0900, 0901, 0902, 0905, 0906, 0907, 0911, 0912, 0913, 0914, 0915, 0916, 0917, 0919, 0944, 0945, 0982, 0983		

Table A.2. Codes to identify emergency room visits for exclusion

Code System	Code
UB Revenue	0450, 0451, 0452, 0456, 0459, 0981
CPT	99281, 99282, 99283, 99284, 99285
Place of Service	23
BETOS	M3

Denominator Statement

The denominator includes discharges paid under the IPF prospective payment system (PPS) during the performance period for Medicare fee-for-service (FFS) patients with a principal diagnosis of mental illness or SUD. Specifically, the measure includes IPF discharges (Table A.3) for which the patient was:

- Discharged with a principal diagnosis of mental illness or substance use disorder that would necessitate outpatient follow-up care.
  - Defined using the ICD-10-CM diagnosis codes listed in Table A.4 and claim type listed in Table A.3.
- Discharged alive to ensure they are eligible for follow-up care.
  - Defined as any Discharge Status Code other than '20' (expired).
- Enrolled in Medicare Parts A and B during the month of the discharge date and at least one month after the discharge date to ensure data are available to capture the index admission and follow-up visits.
  - Defined as having continuous (no gaps) Medicare Part A and Part B coverage with no Health Maintenance Organization (HMO). Therefore, the Entitlement Buy-in Indicator must be '3' or 'C' and the HMO indicator must be '0' for both the month of discharge and the month following the discharge month for the IPF stay to qualify as continuous FFS.
- Six years of age or older on the date of discharge because follow-up treatment for mental illness or SUD may not always be recommended for younger children.
  - Defined using date of birth and discharge date from the CMS denominator file.

Table A.3. Claim type codes to identify eligible IPF discharges

Criteria for eligible IPF discharges
Claim Type 60
CMS Certification Number (CCN) meets at least one of the following criteria: • Last 4 digits of the CMS Certification Number (CCN) is 4000–4499 (Psychiatric Hospital excluded from Inpatient Prospective Payment System) • 3rd digit of CCN is 'S' (distinct part Psychiatric Unit in an acute care hospital) • 3rd digit of CCN 'M' (Psychiatric Unit in a CAH)

Table A.4. 2018 ICD-10-CM codes to identify mental illness or substance use disorder for denominator and numerator

ICD-10-CM Description	ICD-10-CM Diagnosis codes
Dementia	F01.50, F01.51, F02.80, F02.81, F03.90, F03.91
Amnestic disorder	F04
Delirium	F05
Other mental disorders due to known physiological condition	F06.0, F06.1, F06.2, F06.30, F06.31, F06.32, F06.33, F06.34, F06.4, F06.8
Alcohol abuse or dependence	F10.10, F10.120, F10.121, F10.129, F10.14, F10.150, F10.151, F10.159, F10.180, F10.181, F10.182, F10.188, F10.19, F10.20, F10.220, F10.221, F10.229, F10.230, F10.231, F10.232, F10.239, F10.24, F10.250, F10.251, F10.259, F10.26, F10.27, F10.280, F10.281, F10.282, F10.288, F10.29
Opioid abuse or dependence	F11.10, F11.120, F11.121, F11.122, F11.129, F11.14, F11.150, F11.151, F11.159, F11.181, F11.182, F11.188, F11.19, F11.20, F11.220, F11.221, F11.222, F11.229, F11.23, F11.24, F11.250, F11.251, F11.259, F11.281, F11.282, F11.288, F11.29
Cannabis abuse or dependence	F12.10, F12.120, F12.121, F12.122, F12.129, F12.150, F12.151, F12.159, F12.180, F12.188, F12.19, F12.20, F12.220, F12.221, F12.222, F12.229, F12.250, F12.251, F12.259, F12.280, F12.288, F12.29
Sedative, hypnotic, or anxiolytic abuse or dependence	F13.10, F13.120, F13.121, F13.129, F13.14, F13.150, F13.151, F13.159, F13.180, F13.181, F13.182, F13.188, F13.19, F13.20, F13.220, F13.221, F13.229, F13.230, F13.231, F13.232, F13.239, F13.24, F13.250, F13.251, F13.259, F13.26, F13.27, F13.280, F13.281, F13.282, F13.288, F13.29
Cocaine abuse or dependence	F14.10, F14.120, F14.121, F14.122, F14.129, F14.14, F14.150, F14.151, F14.159, F14.180, F14.181, F14.182, F14.188, F14.19, F14.20, F14.220, F14.221, F14.222, F14.229, F14.23, F14.24, F14.250, F14.251, F14.259, F14.280, F14.281, F14.282, F14.288, F14.29
Other stimulant abuse or dependence	F15.10, F15.120, F15.121, F15.122, F15.129, F15.14, F15.150, F15.151, F15.159, F15.180, F15.181, F15.182, F15.188, F15.19, F15.20, F15.220, F15.221, F15.222, F15.229, F15.23, F15.24, F15.250, F15.251, F15.259, F15.280, F15.281, F15.282, F15.288, F15.29
Hallucinogen abuse or dependence	F16.10, F16.120, F16.121, F16.122, F16.129, F16.14, F16.150, F16.151, F16.159, F16.180, F16.183, F16.188, F16.19, F16.20, F16.220, F16.221, F16.229, F16.24, F16.250, F16.251, F16.259, F16.280, F16.283, F16.288, F16.29
Inhalant abuse or dependence	F18.10, F18.120, F18.121, F18.129, F18.14, F18.150, F18.151, F18.159, F18.17, F18.180, F18.188, F18.19, F18.20, F18.220, F18.221, F18.229, F18.24, F18.250, F18.251, F18.259, F18.27, F18.280, F18.288, F18.29
Other psychoactive substance abuse or dependence	F19.10, F19.120, F19.121, F19.122, F19.129, F19.14, F19.150, F19.151, F19.159, F19.16, F19.17, F19.180, F19.181, F19.182, F19.188, F19.19, F19.20, F19.220, F19.221, F19.222, F19.229, F19.230, F19.231, F19.232, F19.239, F19.24, F19.250, F19.251, F19.259, F19.26, F19.27, F19.280, F19.281, F19.282, F19.288, F19.29
Schizophrenia	F20.0, F20.1, F20.2, F20.3, F20.5, F20.81, F20.89, F20.9

ICD-10-CM Description	ICD-10-CM Diagnosis codes
Schizotypal disorder	F21
Delusional disorders	F22
Brief psychotic disorder	F23
Shared psychotic disorder	F24
Schizoaffective disorders	F25.0, F25.1, F25.8, F25.9
Other psychotic disorder not due to a substance or known physiological condition	F28
Unspecified psychosis not due to a substance or known physiological condition	F29
Manic episode	F30.10, F30.11, F30.12, F30.13, F30.2, F30.3, F30.4, F30.8, F30.9
Bipolar disorder	F31.0, F31.10, F31.11, F31.12, F31.13, F31.2, F31.30, F31.31, F31.32, F31.4, F31.5, F31.60, F31.61, F31.62, F31.63, F31.64, F31.70, F31.71, F31.72, F31.73, F31.74, F31.75, F31.76, F31.77, F31.78, F31.81, F31.89, F31.9
Major depressive disorder, single episode	F32.0, F32.1, F32.2, F32.3, F32.4, F32.5, F32.81, F32.89, F32.9
Major depressive disorder, recurrent	F33.0, F33.1, F33.2, F33.3, F33.40, F33.41, F33.42, F33.8, F33.9
Persistent mood (affective) disorders	F34.0, F34.1, F34.81, F34.89, F34.9
Unspecified mood (affective) disorder	F39
Phobic anxiety disorders	F40.00, F40.01, F40.02, F40.10, F40.11
Other anxiety disorders	F41.0, F41.1, F41.3, F41.8, F41.9
Obsessive-compulsive disorder	F42.2, F42.3, F42.4, F42.8, F42.9
Reaction to severe stress, and adjustment disorders	F43.0, F43.10, F43.11, F43.12, F43.20, F43.21, F43.22, F43.23, F43.24, F43.25, F43.29, F43.8, F43.9
Dissociative and conversion disorders	F44.0, F44.1, F44.2, F44.4, F44.5, F44.6, F44.7, F44.81, F44.89, F44.9
Somatoform disorders	F45.0, F45.1, F45.20, F45.21, F45.22, F45.29, F45.41, F45.42, F45.8, F45.9
Other nonpsychotic mental disorders	F48.1, F48.2
Eating disorders	F50.00, F50.01, F50.02, F50.2, F50.81, F50.82, F50.89, F50.9
Puerperal psychosis	F53
Specific personality disorders	F60.0, F60.1, F60.2, F60.3, F60.4, F60.5, F60.6, F60.7, F60.81, F60.89, F60.9
Impulse disorders	F63.0, F63.1, F63.2, F63.3, F63.81, F63.89, F63.9
Other disorders of adult personality and behavior	F68.10, F68.11, F68.12, F68.13, F68.8
Pervasive developmental disorders	F84.0, F84.2, F84.3, F84.5, F84.8, F84.9
Attention-deficit hyperactivity disorder	F90.0, F90.1, F90.2, F90.8, F90.9
Conduct disorders	F91.0, F91.1, F91.2, F91.3, F91.8, F91.9
Emotional disorders with onset specific to childhood	F93.0, F93.8, F93.9
Disorders of social functioning with onset specific to childhood and adolescence	F94.0, F94.1, F94.2, F94.8, F94.9
Tic disorders	F95.0, F95.1, F95.2, F95.8, F95.9

ICD-10-CM Description	ICD-10-CM Diagnosis codes
Alzheimer's and other dementias	G30.0, G30.1, G30.8, G30.9, G31.01, G31.09, G31.1, G31.83
Intentional Self-harm	T36.0X2A, T36.0X2D, T36.0X2S, T36.1X2A, T36.1X2D, T36.1X2S, T36.2X2A, T36.2X2D, T36.2X2S, T36.3X2A, T36.3X2D, T36.3X2S, T36.4X2A, T36.4X2D, T36.4X2S, T36.5X2A, T36.5X2D, T36.5X2S, T36.6X2A, T36.6X2D, T36.6X2S, T36.7X2A, T36.7X2D, T36.7X2S, T36.8X2A, T36.8X2D, T36.8X2S, T36.92XA, T36.92XD, T36.92XS, T37.0X2A, T37.0X2D, T37.0X2S, T37.1X2A, T37.1X2D, T37.1X2S, T37.2X2A, T37.2X2D, T37.2X2S, T37.3X2A, T37.3X2D, T37.3X2S, T37.4X2A, T37.4X2D, T37.4X2S, T37.5X2A, T37.5X2D, T37.5X2S, T37.8X2A, T37.8X2D, T37.8X2S, T37.92XA, T37.92XD, T37.92XS, T38.0X2A, T38.0X2D, T38.0X2S, T38.1X2A, T38.1X2D, T38.1X2S, T38.2X2A, T38.2X2D, T38.2X2S, T38.3X2A, T38.3X2D, T38.3X2S, T38.4X2A, T38.4X2D, T38.4X2S, T38.5X2A, T38.5X2D, T38.5X2S, T38.6X2A, T38.6X2D, T38.6X2S, T38.7X2A, T38.7X2D, T38.7X2S, T38.802A, T38.802D, T38.802S, T38.812A, T38.812D, T38.812S, T38.892A, T38.892D, T38.892S, T38.902A, T38.902D, T38.902S, T38.992A, T38.992D, T38.992S, T39.012A, T39.012D, T39.012S, T39.092A, T39.092D, T39.092S, T39.1X2A, T39.1X2D, T39.1X2S, T39.2X2A, T39.2X2D, T39.2X2S, T39.312A, T39.312D, T39.312S, T39.392A, T39.392D, T39.392S, T39.4X2A, T39.4X2D, T39.4X2S, T39.8X2A, T39.8X2D, T39.8X2S, T39.92XA, T39.92XD, T39.92XS, T40.0X2A, T40.0X2D, T40.0X2S, T40.1X2A, T40.1X2D, T40.1X2S, T40.2X2A, T40.2X2D, T40.2X2S, T40.3X2A, T40.3X2D, T40.3X2S, T40.4X2A, T40.4X2D, T40.4X2S, T40.5X2A, T40.5X2D, T40.5X2S, T40.602A, T40.602D, T40.602S, T40.692A, T40.692D, T40.692S, T40.7X2A, T40.7X2D, T40.7X2S, T40.8X2A, T40.8X2D, T40.8X2S, T40.902A, T40.902D, T40.902S, T40.992A, T40.992D, T40.992S, T41.0X2A, T41.0X2D, T41.0X2S, T41.1X2A, T41.1X2D, T41.1X2S, T41.202A, T41.202D, T41.202S, T41.292A, T41.292D, T41.292S, T41.3X2A, T41.3X2D, T41.3X2S, T41.42XA, T41.42XD, T41.42XS, T41.5X2A, T41.5X2D, T41.5X2S, T42.0X2A, T42.0X2D, T42.0X2S, T42.1X2A, T42.1X2D, T42.1X2S, T42.2X2A, T42.2X2D, T42.2X2S, T42.3X2A, T42.3X2D, T42.3X2S, T42.4X2A, T42.4X2D, T42.4X2S, T42.5X2A, T42.5X2D, T42.5X2S, T42.6X2A, T42.6X2D, T42.6X2S, T42.72XA, T42.72XD, T42.72XS, T42.8X2A, T42.8X2D, T42.8X2S, T43.012A, T43.012D, T43.012S, T43.022A, T43.022D, T43.022S, T43.1X2A, T43.1X2D, T43.1X2S, T43.202A, T43.202D, T43.202S, T43.212A, T43.212D, T43.212S, T43.222A, T43.222D, T43.222S, T43.292A, T43.292D, T43.292S, T43.3X2A, T43.3X2D, T43.3X2S, T43.4X2A, T43.4X2D, T43.4X2S, T43.502A, T43.502D, T43.502S, T43.592A, T43.592D, T43.592S, T43.602A, T43.602D, T43.602S, T43.612A, T43.612D, T43.612S, T43.622A, T43.622D, T43.622S, T43.632A, T43.632D, T43.632S, T43.692A, T43.692D, T43.692S, T43.8X2A, T43.8X2D, T43.8X2S, T43.92XA, T43.92XD, T43.92XS,

ICD-10-CM Description	ICD-10-CM Diagnosis codes
	T44.0X2A, T44.0X2D, T44.0X2S, T44.1X2A, T44.1X2D, T44.1X2S, T44.2X2A, T44.2X2D, T44.2X2S, T44.3X2A, T44.3X2D, T44.3X2S, T44.4X2A, T44.4X2D, T44.4X2S, T44.5X2A, T44.5X2D, T44.5X2S, T44.6X2A, T44.6X2D, T44.6X2S, T44.7X2A, T44.7X2D, T44.7X2S, T44.8X2A, T44.8X2D, T44.8X2S, T44.902A, T44.902D, T44.902S, T44.992A, T44.992D, T44.992S, T45.0X2A, T45.0X2D, T45.0X2S, T45.1X2A, T45.1X2D, T45.1X2S, T45.2X2A, T45.2X2D, T45.2X2S, T45.3X2A, T45.3X2D, T45.3X2S, T45.4X2A, T45.4X2D, T45.4X2S, T45.512A, T45.512D, T45.512S, T45.522A, T45.522D, T45.522S, T45.602A, T45.602D, T45.602S, T45.612A, T45.612D, T45.612S, T45.622A, T45.622D, T45.622S, T45.692A, T45.692D, T45.692S, T45.7X2A, T45.7X2D, T45.7X2S, T45.8X2A, T45.8X2D, T45.8X2S, T45.92XA, T45.92XD, T45.92XS, T46.0X2A, T46.0X2D, T46.0X2S, T46.1X2A, T46.1X2D, T46.1X2S, T46.2X2A, T46.2X2D, T46.2X2S, T46.3X2A, T46.3X2D, T46.3X2S, T46.4X2A, T46.4X2D, T46.4X2S, T46.5X2A, T46.5X2D, T46.5X2S, T46.6X2A, T46.6X2D, T46.6X2S, T46.7X2A, T46.7X2D, T46.7X2S, T46.8X2A, T46.8X2D, T46.8X2S, T46.902A, T46.902D, T46.902S, T46.992A, T46.992D, T46.992S, T47.0X2A, T47.0X2D, T47.0X2S, T47.1X2A, T47.1X2D, T47.1X2S, T47.2X2A, T47.2X2D, T47.2X2S, T47.3X2A, T47.3X2D, T47.3X2S, T47.4X2A, T47.4X2D, T47.4X2S, T47.5X2A, T47.5X2D, T47.5X2S, T47.6X2A, T47.6X2D, T47.6X2S, T47.7X2A, T47.7X2D, T47.7X2S, T47.8X2A, T47.8X2D, T47.8X2S, T47.92XA, T47.92XD, T47.92XS, T48.0X2A, T48.0X2D, T48.0X2S, T48.1X2A, T48.1X2D, T48.1X2S, T48.202A, T48.202D, T48.202S, T48.292A, T48.292D, T48.292S, T48.3X2A, T48.3X2D, T48.3X2S, T48.4X2A, T48.4X2D, T48.4X2S, T48.5X2A, T48.5X2D, T48.5X2S, T48.6X2A, T48.6X2D, T48.6X2S, T48.902A, T48.902D, T48.902S, T48.992A, T48.992D, T48.992S, T49.0X2A, T49.0X2D, T49.0X2S, T49.1X2A, T49.1X2D, T49.1X2S, T49.2X2A, T49.2X2D, T49.2X2S, T49.3X2A, T49.3X2D, T49.3X2S, T49.4X2A, T49.4X2D, T49.4X2S, T49.5X2A, T49.5X2D, T49.5X2S, T49.6X2A, T49.6X2D, T49.6X2S, T49.7X2A, T49.7X2D, T49.7X2S, T49.8X2A, T49.8X2D, T49.8X2S, T49.92XA, T49.92XD, T49.92XS, T50.0X2A, T50.0X2D, T50.0X2S, T50.1X2A, T50.1X2D, T50.1X2S, T50.2X2A, T50.2X2D, T50.2X2S, T50.3X2A, T50.3X2D, T50.3X2S, T50.4X2A, T50.4X2D, T50.4X2S, T50.5X2A, T50.5X2D, T50.5X2S, T50.6X2A, T50.6X2D, T50.6X2S, T50.7X2A, T50.7X2D, T50.7X2S, T50.8X2A, T50.8X2D, T50.8X2S, T50.902A, T50.902D, T50.902S, T50.992A, T50.992D, T50.992S, T50.A12A, T50.A12D, T50.A12S, T50.A22A, T50.A22D, T50.A22S, T50.A92A, T50.A92D, T50.A92S, T50.B12A, T50.B12D, T50.B12S, T50.B92A, T50.B92D, T50.B92S, T50.Z12A, T50.Z12D, T50.Z12S, T50.Z92A, T50.Z92D, T50.Z92S, T51.0X2A, T51.0X2D, T51.0X2S, T51.1X2A, T51.1X2D, T51.1X2S, T51.2X2A, T51.2X2D, T51.2X2S, T51.3X2A, T51.3X2D, T51.3X2S,

ICD-10-CM Description	ICD-10-CM Diagnosis codes
	T51.8X2A, T51.8X2D, T51.8X2S, T51.92XA, T51.92XD, T51.92XS, T52.0X2A, T52.0X2D, T52.0X2S, T52.1X2A, T52.1X2D, T52.1X2S, T52.2X2A, T52.2X2D, T52.2X2S, T52.3X2A, T52.3X2D, T52.3X2S, T52.4X2A, T52.4X2D, T52.4X2S, T52.8X2A, T52.8X2D, T52.8X2S, T52.92XA, T52.92XD, T52.92XS, T53.0X2A, T53.0X2D, T53.0X2S, T53.1X2A, T53.1X2D, T53.1X2S, T53.2X2A, T53.2X2D, T53.2X2S, T53.3X2A, T53.3X2D, T53.3X2S, T53.4X2A, T53.4X2D, T53.4X2S, T53.5X2A, T53.5X2D, T53.5X2S, T53.6X2A, T53.6X2D, T53.6X2S, T53.7X2A, T53.7X2D, T53.7X2S, T53.92XA, T53.92XD, T53.92XS, T54.0X2A, T54.0X2D, T54.0X2S, T54.1X2A, T54.1X2D, T54.1X2S, T54.2X2A, T54.2X2D, T54.2X2S, T54.3X2A, T54.3X2D, T54.3X2S, T54.92XA, T54.92XD, T54.92XS, T55.0X2A, T55.0X2D, T55.0X2S, T55.1X2A, T55.1X2D, T55.1X2S, T56.0X2A, T56.0X2D, T56.0X2S, T56.1X2A, T56.1X2D, T56.1X2S, T56.2X2A, T56.2X2D, T56.2X2S, T56.3X2A, T56.3X2D, T56.3X2S, T56.4X2A, T56.4X2D, T56.4X2S, T56.5X2A, T56.5X2D, T56.5X2S, T56.6X2A, T56.6X2D, T56.6X2S, T56.7X2A, T56.7X2D, T56.7X2S, T56.812A, T56.812D, T56.812S, T56.892A, T56.892D, T56.892S, T56.92XA, T56.92XD, T56.92XS, T57.0X2A, T57.0X2D, T57.0X2S, T57.1X2A, T57.1X2D, T57.1X2S, T57.2X2A, T57.2X2D, T57.2X2S, T57.3X2A, T57.3X2D, T57.3X2S, T57.8X2A, T57.8X2D, T57.8X2S, T57.92XA, T57.92XD, T57.92XS, T58.02XA, T58.02XD, T58.02XS, T58.12XA, T58.12XD, T58.12XS, T58.2X2A, T58.2X2D, T58.2X2S, T58.8X2A, T58.8X2D, T58.8X2S, T58.92XA, T58.92XD, T58.92XS, T59.0X2A, T59.0X2D, T59.0X2S, T59.1X2A, T59.1X2D, T59.1X2S, T59.2X2A, T59.2X2D, T59.2X2S, T59.3X2A, T59.3X2D, T59.3X2S, T59.4X2A, T59.4X2D, T59.4X2S, T59.5X2A, T59.5X2D, T59.5X2S, T59.6X2A, T59.6X2D, T59.6X2S, T59.7X2A, T59.7X2D, T59.7X2S, T59.812A, T59.812D, T59.812S, T59.892A, T59.892D, T59.892S, T59.92XA, T59.92XD, T59.92XS, T60.0X2A, T60.0X2D, T60.0X2S, T60.1X2A, T60.1X2D, T60.1X2S, T60.2X2A, T60.2X2D, T60.2X2S, T60.3X2A, T60.3X2D, T60.3X2S, T60.4X2A, T60.4X2D, T60.4X2S, T60.8X2A, T60.8X2D, T60.8X2S, T60.92XA, T60.92XD, T60.92XS, T61.02XA, T61.02XD, T61.02XS, T61.12XA, T61.12XD, T61.12XS, T61.772A, T61.772D, T61.772S, T61.782A, T61.782D, T61.782S, T61.8X2A, T61.8X2D, T61.8X2S, T61.92XA, T61.92XD, T61.92XS, T62.0X2A, T62.0X2D, T62.0X2S, T62.1X2A, T62.1X2D, T62.1X2S, T62.2X2A, T62.2X2D, T62.2X2S, T62.8X2A, T62.8X2D, T62.8X2S, T62.92XA, T62.92XD, T62.92XS, T63.002A, T63.002D, T63.002S, T63.012A, T63.012D, T63.012S, T63.022A, T63.022D, T63.022S, T63.032A, T63.032D, T63.032S, T63.042A, T63.042D, T63.042S, T63.062A, T63.062D, T63.062S, T63.072A, T63.072D, T63.072S, T63.082A, T63.082D, T63.082S, T63.092A, T63.092D, T63.092S, T63.112A, T63.112D, T63.112S, T63.122A, T63.122D, T63.122S, T63.192A, T63.192D, T63.192S,

ICD-10-CM Description	ICD-10-CM Diagnosis codes
	T63.2X2A, T63.2X2D, T63.2X2S, T63.302A, T63.302D, T63.302S, T63.312A, T63.312D, T63.312S, T63.322A, T63.322D, T63.322S, T63.332A, T63.332D, T63.332S, T63.392A, T63.392D, T63.392S, T63.412A, T63.412D, T63.412S, T63.422A, T63.422D, T63.422S, T63.432A, T63.432D, T63.432S, T63.442A, T63.442D, T63.442S, T63.452A, T63.452D, T63.452S, T63.462A, T63.462D, T63.462S, T63.482A, T63.482D, T63.482S, T63.512A, T63.512D, T63.512S, T63.592A, T63.592D, T63.592S, T63.612A, T63.612D, T63.612S, T63.622A, T63.622D, T63.622S, T63.632A, T63.632D, T63.632S, T63.692A, T63.692D, T63.692S, T63.712A, T63.712D, T63.712S, T63.792A, T63.792D, T63.792S, T63.812A, T63.812D, T63.812S, T63.822A, T63.822D, T63.822S, T63.832A, T63.832D, T63.832S, T63.892A, T63.892D, T63.892S, T63.92XA, T63.92XD, T63.92XS, T64.02XA, T64.02XD, T64.02XS, T64.82XA, T64.82XD, T64.82XS, T65.0X2A, T65.0X2D, T65.0X2S, T65.1X2A, T65.1X2D, T65.1X2S, T65.212A, T65.212D, T65.212S, T65.222A, T65.222D, T65.222S, T65.292A, T65.292D, T65.292S, T65.3X2A, T65.3X2D, T65.3X2S, T65.4X2A, T65.4X2D, T65.4X2S, T65.5X2A, T65.5X2D, T65.5X2S, T65.6X2A, T65.6X2D, T65.6X2S, T65.812A, T65.812D, T65.812S, T65.822A, T65.822D, T65.822S, T65.832A, T65.832D, T65.832S, T65.892A, T65.892D, T65.892S, T65.92XA, T65.92XD, T65.92XS, T71.112A, T71.112D, T71.112S, T71.122A, T71.122D, T71.122S, T71.132A, T71.132D, T71.132S, T71.152A, T71.152D, T71.152S, T71.162A, T71.162D, T71.162S, T71.192A, T71.192D, T71.192S, T71.222A, T71.222D, T71.222S, T71.232A, T71.232D, T71.232S
Suicide Attempt	T14.91XA, T14.91XD, T14.91XS

Medicare files are used to identify all exclusions. The denominator excludes IPF discharges for patients:

- Admitted or transferred to acute and non-acute inpatient facilities within the 30-day follow-up period because admission or transfer to other institutions may prevent an outpatient follow-up visit from taking place.
  - Defined using the specified codes listed in Table A.5.
- Who were discharged against medical advice (AMA) because the IPF may have limited opportunity to complete treatment and prepare for discharge
  - Defined using Discharge Status Code '07'
- Who died during the 30-day follow-up period because patients who expire may not have the opportunity for an outpatient follow-up visit.
  - Defined using the Medicare Enrollment File.
- Who use hospice services or elect to use a hospice benefit any time during the measurement year, regardless of when the services began because patients in hospice may require different follow-up services.
  - Defined using the hospice codes listed in Table A.6.

Table A.5. Codes to identify admission or transfer to acute and non-acute inpatient facility

Description	Codes
Inpatient Stay	UB Revenue: 0100, 0101, 0110, 0111, 0112, 0113, 0114, 0116, 0117, 0118, 0119, 0120, 0121, 0122, 0123, 0124, 0126, 0127, 0128, 0129, 0130, 0131, 0132, 0133, 0134, 0136, 0137, 0138, 0139, 0140, 0141, 0142, 0143, 0144, 0146, 0147, 0148, 0149, 0150, 0151, 0152, 0153, 0154, 0156, 0157, 0158, 0159, 0160, 0164, 0167, 0169, 0170, 0171, 0172, 0173, 0174, 0179, 0190, 0191, 0192, 0193, 0194, 0199, 0200, 0201, 0202, 0203, 0204, 0206, 0207, 0208, 0209, 0210, 0211, 0212, 0213, 0214, 0219, 1000, 1001, 1002

Table A.6. Codes to identify Hospice Patients

CPT
99377, 99378
HCPCS
G0182, G9473, G9474, G9475, G9476, G9477, G9478, G9479, Q5003, Q5004, Q5005, Q5006, Q5007, Q5008, Q5010, S9126, T2042, T2043, T2044, T2045, T2046
UB Revenue
0115, 0125, 0135, 0145, 0155, 0235, 0650, 0651, 0652, 0655, 0656, 0657, 0658, 0659
UB Type of Bill
0810, 0811, 0812, 0813, 0814, 0815, 0817, 0818, 0819, 0820, 0821, 0822, 0823, 0824, 0825, 0827, 0828, 0829, 081A, 081B, 081C, 081D, 081E, 081F, 081G, 081H, 081I, 081J, 081K, 081M, 081O, 081X, 081Y, 081Z, 082A, 082B, 082C, 082D, 082E, 082F, 082G, 082H, 082I, 082J, 082K, 082M, 082O, 082X, 082Y, 082Z