



Optum Labs QE Public Reports: 2022 Companion Guide

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Introduction and program overview

The Qualified Entity (QE) program was created as part of the Affordable Care Act to facilitate health system improvement using insights from data. The program allows Qualified Entities to apply to receive Centers for Medicare and Medicaid Services (CMS) claims data for the purpose of combining that data with a commercial claims dataset and using it to report back publicly on health system quality measures. The Qualified Entity Certification Program (QECP) enables organizations certified as QEs to report on the quality of care across a broad spectrum of standard measures to facilitate health system improvement.

Optum Labs Qualified Entity Program

Optum Labs® is certified as a national QE, which means our scope for combining data for quality reporting is on a national scale, and includes all states, Puerto Rico and the District of Columbia. Optum Labs receives 100% of the Parts A, B, and D CMS Fee-for-service (FFS) claims and enrollment data.

Optum Labs is in the distinctive position of having a patient-level, linked and de-identified administrative claims and clinical data set to combine with the CMS Medicare FFS data in its reporting program. We have chosen to use this combined dataset to report on measures in two domains: 1) comparing processes and outcomes — to examine the quality of health care outcomes related to certain processes, and 2) transition to Medicare — to examine the quality of care for individuals making their first transition from private commercial health insurance to Medicare. These areas have not been explored with this breadth of data, and the transition to Medicare is an understudied area.

This Companion Guide provides more detail on the Optum Labs QE reports, including our approach to reporting, data sources, measure selection and calculation methodologies, as well as limitations. There is also more information in the [Frequently Asked Questions section of our QE reporting website](#).

Reporting overview

The Optum Labs QE public reports present measures through two distinctive lenses. The first report, *Comparing Processes and Outcomes*, compares measures of health care processes to related health care outcomes. The other report, *Transition to Medicare*, focuses on care quality for individuals making their first transition from private commercial (often employer-sponsored) health insurance to Medicare insurance. The Transition to Medicare theme is one that has not been examined before because it is only possible through the ability to link individuals longitudinally across commercial and Medicare plans.

Each report contains groupings of relevant measures to examine health care quality. For the *Comparing Processes and Outcomes* report, measures are presented in the sub-domain of diabetes, an important disease area. For the *Transition to Medicare* report, measures are presented in the sub-domains of diabetes and hospitalizations and harm, focusing on conditions requiring highly coordinated care.



Measure selection rationale

The measures included in the Optum Labs QE public reports were selected to support the processes and outcomes and transition to Medicare themes. Details of selected measures can be found in the Measure Specifications section.

Comparing Processes and Outcomes: This report trends performance rates on a variety of standard process and meaningful health outcome measures related to diabetes. Caring for patients with complex conditions such as diabetes tends to require an increased level of coordination, which is why the report focuses on this disease area. Measures from the National Care Quality Alliance (NCQA) Comprehensive Diabetes Care set were used for reporting diabetes processes of care and Agency for Health Research and Quality (AHRQ) Diabetes Prevention Quality Indicators (PQIs) were used as the diabetes outcome measures.

Transition to Medicare: This report examines the quality of care provided to individuals who make their first transition from commercial health insurance to Medicare coverage within a measurement year, as compared to the years before and after transition. Members who transition from one plan to another are often excluded from traditional claims-based measurement because standard measures are typically designed to measure a single health plan's performance against other plans and therefore exclude those who move between plans. For this reason, the measures included in this report are QCEP alternative measures, adapted from CMS' standard list and approved by QCEP and our community of stakeholders. Typically, individuals with commercial health insurance transitioning to Medicare enroll in either privately administered MA plans or federally-run, traditional Medicare FFS plans. Whether the transition is a result of turning 65 (e.g., aging into Medicare), disability, or end-stage renal disease (ESRD), transition of insurance coverage may present health services access challenges for individuals, particularly those with chronic conditions such as diabetes or congestive heart failure. Such conditions are believed to require a high level of care coordination, particularly between primary care and chronic care specialists, so the reports focus on these disease areas.

The clinical specialty areas under which the selected measures fall were also, in part, selected based on alignment with Core Measure Sets being developed by the Core Quality Measure Collaborative. Led by CMS, this initiative includes commercial plans, Medicare and Medicaid managed care plans, purchasers, physician and other care provider organizations, and consumers as stakeholders.

Data sources

The Optum Labs Data Warehouse (OLDW) contains de-identified, longitudinal health information on enrollees and patients, representing a mixture of ages and geographical regions across the United States. The claims data in OLDW includes medical and pharmacy claims, laboratory results and enrollment records for commercial and Medicare Advantage enrollees. The EHR-derived data includes a subset of all EHR data that has been normalized and standardized into a single database and is used as supplemental data for the subset of insured individuals in our reports who have had encounters with these providers. These data assets



have been combined with Medicare Parts A, B and D claims data for the purposes of QE reporting.

All data used to create the Optum Labs QE public reports are de-identified in compliance with HIPAA.

Claims data: The claims data in OLDW includes medical (inpatient, outpatient) and pharmacy claims, laboratory results and enrollment records for Commercial and Medicare Advantage enrollees.

In the Optum Labs QE public reports, we enable users to compare different coverage types, and as a result, users will see the terms “Commercial” and “MA” which refer, specifically, to the following:

Commercial: This term refers to claims data representing employer-sponsored and individual health plans sold in the commercial health insurance markets. Generally this includes populations who are not yet Medicare eligible (e.g., under 65 years old), but does also include individuals who continue to work past age 65 and retain employer-sponsored insurance or have private health insurance through an employer’s retirement (or pension) package.

Medicare Advantage (MA): This term refers to claims data representing Medicare health plans sold in commercial health insurance markets by companies that contract with Medicare. Plan types include preferred provider organizations (PPO), health maintenance organizations (HMO) and Special Needs Plans (SNP). These data include populations who are Medicare eligible and opted to purchase Medicare coverage in the commercial market from a private insurer, instead of traditional Medicare FFS offered directly by the federal government. Generally MA-covered individuals are 65 years and older, and not receiving other health insurance. MA does cover a portion of individuals under 65 who are eligible for Medicare due to disability or ESRD.

Medicare fee-for-service (FFS) claims data: Optum Labs received the QE Medicare FFS data as a result of its status as a national Qualified Entity. Medicare claims data, from Parts A, B, and D that were used to produce these public reports span the years 2013-2019. Generally, FFS-covered individuals are 65 years and older, and not receiving health coverage from an employer. Many individuals who become eligible for Medicare at age 65 continue to work and may maintain employer-sponsored commercial insurance as their primary coverage, with Medicare FFS as secondary coverage until retirement when Medicare FFS generally becomes the primary payer.

EHR-derived clinical encounters: The clinical data in OLDW is derived from electronic health record data representing a geographically diverse group of provider institutions (hospitals, clinics, laboratories, skilled nursing facilities, outpatient surgical centers) in the United States. The included institutions represent both Integrated Delivery Networks (IDN) and non-IDN affiliated providers and the patient population includes commercially insured, Medicare enrollees



(both Medicare Advantage and traditional fee-for-service Medicare), Medicaid enrollees, and the uninsured. While the EHR-derived clinical data are substantial in volume overall, they do not capture all clinical encounters as they are limited to the health system departments that have agreed to provide data.

How data sources were used

Optum Labs seeks to produce QE public reports that characterize quality, leveraging all facets of the distinctive data assets in OLDW to calculate measures whose specifications (both logical and technical methodologies) are maintained by measure stewards, subject to the adjustments discussed below. The reports utilize the scope of the linked multi-payer claims (commercial, MA, Medicare FFS) and EHR-derived clinical data available in the OLDW by including both “claims-only” measures as well as “claims and clinical” hybrid measures that require laboratory results (e.g. blood pressure or HbA1c) or certain services and procedures not adequately captured from claims.

The measures presented in the Optum Labs QE reports were calculated using one of two combined sets of the data sources described above, adhering to the extent possible to the requirements defined in each measure steward’s technical specifications. These combined sets of data are described below and are the two “data source” selections available in the public reports:

1. **Claims Data Only:** This combined data source is comprised of the three individual claims sources described above (i.e., Commercial, Medicare Advantage and Medicare FFS), de-identified and linked at the patient level. All measures in the public reports having “claims only” specifications were calculated using only these combined claims data. Measures with hybrid specifications are not possible to calculate with this “claims data only” source. Specific measures in our report that could NOT be calculated using claims data only include:
 - Comprehensive Diabetes Care:
 - Foot Exam
 - HbA1c Control
 - HbA1c Poor Control
 - Blood Pressure Control

When the data source “Claims Data Only” is selected these measures will return a result of “No Data Available.” Users must then change the data source to “Claims and Clinical” to see results for these measures.

2. **Claims and Clinical:** This combined data source is comprised of the three individual claims sources described above (i.e., Commercial, Medicare Advantage and Medicare FFS), along with the EHR-derived clinical data, de-identified and linked at the patient level. Combining the claims and clinical data creates a set that includes individuals who both had coverage and at least one encounter with the providers represented in the EHR-derived data. All measures in both reports (both claims-only and hybrid measures) were calculated using these combined “claims and clinical” data. Measures with claims-only specifications used the clinical data as supplemental to the claims data, when



allowed by the measure specifications. It is important to note that because the combined claims and clinical data represent only a subset of the individual data sources, sample sizes using these combined data may become too small for reliable or reportable results in some cases. In these cases, results are represented by an asterisk (“*”), and noted as “Insufficient data.”

Identifying the Transition to Medicare eligible population

With our capability to link together patient level claims across multiple payers and health plans, Optum Labs developed the *Transition to Medicare* report to compare trends in quality of care in the first transition from commercial to Medicare coverage. To do this, Optum Labs developed a methodology to longitudinally follow beneficiaries who transitioned from commercial coverage to Medicare during the reporting period. The beneficiary’s transition year (e.g., when a person transitioned to Medicare coverage) and the type of Medicare coverage (e.g., MA or Medicare FFS) were determined for each individual in this population.

Two methodologies were used to define transition to Medicare, depending on the type of Medicare coverage into which the individual first transitioned. In both the MA and FFS cases, the transition year used in the public reports is defined as the year of initial transition to Medicare. These methods are described below.

- 1) Commercial to MA transition population: Due to the capitated nature of Medicare Advantage, coverage rules are relatively clear that once a member enrolls in a MA plan, that MA plan is the primary payer responsible for the member. As a result, other insurance coverage held by the member either becomes secondary to MA, or is dropped. Individuals were defined as having transitioned to MA if:
 - The earliest MA enrollment start date was either before or within 45 days of their commercial end date (e.g., overlapping coverage or a gap less than or equal to 45 days, respectively). Members meeting these criteria had an initial Medicare transition date set to the MA enrollment start date.

- 2) Commercial to Medicare FFS transition population: Coverage rules for Medicare FFS are more complex, such that enrollment alone cannot be used to determine transition to FFS. For example, Medicare beneficiaries may enroll in Part A coverage at age 65, but keep working and maintain commercial insurance as the primary payer. Many additional rules apply, so defining transition was based on an algorithm developed for this report and based on claim-level evidence of the primary payer for each member. Individuals were defined as having transitioned to FFS if:
 - There was a gap of less than 45 days between Commercial coverage and Medicare FFS coverage and no evidence of secondary coverage exists, or
 - the Medicare transition date was before the Commercial end date (e.g., overlapping coverage) AND Medicare FFS was determined to be the primary payer. For



members with overlapping coverage, the following logic was used to determine the start date for Medicare FFS as primary payer:

- If the member had no commercial claims during the overlapping period and the first claim after the start of Medicare FFS enrollment indicates Medicare FFS was the primary payer, then the Medicare transition date was set to the start of Medicare FFS enrollment.
- If the member had claims evidence of commercial primary coverage after the start of FFS enrollment, then the first claim date where Medicare FFS is the primary payer was used as the initial Medicare transition date.

All individuals meeting our specified criteria for the “initial transition to Medicare” are included in the eligible population for the *Transition to Medicare* report. Individuals in the eligible population must then also meet the measure specifications to be included in the report for a given measure. The two years before and two years after the transition are each handled as independent measurement years, so while an individual might meet measure criteria in the transition year, he/she may not meet the criteria in all preceding or following years. For example, a newly diagnosed diabetic in the denominator for diabetes measures in the transition year (“0”), might not be included in the diabetes denominator in prior measurement years (“-2” and “-1”).

Identifying hospitalization stays and discharges

Measure steward specifications were followed for the *Hospitalizations per 1000* measures (NQF 2503 and 2504)¹ to define the eligible population, denominator/numerator, index hospitalization time period, and hospital transfer methodology for the rate calculation. The Hospitalization and Harms measures used in our report did not provide a code list to identify hospitalization, so Optum Labs analyzed the claims data and relevant literature and determined that “type of bill” values that indicated an inpatient hospital stay (11x, 41x)² could be used to determine hospital stay records for both measures.

In the case of Diabetes Prevention Quality Indicators, the specifications do not provide a code list for identifying hospital discharges. Based on analysis of the claims data, Optum Labs determined that “type of bill” (11x, 41x) or “claim type” (60, 61) values that indicated an inpatient hospital setting were sufficient as the discharge criteria for these measures.

For the Acute Admission Rates measures, “type of bill” values in the claims data indicating an inpatient hospital stay (11x, 41x) were used to determine hospital stay records for both measures. These measures also specify a denominator exclusion for members who die during the measurement year. Due to HIPAA de-identification requirements, date of death data were not available. Instead, members who dis-enrolled were excluded from the denominator

¹ See Measures Specification section for more information [include link to Measures Specification section]

² Values defined by the National Uniform Billing Committee (NUBC)



because they did not meet continuous enrollment criteria and may have been disenrolled due to death during the year.

Risk adjustment exceptions

The specifications of the CMS Risk Standardized Acute Admission Rate measures (CQF 2886, NQF 2887, NQF 2888) included in the *Transition to Medicare* report, call for risk adjustment using two-level hierarchical statistical models.

For this report, however, Optum Labs determined that risk adjustment was not necessary as the same cohorts of beneficiaries are followed over a five year period. While there is some upward drift in risk over time as the beneficiaries age, these cohorts should be relatively stable from year to year in their risk profile. In aggregate, the only difference among groups will be one additional year of age. Using the raw (unadjusted) acute admission rates is most appropriate for the *Transition to Medicare* report.

Also in the *Transition to Medicare* report, the measure steward for NQF 0709 (Potentially Avoidable Complication Measure), recommends risk adjustment of cost of care for treatment episodes. Optum Labs calculated this measure on members who transition into Medicare and focused on examining the Potential Avoidable Complication (PAC) events (not episode cost) and therefore did not risk adjust this measure.

Ages in calculations exceptions

Included in the *Transition to Medicare* report, the Acute Admission Rates (NQF 2886, NQF 2887, NQF 2888) and the Potentially Harmful Drug Disease Interactions (NQF 2993) measures, target a population of ambulatory Medicare FFS beneficiaries for ages 65 years or older. The age requirement was removed to include all individuals who transition into Medicare, regardless of age, so that these measures may be applied to the transition to Medicare concept.

Confidence intervals

The QECP requires that public reports include either the number of individuals represented by a measure result, or a confidence interval for the reported result. Optum Labs chose to do the latter and used the following methodology. Note that a denominator of less than 30 individuals resulting from a measure calculation is considered too small to be reliable. In such cases, instead of displaying the result, we represent the measures result with an asterisk “*”, meaning there was “Insufficient data” to reliably report the measure.

Confidence intervals were used to determine the statistical validity for the measure results. Calculations of 90% confidence intervals were done for the upper and lower bound results.

The following categories were calculated using percentage measures:
Comprehensive Diabetes Care Measures, Diabetes Prevention Quality Measures,

$$p \pm (t \text{ dist}_{90\%} \times \sqrt{\frac{p \times (1 - p)}{n}})$$



where p is the rate (adherent members/total members) and n is the number of members.

The following categories were calculated using Per Member Year Measures: Hospitalizations per 1000, Acute Admissions Rates, Potentially Avoidable Complications and Potentially Harmful Drug Disease Interactions,

$$x \pm (t \text{ dist}_{90\%} \times \frac{s}{\sqrt{n}})$$

where x is the rate (sum of first admission days / total member years), n is the total member years and s is the standard deviation of first admission days.

Percent change

The public reports illustrate percentage changes in measures. In each report, the percent change is calculated against the mean actual performance for each measure in the reference year. The basic calculation for a given mean rate in year i , with a reference mean rate (ref) is:

$$\text{Percent change } (i) = \frac{\text{Mean rate } (i) - \text{Mean rate } (ref)}{\text{Mean rate } (ref)}$$

For the *Comparing Processes and Outcomes* report, percent change in mean performance for each of the years (i), 2014 through 2019, is calculated against mean performance in the reference year, 2013. As such, the percent change values in this report indicate the degree to which actual performance in a given year for a measure is higher (positive %), the same (0%), or lower (negative %), as compared to the mean measure performance in 2013, the baseline year for trends in this report.

For the *Transition to Medicare* report, percent change in mean performance for years (i), two years before transition (Year -2) through two years after transition (Year +2), is calculated against mean performance in the reference year, which is the year a member first transitions from commercial to Medicare primary insurance (Year 0). As such, the percent change values in this report indicate the degree to which actual performance in a given year before or after first transition to Medicare as primary insurance for a measure is higher (positive %), the same (0%), or lower (negative %), as compared to the mean measure performance during the year of first transition to Medicare as primary insurance, the baseline year for trends in this report.

Points of note on measure use (limitations)

When using administrative data sources to replicate existing measure specifications, there will always be some limitations. The most significant of these are described below.

- **Variability in the capture of measure criteria:**

- **Billing variation:** While Optum Labs followed measure specifications for all measures in the report, it is important to understand that not all specifications (e.g., services and diagnoses) are captured equally across the different claims and clinical data sources. Some services may not be billed through medical claims (e.g., diabetic foot exams) or may be billed through non-medical coverage (e.g., eye exams billed through separate vision coverage which may not be visible in our data). As a result, there will be some variations in measure results that may be subject to poor capture of specifications in the real-world data sources used for these reports and which may result in the appearance of sub-optimal performance on these measures.
- **Changes in enrollment:** Some measures specify that diagnostic services provided years before the measure year count toward performance on the measure. As a result, these measures as calculated in our data may not fully capture actual performance.
- **Capture of supplemental data:** The specifications for most of the process measures in these public reports allow for the additional collection of supplemental data beyond the administrative claims alone (e.g., EHR and other provider data) to attempt to fully capture adherence on performance measures. The supplemental EHR data in OLDW represent only a subset of all patient encounters captured for the individuals who are represented in the claims sources, and so cannot completely fill in the data gaps found in the claims like a full medical record review.
- Specific measures in the report that may be impacted by any or all of the limitations above include the following:
 - Comprehensive Diabetes Care measures
 - Foot Exam
 - Eye Exam
 - HbA1c Testing
 - HbA1c Control
 - HbA1c Poor Control
 - Blood Pressure Control
 - Attention for Medical Nephropathy
- Specific known measure limitations:
 - **Foot Exam (Diabetes):** Foot exams are often conducted during routine office visits and are not billed separately in the claims. This results in the inability to adequately capture the exam using claims data alone, and will likely under-capture the true exam rate.
 - **Eye Exam (Diabetes):** Eye exams may be billed under either medical or optical insurance coverage. This results in the inability

to fully capture the exam using medical claims alone, and will likely under-capture the true exam rate.

- **HbA1c and Blood Pressure Control/Poor Control** measures require laboratory results not available in claims data. As a result, these measures cannot be calculated using claims data alone.
- **Transition to Medicare Hospitalization and Harm** measures are unadjusted outcomes that may be impacted by population differences. Population differences may include demographic differences (i.e., different proportions of gender, race, and/or age), as well as different comorbidities and disease severity that indicate one group is sicker before enrolling in Medicare.
- **Transition to Medicare** – All measures may also be subject to selection bias, since individuals have the option to select the type of Medicare coverage (i.e., Medicare Advantage or traditional fee-for-service) that best suits their particular needs.
- **Small sample size:** Optum Labs has suppressed all measure results that represent a denominator of fewer than 30 individuals, because these results are statistically unreliable. These results are masked and represented in the report by an asterisk (“*”) that indicates “Insufficient data” for the measure. While measures with a denominator larger than 30 individuals are statistically reliable, these results may still vary in accuracy and be subject to substantial variation and large confidence intervals.

Measure specifications

The tables below provide basic detailed measure information for the standard and QECF alternative measures presented in the Optum Labs QE public reports. We provide the measure



description, numerator, denominator, exclusions, and more. More detailed information on these measures can be found on the measure steward's website.

Process and Outcomes – Diabetes							
Measure	Title	Description	Data Source	Numerator Statement	Denominator Statement	Exclusions	Steward
55	Comprehensive Diabetes Care: Eye Exam	The percentage of members 18–75 years of age with diabetes (type 1 and type 2) who had an eye exam (retinal) performed.	Claims and Clinical	Screening or monitoring for diabetic retinal disease as identified by administrative data. This includes diabetics who had one of the following: <ul style="list-style-type: none"> • A retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist) in the measurement year. • A negative retinal or dilated eye exam (negative for retinopathy) by an eye care professional in the year prior to the measurement year. • Bilateral eye enucleation anytime during the member's history through December 31 of the measurement year. 	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year. Optional Exclusions: Identify members who do not have a diagnosis of diabetes, in any setting, during the measurement year or year prior to the measurement year and who had: <ul style="list-style-type: none"> • A diagnosis of gestational diabetes or steroid-induced diabetes, in any setting, during the measurement year or the year prior to the measurement year. 	NCQA
56	Comprehensive Diabetes Care: Foot Exam	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who received a foot exam (visual inspection and sensory exam with mono filament and a pulse exam) during the measurement year.	Claims and Clinical	Members who received a foot exam (visual inspection and sensory exam with monofilament and pulse exam) during the measurement year.	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude members who did not have a diagnosis of diabetes, in any setting, during the measurement year or the year prior to the measurement year and who had a diagnosis of gestational diabetes or steroid-induced diabetes in any setting, during the measurement year or the year prior to the measurement year.	NCQA

Process and Outcomes – Diabetes							
Measure	Title	Description	Data Source	Numerator Statement	Denominator Statement	Exclusions	Steward
57	Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) testing	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who had an HbA1c test performed during the measurement year.	Claims and Clinical	An HbA1c test performed during the measurement year, as identified by claim/encounter or automated laboratory data.	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year.	NCQA
59	Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who had an HbA1c level >9.0% (poor control) during the measurement year.	Claims and Clinical	Most recent HbA1c level is >9.0% or is missing a result, or if an HbA1c test was not done during the measurement year.	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year.	NCQA
61	Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who had a blood pressure (BP) level <140/90 mm Hg.	Claims and Clinical	Most recent BP reading is <140/90 mm Hg during the measurement year.	Members 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year.	NCQA
62	Comprehensive Diabetes Care: Medical Attention for Nephropathy	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who had a nephropathy screening or monitoring test or had evidence of nephropathy during the measurement year.	Claims and Clinical	A nephropathy screening or monitoring test or evidence of nephropathy during the measurement year, as documented through administrative data.	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year.	NCQA
575	Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%)	The percentage of members 18 - 75 years of age with diabetes (type 1 and type 2) whose most recent HbA1c level is <8.0% during the measurement year.	Claims and Clinical	Members whose HbA1c level is <8.0% during the measurement year.	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year.	NCQA

Process and Outcomes – Diabetes							
Measure	Title	Description	Data Source	Numerator Statement	Denominator Statement	Exclusions	Steward
272	Diabetes Short-Term Complications Admission Rate (PQI 01)	Admissions for a principal diagnosis of diabetes with short-term complications (ketoacidosis, hyperosmolarity, or coma) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.	Claims and Clinical	Discharges, for patients ages 18 years and older, with a principal ICD-9-CM and ICD-10-CM diagnosis code for diabetes short-term complications (ketoacidosis, hyperosmolarity, or coma). [NOTE: By definition, discharges with a principal diagnosis of diabetes with short-term complications are precluded from an assignment of MDC 14 by grouper software. Thus, obstetric discharges should not be considered in the PQI rate, though the AHRQ QITM software does not explicitly exclude obstetric cases.]	Population ages 18 years and older in the metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. May be combined with uncontrolled diabetes as a single indicator as a simple sum of the rates to form the Healthy People 2010 indicator (note that the AHRQ QITM excludes transfers to avoid double-counting cases).	None	AHRQ PQI Resources
274	Diabetes Long-Term Complications Admission Rate (PQI 03)	Admissions for a principal diagnosis of diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.	Claims and Clinical	Discharges, for patients ages 18 years and older, with a principal ICD-9-CM and ICD-10-CM diagnosis code for diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified).	Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county where the hospital discharge occurred.	None	AHRQ PQI Resources
285	Lower-Extremity Amputation among Patients with Diabetes Rate (PQI 16)	Admissions for any-listed diagnosis of diabetes and any-listed procedure of lower-extremity amputation per 100,000 population, ages 18 years and older. Excludes any-listed diagnosis of traumatic lower-extremity amputation admissions, toe amputation admission (likely to be traumatic), obstetric admissions, and transfers from other institutions.	Claims and Clinical	Discharges, for patients ages 18 years and older, with any-listed ICD-9-CM and ICD-10-CM procedure codes for lower-extremity amputation and any-listed ICD-9-CM and ICD-10-CM diagnosis codes for diabetes.	Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.	None	AHRQ PQI Resources

Process and Outcomes – Diabetes							
Measure	Title	Description	Data Source	Numerator Statement	Denominator Statement	Exclusions	Steward
638	Uncontrolled Diabetes Admission Rate (PQI 14)	Admissions for a principal diagnosis of diabetes without mention of short-term (ketoacidosis, hyperosmolarity, or coma) or long-term (renal, eye, neurological, circulatory, or other unspecified) complications per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.	Claims and Clinical	Discharges, for patients ages 18 years and older, with a principal ICD-9-CM and ICD-10-CM diagnosis code for uncontrolled diabetes without mention of a short-term or long-term complication.	Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. May be combined with diabetes short-term complications as a single indicator as a simple sum of the rates to form the Health People 2010 indicator (note that the AHRQ QI excludes transfers to avoid double counting cases).	None	AHRQ PQI Resources



Transition to Medicare – Diabetes

All measures in this table are alternative measures approved by QECP and a committee of Optum Labs community stakeholders. Original specifications were used for each measure, except that the Eligible Population for each measure was modified to the [Medicare Transition population described above](#).

Measure	Title	Description	Data Source	Numerator Statement	Denominator Statement	Exclusions	Steward	Original Steward
Not Applicable	Comprehensive Diabetes Care: Eye Exam	The percentage of members 18–75 years of age with diabetes (type 1 and type 2) who had an eye exam (retinal) performed.	Claims and Clinical	Screening or monitoring for diabetic retinal disease as identified by administrative data. This includes diabetics who had one of the following: <ul style="list-style-type: none"> • A retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist) in the measurement year. • A negative retinal or dilated eye exam (negative for retinopathy) by an eye care professional in the year prior to the measurement year. • Bilateral eye enucleation anytime during the member's history through December 31 of the measurement year. 	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year. Optional Exclusions: Identify members who do not have a diagnosis of diabetes, in any setting, during the measurement year or year prior to the measurement year and who had: <ul style="list-style-type: none"> • A diagnosis of gestational diabetes or steroid-induced diabetes, in any setting, during the measurement year or the year prior to the measurement year. 	Optum Labs	NCQA
Not Applicable	Comprehensive Diabetes Care: Foot Exam	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who received a foot exam (visual inspection and sensory exam with mono filament and a pulse exam) during the measurement year.	Claims and Clinical	Members who received a foot exam (visual inspection and sensory exam with monofilament and pulse exam) during the measurement year.	Members 18-75 years of age by the end of the measurement year who had a diagnosis of diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude members who did not have a diagnosis of diabetes, in any setting, during the measurement year or the year prior to the measurement year and who had a diagnosis of gestational diabetes or steroid-induced diabetes in any setting, during the measurement year or the year prior to the measurement year.	Optum Labs	NCQA

Transition to Medicare – Diabetes

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Measure	Title	Description	Data Source	Numerator Statement	Denominator Statement	Exclusions	Steward	Original Steward
Not Applicable	Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) testing	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who had an HbA1c test performed during the measurement year.	Claims and Clinical	An HbA1c test performed during the measurement year, as identified by claim/encounter or automated laboratory data.	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year.	Optum Labs	NCQA
Not Applicable	Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who had an HbA1c level >9.0% (poor control) during the measurement year.	Claims and Clinical	Most recent HbA1c level is >9.0% or is missing a result, or if an HbA1c test was not done during the measurement year.	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year.	Optum Labs	NCQA
Not Applicable	Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who had a blood pressure (BP) level <140/90 mm Hg.	Claims and Clinical	Most recent BP reading is <140/90 mm Hg during the measurement year.	Members 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year.	Optum Labs	NCQA



Transition to Medicare – Diabetes

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Measure	Title	Description	Data Source	Numerator Statement	Denominator Statement	Exclusions	Steward	Original Steward
Not Applicable	Comprehensive Diabetes Care: Medical Attention for Nephropathy	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who had a nephropathy screening or monitoring test or had evidence of nephropathy during the measurement year.	Claims and Clinical	A nephropathy screening or monitoring test or evidence of nephropathy during the measurement year, as documented through administrative data.	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year.	Optum Labs	NCQA
Not Applicable	Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%)	The percentage of members 18 - 75 years of age with diabetes (type 1 and type 2) whose most recent HbA1c level is <8.0% during the measurement year.	Claims and Clinical	Members whose HbA1c level is <8.0% during the measurement year.	Members 18-75 years of age as of December 31 of the measurement year who were identified with diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.	Exclude from the eligible population members who begin using hospice services during the measurement year.	Optum Labs	NCQA



Transition to Medicare – Diabetes

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Measure	Title	Description	Data Source	Numerator Statement	Denominator Statement	Exclusions	Steward	Original Steward
Not Applicable	Diabetes Short-Term Complications Admission Rate (PQI 01)	Admissions for a principal diagnosis of diabetes with short-term complications (ketoacidosis, hyperosmolarity, or coma) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.	Claims and Clinical	Discharges, for patients ages 18 years and older, with a principal ICD-9-CM and ICD-10-CM diagnosis code for diabetes short-term complications (ketoacidosis, hyperosmolarity, or coma). [NOTE: By definition, discharges with a principal diagnosis of diabetes with short-term complications are precluded from an assignment of MDC 14 by grouper software. Thus, obstetric discharges should not be considered in the PQI rate, though the AHRQ QITM software does not explicitly exclude obstetric cases.]	Population ages 18 years and older in the metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. May be combined with uncontrolled diabetes as a single indicator as a simple sum of the rates to form the Healthy People 2010 indicator (note that the AHRQ QITM excludes transfers to avoid double-counting cases).	None	Optum Labs	AHRQ PQI Resources
Not Applicable	Diabetes Long-Term Complications Admission Rate (PQI 03)	Admissions for a principal diagnosis of diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.	Claims and Clinical	Discharges, for patients ages 18 years and older, with a principal ICD-9-CM and ICD-10-CM diagnosis code for diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified).	Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county where the hospital discharge occurred.	None	Optum Labs	AHRQ PQI Resources

Transition to Medicare – Diabetes

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Measure	Title	Description	Data Source	Numerator Statement	Denominator Statement	Exclusions	Steward	Original Steward
Not Applicable	Lower-Extremity Amputation among Patients with Diabetes Rate (PQI 16)	Admissions for any-listed diagnosis of diabetes and any-listed procedure of lower-extremity amputation per 100,000 population, ages 18 years and older. Excludes any-listed diagnosis of traumatic lower-extremity amputation admissions, toe amputation admission (likely to be traumatic), obstetric admissions, and transfers from other institutions.	Claims and Clinical	Discharges, for patients ages 18 years and older, with any-listed ICD-9-CM and ICD-10-CM procedure codes for lower-extremity amputation and any-listed ICD-9-CM and ICD-10-CM diagnosis codes for diabetes.	Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.	None	Optum Labs	AHRQ PQI Resources
Not Applicable	Uncontrolled Diabetes Admission Rate (PQI 14)	Admissions for a principal diagnosis of diabetes without mention of short-term (ketoacidosis, hyperosmolarity, or coma) or long-term (renal, eye, neurological, circulatory, or other unspecified) complications per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.	Claims and Clinical	Discharges, for patients ages 18 years and older, with a principal ICD-9-CM and ICD-10-CM diagnosis code for uncontrolled diabetes without mention of a short-term or long-term complication.	Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. May be combined with diabetes short-term complications as a single indicator as a simple sum of the rates to form the Health People 2010 indicator (note that the AHRQ QI excludes transfers to avoid double counting cases).	None	Optum Labs	AHRQ PQI Resources



Transition to Medicare – Hospitalization and Harm

All measures in this table are alternative measures approved by QECP and a committee of Optum Labs community stakeholders. Original specifications were used for each measure, except that the Eligible Population for each measure was modified to the [Medicare Transition population described above](#).

Measure	Title	Description	Data Source	Numerator Statement	Denominator Statement	Exclusions	Steward	Original Steward
Not Applicable	Hospitalizations per 1000 Medicare fee-for-service (FFS) Beneficiaries	Number of hospital discharges from an acute care hospital (PPS or CAH) per 1000 FFS Medicare beneficiaries at the state and community level by quarter and year.	Claims	Number of hospital discharges from an acute care hospital (PPS or CAH)	Medicare FFS beneficiaries, prorated based on the number of days of FFS eligibility in the time period (quarter or year).	None	Optum Labs	CMS
Not Applicable	Proportion of patients with a chronic condition that have a potentially avoidable complication during a calendar year.	Percent of adult population aged 18+ years who were identified as having at least one of the following six chronic conditions: Asthma, Chronic Obstructive Pulmonary Disease (COPD), Coronary Artery Disease (CAD), Heart Failure (HF), Hypertension (HTN), or Diabetes Mellitus (DM), were followed for at least one-year, and had one or more potentially avoidable complications (PACs) during the most recent 12 months. Please reference attached document labeled NQF_Chronic_Care_PACs_01_24_17.xls, in the tabs labeled PACs I-9 & I-10 for a list of code definitions of PACs relevant to each of the above chronic conditions.	Claims	Outcome: Number of patients with at least one of the following six chronic conditions: Asthma, Chronic Obstructive Pulmonary Disease (COPD), Coronary Artery Disease (CAD), Heart Failure (HF), Hypertension (HTN), or Diabetes Mellitus (DM), and had one or more potentially avoidable complications (PACs), during the most recent 12 months.	Adult patients aged 18+ years who were identified as having at least one of the following six chronic conditions: Asthma, Chronic Obstructive Pulmonary Disease (COPD), Coronary Artery Disease (CAD), Heart Failure (HF), Hypertension (HTN), or Diabetes Mellitus (DM), and were followed for at least 12 months.	Patients are excluded from the measure if they are less than 18 years of age, have an incomplete episode of care (less than 18 months of claims), have an enrollment gap of more than 30 days, or have outlier costs for the most recent 12 months of claim costs. Claims are excluded from the episode if they are for services that are not relevant to the chronic condition.	Optum Labs	Altarum Institute
Not Applicable	30-day Re-hospitalizations per 1000 Medicare fee-for-service (FFS) Beneficiaries	Number of re-hospitalizations occurring within 30 days of discharge from an acute care hospital (prospective payment system (PPS) or critical access hospital (CAH)) per 1000 FFS Medicare beneficiaries at the state and community level by quarter and year.	Claims	Number of re-hospitalizations within 30 days of discharge from an acute care hospital (PPS or CAH).	Medicare FFS beneficiaries, prorated based on the number of days of FFS eligibility in the time period (quarter or year).	None	Optum Labs	CMS
Not Applicable	Risk-Standardized Acute Admission	Rate of risk-standardized acute, unplanned hospital admissions among Medicare Fee-for-Service (FFS) patients	Claims	The outcome measured for each	The target population is ambulatory Medicare	The measure excludes: 1. Patients	Optum Labs	CMS

	Rates for Patients with Heart Failure	65 years and older with heart failure		patient is the number of acute, unplanned admissions per 100 person-years at risk for admission. Persons are considered at risk for admission if they are alive, enrolled in FFS Medicare, and not currently admitted.	FFS patients aged 65 years and older with a diagnosis of heart failure.	without continuous enrollment in Medicare Part A for the duration of the measurement period (or until death). Rationale: We exclude these patients to ensure full data availability for outcome assessment. 2. Patients with left ventricular assist devices (LVADs). Rationale: We exclude these patients because while they have a high risk of admission, they are low in prevalence and are clustered among a few ACOs.		
Not Applicable	Risk-Standardized Acute Admission Rates for Patients with Diabetes	Rate of risk-standardized acute, unplanned hospital admissions among Medicare fee-for-service (FFS) patients 65 years and older with diabetes	Claims	The outcome measured for each patient is the number of acute, unplanned admissions per 100 person-years at risk for admission. Persons are considered at risk for admission if they are alive, enrolled in FFS Medicare, and not currently admitted.	The target population is ambulatory Medicare FFS patients aged 65 years and older with a diagnosis of diabetes.	The measure excludes: 1. Patients without continuous enrollment in Medicare Part A for the duration of the measurement period (or until death). Rationale: We exclude these patients to ensure full data availability for outcome assessment (Part A during the measurement year).	Optum Labs	CMS

<p>Not Applicable</p>	<p>Risk-Standardized Acute Admission Rates for Patients with Multiple Chronic Conditions</p>	<p>Rate of risk-standardized acute, unplanned hospital admissions among Medicare fee-for-service (FFS) patients 65 years and older with multiple chronic conditions (MCCs)</p>	<p>Claims</p>	<p>The outcome measured for each patient is the number of acute, unplanned admissions per 100 person-years at risk for admission. Persons are considered at risk for admission if they are alive, enrolled in FFS Medicare, and not currently admitted.</p>	<p>Our target population is Medicare FFS patients aged 65+ whose combinations of chronic conditions put them at high risk of admission and whose admission rates could be lowered through better care. The NQF's "Multiple Chronic Conditions Measurement Framework," defines patients with multiple chronic conditions as people "having two or more concurrent chronic conditions that... act together to significantly increase the complexity of management, and affect functional roles and health outcomes, compromise life expectancy, or hinder self-management [1]." Operationally, the measure cohort includes patients with diagnoses in two or more of eight chronic disease groups: 1. Acute myocardial infarction (AMI), Alzheimer's disease and related disorders or senile dementia, Atrial fibrillation, Chronic kidney disease (CKD),</p>	<p>The measure excludes: 1. Patients without continuous enrollment in Medicare Part A for the duration of the measurement period (or until death). Rationale: We exclude these patients to ensure full data availability for outcome assessment (Part A during the measurement year).</p>	<p>Optum Labs</p>	<p>CMS</p>
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					Chronic obstructive pulmonary disease (COPD) and asthma, Depression, Heart failure, Stroke and transient ischemic attack (TIA) This approach captures ~ 25% of Medicare FFS beneficiaries 65+ with at least 1 chronic condition.			
Not Applicable	Potentially Harmful Drug-Disease Interactions in the Elderly	The percentage of Medicare members 65 years of age and older who have evidence of an underlying disease, condition or health concern and who were dispensed an ambulatory prescription for a potentially harmful medication, concurrent with or after the diagnosis. Report each of the three rates separately and as a total rate. <ul style="list-style-type: none"> • A history of falls and a prescription for anticonvulsants, nonbenzodiazepine hypnotics, SSRIs, antipsychotics, benzodiazepines or tricyclic antidepressants. • Dementia and a prescription for antipsychotics, benzodiazepines, tricyclic antidepressants, H2 Receptor Antagonists, nonbenzodiazepine hypnotics or anticholinergic agents. • Chronic kidney disease and prescription for Cox-2 Selective NSAIDs or nonaspirin NSAIDs. • Total rate (the sum of the three numerators divided by the sum of the three denominators). Members with more than one disease or condition may appear in the measure multiple times (i.e., in each indicator for which they qualify). A lower rate represents better performance for all three rates.	Claims	Rate 1: Drug-Disease Interactions (DDI)—History of Falls and Anticonvulsants, Nonbenzodiazepine Hypnotics, SSRIs, Antipsychotics, Benzodiazepines or Tricyclic Antidepressants - Dispensed an ambulatory prescription for an anticonvulsant, nonbenzodiazepine hypnotic, SSRI, antipsychotic, benzodiazepine or tricyclic antidepressant on or between the IESD and December 31 of measurement year. Rate 2: Dementia and Antipsychotics, Benzodiazepine or	Members 67 years or older as of December 31 of the measurement year who had at least one disease, condition or procedure in the measurement year or the year prior to the measurement year. Refer to Additional Eligible Population Criteria for each rate. Rate 1: An accidental fall or hip fracture* on or between January 1 of the year prior to the measurement year and December 1 of the measurement year. Rate 2: Identify members with a diagnosis of dementia (Dementia Value Set) or a dispensed dementia medication on or between January 1 of	Exclude from the eligible population members who begin using hospice services during the measurement year. Exclude denied claims from the numerator. Rate 1: Exclude members with a diagnosis of psychosis, schizophrenia, bipolar disorder or seizure disorder on or between January 1 of the year prior to the measurement year and December 1 of the measurement year. Rate 2: Exclude members with a diagnosis of psychosis, schizophrenia or bipolar disorder on or between January 1 of the year prior to the	Optum Labs	NCQA

			<p> pines, Tricyclic Antidepressants, H2 Receptor Antagonists, Nonbenzodiazepine Hypnotics or Anticholinergic Agents - Dispensed an ambulatory prescription for an antipsychotic, benzodiazepine or tricyclic antidepressant or H2 receptor antagonist, nonbenzodiazepine hypnotic or anticholinergic agent on or between the IESD and December 31 of the measurement year. Rate 3: DDI-Chronic Kidney Disease and Cox-2 Selective NSAIDs or Nonaspirin NSAIDs - Dispensed an ambulatory prescription for a Cox-2 selective NSAID or nonaspirin NSAID on or between the IESD and December 31 of the measurement year. </p>	<p> the year prior to the measurement year and December 1 of the measurement year. Rate 3: Chronic kidney disease as identified by a diagnosis of ESRD, stage 4 chronic kidney disease or kidney transplant on or between January 1 of the year prior to the measurement year and December 1 of the measurement year. </p>	<p> measurement year and December 1 of the measurement year. </p>		
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