HEDIS Quality Improvement Project:
Measurement and Intervention Development

This resource is provided for informational purposes only and is not intended as reimbursement or legal advice. You should seek independent, qualified professional advice to ensure that your organization is in compliance with the complex legal and regulatory requirements governing health care services, and that treatment decisions are made consistent with the applicable standards of care.
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Impact of the Affordable Care Act on Payers

The Affordable Care Act (ACA) was passed with the goal of reforming the American healthcare system to provide high-quality healthcare to an increased portion of the U.S. population. The ACA outlines a variety of laws and provisions aimed at reforming healthcare through the improvement of quality and efficiency of healthcare (Title III) as well as the prevention of chronic disease and improvement of public health (Title IV).1 The ACA also brings the development of the Health Insurance Marketplace in 2014, offering millions of Americans access to an expanded choice of payers.1 Precedence is being placed on quality in healthcare and preventative services with the goal of reducing the overall cost of care through improved management of overall health.1 Payers may experience challenges to effectively and efficiently manage this new membership, while maintaining or improving quality of care.

Due to changes in regulations regarding lifetime and annual coverage limits, pre-existing conditions, and rescinding coverage, effective management of high-risk members is of even greater importance. For example, Section 3025 of the ACA established the Readmissions Reduction Program, requiring the Centers for Medicare & Medicaid Services (CMS) to reduce payments to Inpatient Prospective Payment System (IPPS) hospitals with excess readmissions. The act defines readmission as an admission to a hospital for the same diagnosis paid under the IPPS within 30 days of discharge.7 This means that hospitals that treat patients prone to relapse and rehospitalization may not be fully reimbursed for care of patients readmitted within 30 days.

Schizophrenia: Rationale for Care Management

Schizophrenia affects approximately 1.1% of the population and is characterized by delusions, hallucinations, incoherence, disorganized behavior, and affective flattening.2,3

The direct costs for schizophrenia in the United States were estimated at $47 billion (in 2013 U.S. dollars).4 Part of this cost may result from the increased rates of relapse associated with schizophrenia. In 2010, there were more than 397,000 hospital stays for schizophrenia and other psychotic disorders and of those, approximately 1 in 4 (22%) were readmitted within 30 days.5 Past relapse may be predictive of future relapse and increased cost.6,7

One of the drivers of relapse is poor adherence to antipsychotic medication, which is common among patients with schizophrenia.8,9 Reductions in relapse rates may represent a step forward in the effective management of schizophrenia.

Management of comorbidities in this population likely contributes to increased health costs. Diabetes, metabolic syndrome, cardiovascular and pulmonary disease are more common in schizophrenic individuals than the general population.3,10-12 An increased risk of type 2 diabetes and cardiovascular disease can increase the cost of care.13,14

*Direct costs are the sum of the estimated direct healthcare costs and direct non-healthcare costs (i.e., law enforcement [incarceration, judicial and legal services, police protection], shelters for the homeless, and research and training related to schizophrenia).
Schizophrenia: Rationale for Care Management (cont’d)

The ACA supports coordination of care in the mental health setting. Appropriate follow-up care after a hospital discharge for patients with mental illness may help improve health outcomes, yet, according to the National Committee for Quality Assurance (NCQA), follow-up in the form of outpatient visits, intensive outpatient encounters, or partial hospitalization with a mental health provider is lagging.

Hospitals, accountable care organizations (ACOs), and payers may be able to help patients with schizophrenia manage their disease through development of treatment and discharge plans that address treatment adherence, educate patients and caregivers, and ensure coordination of care.

Performance Measures

The high cost of schizophrenia, along with the various components of care, warrants close scrutiny by payers. Yet components of the treatment pathways that may need improvement cannot be identified without a better understanding of the process involved in schizophrenia care. Continued measurement of process (eg, adherence to medication and ambulatory follow-up), outcomes (eg, relapse and readmission), and overall health status (eg, screening for diabetes and cardiovascular disease) are important to quality care for patients with schizophrenia. Ongoing assessment of process and outcome indicators by payers may enable identification of the areas in schizophrenia care that are in need of improvement, as well as the development of interventions to improve treatment outcomes and reduce overall cost of care.

Several opportunities for healthcare quality improvement derive from the Healthcare Effectiveness Data and Information Set (HEDIS®). HEDIS is a set of standardized performance measures designed to ensure that purchasers and consumers have the information they need to reliably compare the performance of health plans and quality of care associated with hospitals.

The HEDIS measures of particular interest to those who manage the quality of services rendered to patients with schizophrenia include:

**Adherence to Antipsychotic Medications for Individuals With Schizophrenia (SAA)**

Percentage of members with schizophrenia who are 19-64 years of age and were prescribed antipsychotic medication for at least 80% of their treatment period in the measurement year.
Performance Measures (cont’d)

Poor adherence to antipsychotic medication is common among patients with schizophrenia and is a contributor to relapse, which is associated with increased service utilization and cost of care. Ongoing assessment of patient adherence could help identify patients with chronic low adherence, allowing for an alteration in treatment regimens prior to relapse. Development of programs that improve adherence rates to antipsychotics in patients with schizophrenia may help improve patient outcomes and may reduce costs to hospitals, ACOs, and payers.

Follow-Up After Hospitalization for Mental Illness (FUH)

Percentage of discharges for members 6 years of age and older hospitalized for treatment of selected mental health diagnosis who also had an outpatient visit, intensive outpatient encounter, or partial hospitalization with a mental health practitioner within 7 and 30 days of discharge.

The rate of readmission for patients with schizophrenia is high. By focusing on resolutions to common challenges faced by patients with schizophrenia during transitions of care, hospitals, ACOs, and payers may help reduce the risk of relapse and readmission. Use of this measure to assess current follow-up rates and procedures may identify areas for improvement leading to increased support and may hopefully lower readmission rates for recently hospitalized patients.

Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications (SSD)

Percentage of members with schizophrenia or bipolar disorder taking antipsychotics who are 18-64 years of age and have received a diabetes screening test during the measurement year.

Diabetes Monitoring for People With Diabetes and Schizophrenia (SMD)

Percentage of members with schizophrenia and diabetes who are 18-64 years of age who received both a LDL-C and HbA1c test during the measurement year.

Patients with schizophrenia are possibly at an increased risk of diabetes due to metabolic comorbidities such as weight gain and hyperlipidemia. Effective management of patients with schizophrenia and diabetes is important, as these patients are estimated to have healthcare costs nearly twice that of non-diabetic schizophrenics. Due to the difference in cost of care, institution of regular screening to promptly diagnose and treat diabetes may help minimize negative outcomes and overall healthcare costs. Regular monitoring of diabetes symptoms and severity, using tests such as LDL-C and HbA1c, could allow for proper treatment intervention prior to disease progression and development of complications.
Inpatient Hospital 30-Day Readmission Rate\textsuperscript{18}

Percentage of hospital discharges that are readmitted for the same diagnosis within 30 days.

The high cost of schizophrenia may be attributed in part to the increased utilization of high-cost services, such as inpatient hospital stays.\textsuperscript{4} These costs are further augmented when effective treatment is not received, potentially leading to relapse and readmission.\textsuperscript{12} Through reduction in readmissions, payers may be able to reduce costs, especially in chronic diseases with high relapse rates like schizophrenia.\textsuperscript{6} Continuous assessment of aggregate rates over time may allow payers to evaluate processes or procedures put in place aimed at improving patient care and reducing readmissions, allowing modification of those procedures that are not performing as intended.

Cardiovascular Monitoring for People With Cardiovascular Disease and Schizophrenia (SMC)\textsuperscript{18}

Percentage of members with schizophrenia and cardiovascular disease who are 18-64 years of age and received an LDL-C test during the measurement year.

Patients with schizophrenia may have an increased prevalence of cardiovascular disease compared to the general population.\textsuperscript{11} Aside from the increased health risks associated with cardiovascular conditions, presence of this comorbidity is estimated to nearly double the costs of care in this patient population.\textsuperscript{13,14} Regular monitoring of patients with schizophrenia and cardiovascular disease is important to maintain health and help reduce service utilization.\textsuperscript{21}

In addition to the HEDIS measures mentioned previously, the inclusion of two more general measures may contribute to a better understanding of treatment patterns for patients with schizophrenia. These measures include:

**Ambulatory Care (AMB)\textsuperscript{18}**

The total number of outpatient and emergency department visits per patient during the measurement year.

Assessment of annual ambulatory care use may help identify high-cost individuals being treated with ineffective care regimens. This measure may also be used by payers to assess treatment processes and programs (e.g., aftercare programs). Once identified, alterations in treatment plans may be utilized to improve care for these individuals.\textsuperscript{12}

Continuous Quality Improvement: Translating Metric Results into Action

NCQA endorses a standard of continuous quality improvement (CQI), which involves ongoing measurement of rates, identification of opportunities for improvement, implementation of interventions to improve rates on performance metrics, and ongoing re-measurement of performance. Regular assessment of the HEDIS measures related to schizophrenia patient management may be used as part of a CQI process to help improve the management of patients with schizophrenia. Data from these measures may help define strategies to improve aspects of treatment that are potentially suboptimal and highlight those components that are successful.
Adherence to Antipsychotic Medication for Individuals With Schizophrenia (SAA)

This HEDIS measure determines the percentage of members 19-64 years of age during the measurement year with schizophrenia who were dispensed and remained on an antipsychotic medication for at least 80% of their treatment period.

**IPSD:** Index prescription start day; the earliest prescription dispensing date for any antipsychotic medication between January 1 and September 30 of the measurement year.

**Treatment Period:** The period of time beginning on the IPSD through the last day of the measurement year.

**Oral medication dispensing event:**
One prescription of an amount lasting 30 days or less. To calculate dispensing events for prescriptions longer than 30 days, divide the days’ supply by 30 and round down to convert. For example, a 100-day prescription is equal to three dispensing events.

Multiple prescriptions for different medications dispensed on the same day are counted as separate dispensing events. If multiple prescriptions for the same medication are dispensed on the same day, use the prescription with the longest days’ supply. Use the drug ID to determine if the prescriptions are the same or different.

**Long-acting injections dispensing event:**
Injections count as one dispensing event. Multiple J codes or National Drug Codes (NDCs) for the same or different medication on the same day are counted as a single dispensing event.

**Calculating number of days covered for oral medications:** If multiple prescriptions for the same or different oral medications are dispensed on the same day, calculate the number of days covered by an antipsychotic medication (for the numerator) using the prescription with the longest days’ supply.

If multiple prescriptions for different oral medications are dispensed on different days, count each day within the treatment period only once toward the numerator.

If multiple prescriptions for the same oral medication are dispensed on different days, sum the days’ supply and use the total to calculate the number of days covered by an antipsychotic medication (for the numerator). For example, if three antipsychotic prescriptions for the same oral medication are dispensed on different days, each with a 30-day supply, sum the days’ supply for a total of 90 days covered by an oral antipsychotic (even if there is overlap).

Use the drug ID provided on the NDC list to determine whether the prescriptions are the same or different.

**Calculating the number of days covered for long-acting injections:**
Calculate the number of days covered (for the numerator) for long-acting injections using the days’ supply specified for the medication on table SAA-A. For multiple J codes or NDCs for the same or different medications on the same day, use the medications with the longest days’ supply. For multiple J codes or NDCs for the same or different medications on different days with overlapping days’ supply, count each day within the treatment period only once toward the numerator.
**Product lines:** Medicaid

**Ages:** 19-64 years of age as of December 31 of the measurement year

**Continuous enrollment:** The measurement year

**Allowable gap:** No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (i.e., a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).

**Anchor date:** December 31 of the measurement year

**Benefits:** Medical and pharmacy

**Event/diagnosis:** Follow the steps below to identify the eligible population

**Step 1:** Identify members with schizophrenia as those who met at least one of the following criteria during the measurement year:

- At least one acute inpatient claim/encounter with any diagnosis of schizophrenia. Either of the following code combinations meets criteria:
  - BH Stand Alone Acute Inpatient Value Set with Schizophrenia Value Set
  - BH Acute Inpatient Value Set with BH Acute Inpatient POS Value Set and Schizophrenia Value Set

**Step 2:** Required exclusions:

- Members with a diagnosis of dementia during the measurement year
- Members who did not have at least two anti-psychotic medication dispensing events during the measurement year
Appendix A – Measurement Logic

Follow-Up after Hospitalization for Mental Illness (FUH)

This HEDIS measure determines the percentage of patients who attend a follow-up appointment within 7 and 30 days of discharge from a hospital. During the measurement year, mental health hospitalizations are identified via the place of service and diagnosis code fields appearing on the medical record. Patients with claims meeting both of the following criteria are retained for analysis of this measure:

1. A place of service code for either an inpatient hospitalization or emergency department (ED) visit; and
2. An ICD-9-CM diagnosis code of schizophrenia (295.x)
   a. Other qualifying mental illnesses* can also be assessed with this measure

The total number of patients showing at least one claim meeting both of these criteria during the measurement year will comprise this measure’s denominator. In the 30-day window following the mental health hospitalization discharge, all subsequent healthcare encounters (office visits, outpatient visits, inpatient visits, ED visits) will be examined for the re-appearance of the original mental health diagnosis that was treated at the initial hospitalization. The service dates of such encounters will be subtracted from the initial hospital discharge date to determine the interval. The percentage of patients evidencing follow-up mental health encounters within both 7 days and within 30 days will be reported.

*Manic disorder (296.0x, 296.1x), major depressive disorder (296.2x, 296.3x), bipolar affective disorder (296.4x, 296.5x, 296.6x, 296.7x), manic-depressive psychosis (296.8x), other and unspecified psychoses (296.9x), anxiety states (300.0x), personality disorders (301.x), sexual deviations and disorders (302.x), alcohol dependence (303.x), or drug dependence (304.x)

Product lines: Commercial, Medicaid, Medicare (report each product line separately)

Ages: 6 years of age and older as of the date of discharge

Continuous enrollment: Date of discharge through 30 days after discharge

Allowable gap: No gaps in enrollment

Anchor date: None

Benefits: Medical and mental health (inpatient and outpatient)

Event/diagnosis: Discharged alive from an acute inpatient setting (including acute care psychiatric facilities) with a principal mental health diagnosis on or between January 1 and December 1 of the measurement year.

The denominator for this measure is based on discharges, not members. Include all discharges for members who have more than one discharge on or between January 1 and December 1 of the measurement year.

Mental health readmission or direct transfer: If the discharge is followed by readmission or direct transfer to an acute facility for any mental health principal diagnosis within the 20-day follow-up period, count only the readmission discharge or the discharge from the facility to which the member was transferred. Although the re-hospitalization might not be for a selected mental health disorder, it is probably for a related condition.

Exclude both the initial discharge and the readmission/direct transfer discharge if the readmission/direct transfer discharge occurs after December 1 of the measurement year.

Exclude discharges followed by readmission or direct transfer to nonacute facility for any mental health principal
Event/diagnosis (cont’d):
diagnosis within the 30-day follow-up period. These discharges are excluded from the measure because readmission or transfer may prevent outpatient follow-up visit from taking place.

Non-mental health readmission or direct transfer:
Exclude discharges in which the patient was transferred directly or readmitted within 30 days after discharge to an acute or nonacute facility for a non-mental health principal diagnosis. These discharges are excluded from the measure because re-hospitalization or transfer may prevent an outpatient follow-up visit from taking place.

Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications (SDD)

During the measurement year, the percentage of patients taking antipsychotic medications who are screened for diabetes will be determined by evaluating medical and pharmacy claims. The eligible population will be determined by identifying patients with a diagnosis of schizophrenia (295.x) or bipolar disorder who do not have previous diagnosis of diabetes and have at least one acute inpatient encounter or at least two visits in an outpatient, intensive outpatient, partial hospital, ED, or nonacute inpatient setting, on different dates of service during the measurement year. To determine the percentage having received diabetes screening, patients with a glucose test or HbA1c test during the measurement year will be identified. The eligible population will serve as the denominator and the patients having received diabetes screening will serve as the numerator.

Product lines: Medicaid

Ages: 18-64 years of age as of December 31 of the measurement year

Continuous enrollment: The measurement year

Allowable gap: No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (ie, a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).

Anchor date: December 31 of the measurement year

Benefits: Medical and pharmacy

Event/diagnosis: Patients should be included who meet at least one of the following criteria:

1. At least one acute inpatient encounter, with any diagnosis of schizophrenia or bipolar disorder
2. At least two visits in an outpatient, intensive outpatient, partial hospital, ED, or nonacute inpatient setting, on different dates of service, with any diagnosis of schizophrenia
3. At least two visits in an outpatient, intensive outpatient, partial hospital, ED, or nonacute inpatient setting, on different dates of service, with any diagnosis of bipolar disorder

Patients should be excluded if:

1. They already have a diagnosis of diabetes
2. They did not have any antipsychotic medication dispensed during the measurement year

†296.4x, 296.5x, 296.6x, 296.7x
Diabetes Monitoring for People With Diabetes and Schizophrenia (SMD)

The percentage of patients diagnosed with schizophrenia and diabetes who are being properly monitored (receive a LDL-C and HbA1c test) is calculated with this HEDIS measure. The eligible population will consist of patients identified as having diagnoses of both schizophrenia (295.x) and diabetes (250.x) who have at least one acute inpatient encounter or at least two visits in an outpatient, intensive outpatient, partial hospital, ED, or non-acute inpatient setting, on different dates of service during the measurement year. To determine the percentage of patients receiving diabetes monitoring, patients must have had both an HbA1c test to determine blood glucose levels from the last 3 months and an LDL-C test to determine their cholesterol level during the measurement year. The eligible population will serve as the denominator and the number of patients receiving monitoring will serve as the numerator.

**Product lines:** Medicaid

**Ages:** 18-64 years of age as of December 31 of the measurement year

**Continuous enrollment:** The measurement year

**Allowable gap:** No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (ie, a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).

**Anchor date:** December 31 of the measurement year

**Benefits:** Medical

**Event/diagnosis:** Identify patients who have diabetes and meet one of the following criteria:

1. At least one acute inpatient encounter, with any diagnosis of schizophrenia
2. At least two visits in an outpatient, intensive outpatient, partial hospital, ED, or non-acute inpatient setting, on different dates of service, with any diagnosis of schizophrenia

Cardiovascular Monitoring for People With Cardiovascular Disease and Schizophrenia (SMC)

This measure calculates the percentage of patients diagnosed with both schizophrenia and cardiovascular disease monitored for their cardiovascular disease (LDL-C test) during the measurement year. The eligible population consists of patients with a diagnosis of schizophrenia and having either a diagnosis of or an event indicative of cardiovascular disease during the measurement year. Of the eligible patient population, those receiving an LDL-C test to determine cholesterol level during the measurement year serve as the numerator.

**Product lines:** Medicaid

**Ages:** 18-64 years of age as of December 31 of the measurement year

**Continuous enrollment:** The measurement year

**Allowable gap:** No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (ie, a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).
Ambulatory Care (AMB)

The AMB measure calculates ambulatory care utilization though identification of members with schizophrenia as those who met at least one of the following criteria during the measurement year:

- At least one acute inpatient claim/encounter with any diagnosis of schizophrenia. Either of the following code combinations meets criteria:
  - BH Stand Alone Acute Inpatient Value Set with Schizophrenia Value Set
  - BH Acute Inpatient Value Set with BH Acute Inpatient POS Value Set and Schizophrenia Value Set

- At least two visits in an outpatient, intensive outpatient, partial hospital, ED or nonacute inpatient setting, on different dates of service, with any diagnosis of schizophrenia

During the measurement year, the total number of outpatient and ED visits will be calculated per patient. Using the medical claims table, the place of service field will be used to categorize relevant visits.

A maximum of one ED visit will be assumed per day. Multiple outpatient visits will be allowed on a single day only if they are associated with unique provider IDs on the claim line. Otherwise, they will be bundled into a single visit.

Product lines: Medicaid

Ages: 19-64 years of age as of December 31 of the measurement year

Continuous enrollment: The measurement year

Anchor date: December 31 of the measurement year

Benefits: Medical

Event/diagnosis: Identify patients who have cardiovascular disease and meet one of the following criteria:

1. At least one acute inpatient encounter, with any diagnosis of schizophrenia
2. At least two visits in an outpatient, intensive outpatient, partial hospital, ED or nonacute inpatient setting, on different dates of service, with any diagnosis of schizophrenia
Inpatient Hospital 30-Day Readmission Rate

This measure calculates the percentage of patients who are readmitted to the hospital within 30 days of discharge. During the measurement year, mental health hospitalizations are identified via the place of service and diagnosis fields appearing on the medical record. Claims meeting both of the following criteria will be retained for analysis of this measure:

1. A place of service code for an inpatient hospitalization; and
2. An ICD-9-CM diagnosis code of either schizophrenia (295.x), manic disorder (296.0x, 296.1x), major depressive disorder (296.2x, 296.3x), bipolar affective disorder (296.4x, 296.5x, 296.6x, 296.7x), manic-depressive psychosis (296.8x), other and unspecified psychoses (296.9x), anxiety states (300.0x), personality disorders (301.x), sexual deviations and disorders (302.x), alcohol dependence (303.x), or drug dependence (304.x)

The total number of patients showing at least one claim meeting both of these criteria will comprise this measure’s denominator. For patients evidencing multiple hospitalizations, subsequent admissions will be categorized as either of the following:

1. A readmission for an existing mental health condition, defined as a subsequent inpatient hospital admission accompanied by the same mental health diagnosis code from the prior admission; or
2. A new admission, defined as a subsequent inpatient hospital admission accompanied by a diagnosis code for an unrelated medical condition

Product lines: Medicaid

Ages: 19-64 years of age as of December 31 of the measurement year

Continuous enrollment: The measurement year

Allowable gap: No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than 1-month gap in coverage (ie, a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).

Anchor date: December 31 of the measurement year

Benefits: Medical and pharmacy
References:


