Premera Premier Provider Program Methodology

VERSION 2.0



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Program introduction

The Premera Premier Provider program evaluates provider quality and cost-efficiency performance on contracted providers across 12 specialties, including primary care and pediatric primary care. Providers include physicians, physician's assistants, and nurse practitioners. The program uses methodology consistent with national and industry standards to grant high-performance provider designations with a goal of transparency in assisting Premera's members in making well-informed choices about their healthcare. Designating high-performance providers helps members get higher-quality and more cost-efficient care and encourages providers to improve the care they deliver.

Program goal and guiding principles

The Premera Premier Provider program aims to empower Premera members with high-value care solutions and to recognize providers for their quality of care delivered and efficient use of resources. This will be achieved by featuring high-performance providers in its products and services that navigate members to effective, appropriate, cost efficient, and exceptional care.

Core to this goal are the program guiding principles of measuring provider performance:

- Objectively
- Transparently
- Defensibly, and
- Consistently

Quality and cost-efficiency measurement approaches are anchored in both industry and national standards and rely on robust Premera claims and Center for Medicare & Medicaid Services (CMS) data sources. The program uses third-party analytics to promote an objective perspective on performance.

Vendor partnerships and technologies

Premera partners with vendors in the market that focus on provider performance and member guidance to high-performance providers and services. The following technologies have been incorporated into the methodology of the Premera Premier Provider program.

- 1. Optum Symmetry
- 2. Quantros Outcomes Insights

1. Optum Symmetry

The Premera Premier Provider program uses Symmetry, an industry-standard platform available through Optum, to evaluate the quality and cost-efficiency performance of episodes of care. Symmetry serves as a third-party data source for credibility, common adoption, and industry expertise. Premera quality professionals engage with the Symmetry platform to stay abreast of all national and industry changes, additions, or retirements of quality measures.

2. Quantros Outcomes Insights

Outcomes Insights hospital inpatient and outpatient outcomes data is incorporated from Quantros into the Premera Premier Provider program methodology. Quantros uses CMS data to compare the quality of hospital inpatient and outpatient provider care to national standards across a variety of clinical indicators. For the purposes of the program, Quantros' Outcomes Insights data is combined with the Symmetry quality data to ensure comprehensive quality measurement coverage.

Document content

The content of this document is divided into the following three (3) sections.

Terminology helpful for navigating this document is provided in Appendix A

· Section I: How Premera designates high-performance providers

This section provides an overview of how Premera designates high-performance providers, outlines the methodology behind the performance calculations, and reviews the designations providers can receive

Section II: Performance calculation methodology

This section explores in detail the program performance calculation methodology used to measure the quality and cost-efficiency performance of individual providers

• Section III: Program considerations

This section reviews important program considerations including provider performance reconsideration, program exclusions, and COVID-19 impacts

I. How Premera designates high-performance providers

The Premera Premier Provider program grants provider designations based on quality and cost-efficiency performance to provide members with the information and tools they need to make the best healthcare decisions.

Premera-contracted providers are evaluated annually using updated quality and cost-efficiency methodologies and claims data. Several factors contribute to the evaluation of providers for high-performance designations. This section reviews the following components of how the program designates providers:

- a. Eligibility
- b. Assessed specialties
- c. Peer group
- d. Episodes of care
- e. Attribution
- f. Review period
- g. Statistical validity
- h. Performance calculations
- i. Provider performance designations

a. Eligibility

Providers may receive a high-performance designation if they meet the following requirements:

- Located in the Washington markets served by Premera
- Contracted with Premera's commercial line of business
- Practicing and board certified within one of the 12 assessed specialties
- Meets minimum volume requirements for completed episodes of care
- High performance on elements of quality and/or cost-efficiency

b. Assessed specialties

Currently the program evaluates providers in the subsequent 12 specialties. A provider can only be assigned to one specialty. The specialty types evaluated account for more than 60% of healthcare spend, based on Premera claims data, in the commercial line of business. Program specialties are subject to change and program documentation will be updated accordingly.

Primary Care	Orthopedics	Gastroenterology	Pediatric Primary Care	General Surgery	Cardiology
Pulmonary Medicine	Obstetrics & Gynocology	Psychiatry	Endocrinology	Neurology	Rheumatology

c. Peer group

In order to compare performance, providers are sorted into a peer group. A provider's credentialed specialty and metropolitan statistical area (MSA) are used to determine the provider peer group for comparison of quality and cost-efficiency performance results. The MSA is defined by the provider's practicing location based on the provider's credentialed address. Premera deems a provider as distinct by the combination of the National Provider Identifier (NPI) and the MSA.

The provider's performance is compared to the performance of same-specialty providers in the same MSA. A minimum of three (3) providers is required to define a peer group. When a provider practices in multiple MSAs, they are designated separately per location.

d. Episodes of care

The Premera Premier Provider program uses Episode Treatment Groups (ETG), an industry-standard illness classification methodology, to combine services into a complete episode of care. All claims related to a specific condition are grouped together into an ETG. Each episode of care is assigned a severity level from 1 (low) to 4 (high) based on members comorbidities and complications.

Only completed episodes of care are included in the performance calculation. All acute or non-chronic episodes of care are complete when enough time has passed since services were rendered for the condition to indicate that the episode has ended. All chronic ETG episodes are 12-months in duration and a new episode is created for the next 12-month period.

Only members with at least six (6) months of continuous eligibility during the year(s) used are included.

A full list of Symmetry Episode Treatment Groups is provided in Appendix C

e. Attribution

Quality performance measurement in the Premera Premier Provider program attributes quality measures to members based on the member's medical condition and type of treatment. The member is then attributed to a provider, tying the member's quality measures to the provider. A provider must have at least five (5) quality measure compliance opportunities in at least two (2) Optum Symmetry Evidence-Based Medicine (EBM) quality categories for consideration.

For acute or chronic evidence-based quality measures, metrics specific to triggering claims are attributed to the provider on that claim. For population health and preventative measures, members are attributed to providers based on having at least two (2) Evaluation and Management (E&M) visits in the program measurement period (24 months).

For hospital-based measures, a specific procedure or inpatient episode of care is attributed to the provider.

Within cost-efficiency performance, the episode of care is attributed to the provider with the highest management or surgical allowed cost within the episode. The cost-efficiency performance measurement requires a minimum of ten (10) episodes attributed to a provider within a two-year period. Each episode also

requires that a provider have three (3) peers who have been attributed episodes for the same severity and same medical condition as the attributed provider.

A single member with more than one (1) medical condition or with more than one (1) case of the same acute medical condition may have multiple episodes of care within a calendar year. This can lead a member to be attributed to multiple providers in different specialties within the same calendar year.

f. Review period

The Premera Premier Provider program uses claims paid data run for a 36-month time period comprising calendar years 2019, 2020, and 2021. Quality data incorporates an additional three months of claims to incorporate 39-month timespan measures. All relevant services and procedures for episodes finalized between January 1, 2019 and December 31, 2021 are included. All chronic condition episodes of care are 12 months in duration and a new episode is created for the next 12-month period.

Quantros Outcomes Insights uses a trailing 12-quarter data run.

g. Statistical validity

To ensure the Premera Premier Provider program data are reliable and accurately representing providers, various methods are implemented to achieve statistical validity for both quality and cost-efficiency. Further statistical rigor is embedded in the approach and methodologies by our vendor partners and technologies.

Quality

A provider is designated as high-performance in quality when they are statistically more compliant in their quality measures than their peers. The Premera Premier Provider program uses an industry-standard z-scoring process for determining quality statistical validity.

Cost-Efficiency

A provider is designated as high-performance in cost-efficiency based on a re-sampling process of episodes by MSA to identify statistically significant differences. The Premera Premier Provider program uses an industry-standard re-sampling process for determining cost-efficiency statistical validity.

Case-mix adjustment

For cost-efficiency performance, the Premera Premier Provider program uses case-mix adjustment to account for variations in the make-up of the members and episodes each provider treats. Case-mix adjustment ensures fair comparison of performance among providers with a differing mix of member conditions, procedures, and severity levels. Within the program, case mix is defined by the conditions a provider treats and at what severity.

Outliers

In assessing cost-efficiency performance, the Premera Premier Provider program includes a methodology to account for outlier episodes. Each ETG/severity combination is assigned a normalized range of cost by the Optum Symmetry software. Episode costs outside of the normalized range are considered outliers and excluded from the cost-efficiency performance calculation.

In addition, minimum threshold volumes are applied in both quality and cost-efficiency calculations as further explained in the detailed performance calculation sections.

h. Performance calculations

This section reviews the following components of the provider performance calculations:

- 1. Quality performance
- 2. Cost-efficiency performance

Detailed performance calculation examples are provided in Section II

1. Quality performance

Quality measures

The quality performance of a provider is evaluated using a claims-based assessment of evidence-based and hospital-based quality metrics. The quality measures selected for the Premera Premier Provider program are based on national and industry standards, clinical significance, existing Premera value-based contracts and networks, and metrics important to local population health priorities. These measures cover hundreds of conditions and surgical procedures and span across several categories of quality including:

- National Standards
- Care Patterns
- Unplanned Encounters
- Disease Management
- Medication Adherence
- Complications

- Patient Safety
- Overuse
- Mortality

The Premera Premier Provider program uses two groupings of quality measurement: evidence-based measures and inpatient care measures.

- Evidence-based measures identify gaps between clinical evidence and practice, pinpoint members with poor disease control, and highlight unnecessary or harmful treatments or tests
- Hospital-based measures compare the quality of inpatient and outpatient hospital and provider care to
 national standards using a variety of clinical indicators including complications, unplanned encounters, and
 mortality.

The full program Quality Measure Library is provided in Appendix B

Performance calculation

A provider's quality performance calculation is the ratio between a provider's average compliance on quality measures to their peers. This comparison is calculated as the measure effectiveness.

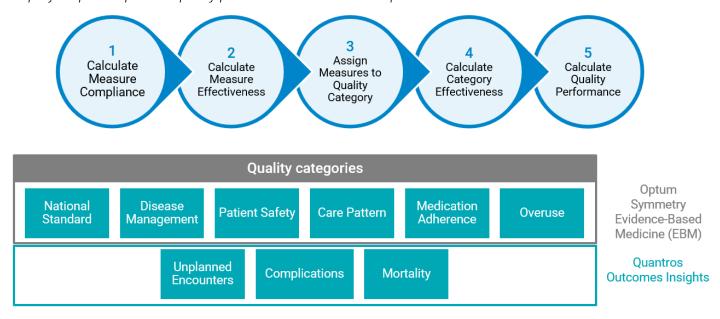
The program quality measures are assigned to seven (7) quality categories. The aggregation of the unplanned encounters, complications, and mortality domains form the Quantros Outcomes Insights category. The quality measures within categories are equally weighted to create a category level effectiveness. Each quality category is then equally weighted to create an overall effectiveness for the provider.

Within the inpatient dominated specialties of Orthopedics, Cardiology, Pulmonary Medicine, and General Surgery, providers scoring above the 90th national percentile in the Quantros Outcomes Insights domain achieve a quality designation.

See Figure 1.0 below for the quality performance calculation method steps and the program quality categories.

Figure 1.0: Quality performance calculation steps and categories





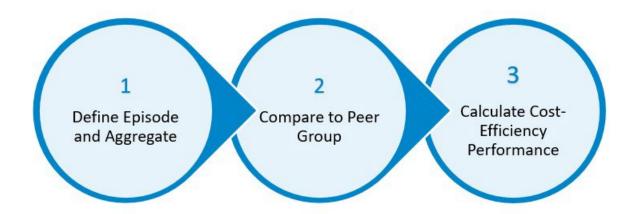
2. Cost-efficiency performance

To calculate cost-efficiency performance, the Premera Premier Provider program uses member episodic cost measurement applicable to the provider's specialty. Allowed amounts are used for cost-efficiency performance and reflect both the member cost burden and that paid by Premera. Pharmacy and lab costs are included in the total allowed amount.

A provider's cost-efficiency performance calculation is the ratio between a provider and their case-mix adjusted peer group. This ratio is computed by defining the provider's episodic costs and case mix and comparing the provider to their peer group where the group's utilization is set to match the provider's case-mix adjustment.

See Figure 2.0 below for the cost-efficiency performance calculation method steps.

Figure 2.0: Cost-efficiency performance calculation steps



Episodes of care can vary based on:



A step-by-step provider example of a cost-efficiency performance calculation is provided in Section II

i. Provider performance designations

The Premera Premier Provider program individually calculates quality and cost-efficiency performance separately and, for those providers who have both quality and cost-efficiency performance data available, an overall performance is calculated.

Within the Premera Premier Provider program, the following designations are available to providers:

- **High performance**: Provider excels among their peers in both quality and cost-efficiency
- **High quality**: Provider excels among their peers in quality performance only
- Cost-efficient: Provider excels among their peers in cost-efficiency performance only

The program first assesses a threshold on quality to qualify for any available designation. In this assessment, providers that are two (2) standard deviations lower-than-the-mean in at least two (2) of the EBM quality categories, or if they are below the 10th national percentile in the Quantros Outcomes Insights category, are not eligible for any high-performance designation.

II. Performance calculation methodology

The Premera Premier Provider program applies standardized quality and cost-efficiency performance methodologies to designate high-performance providers. Quality and cost-efficiency performance are assessed separately to determine if a provider is designated as high performance in each area alone or in both. This section reviews in detail the following components of the performance calculation methodology:

- a. Quality performance calculation
- b. Cost-efficiency performance calculation

a. Quality performance calculation

A provider's quality performance calculation is the ratio between a provider's average compliance on quality measures to their peers.

The quality performance calculation is divided into the following five-step process. The steps are paired with an example provider, a fictional cardiologist, Dr. Brown, to assist in understanding how each step in the process works.



Step 1: Calculate measure compliance

Quality measures linked to select clinical conditions are identified for a provider and their peers, and the average compliance rate is calculated for each applicable measure.

Peer group compliance rates are the average of providers within the same specialty in the MSA. The peer group compliance rates exclude the individual provider's compliance rates.

For evidence-based medicine (EBM) measures, it is possible for a member to count more than once for a single provider on a single measure if multiple instances of the triggering criteria exist. In addition, multiple measures

for the same eligible member can be applied to the same provider. EBM quality measures are not risk adjusted, as the EBM rules have exact technical specifications for both numerator and denominator for each measure.

Table 1.0 below illustrates both Dr. Brown's and her peers' quality measure compliance.

Table 1.0: Quality measure compliance

Quality		Dr. Brown	Dr. Brown's Quality Compliance		Peer Group's Quality Compliance		
Category	Quality Measure	Compliant	Total	Compliance Rate	Compliant	Total	Compliance Rate
Care Pattern	Patient(s) with an LDL cholesterol test in last 24 reported months	29	30	96.7%	108	123	87.8%
Care Pattern	Patient(s) that had an ambulatory visit for CAD care in last 12 reported months	22	30	73.3%	82	123	66.7%
Disease Management	Patient(s) currently taking an ACE-inhibitor or angiotensin receptor blocker (ARB)	7	13	53.8%	17	39	43.6%
Disease Management	Patient(s) currently taking a statin	9	14	64.3%	20	42	47.6%
Medication Adherence	Patient(s) compliant with prescribed ACE-inhibitor- containing medication (minimum compliance 80%)	1	2	50.0%	6	7	85.7%
Medication Adherence	Patient(s) compliant with prescribed calcium channel blocker-containing medication (minimum compliance 80%)	2	2	100.0%	7	8	87.5%
National Standard	Patient(s) with cardiovascular disease that received a high- intensity or moderate- intensity statin medication	5	8	62.5%	27	38	71.1%

Quality	Quality Category Dr. Brown's Quality Compliance Compliant Total Compliance Rate		/ Compliance	Peer Group's Quality Compliance			
Category			Total		Compliant	Total	Compliance Rate
National Standard	Men 21-75 years of age with cardiovascular disease that received a high-intensity or moderate-intensity statin medication	5	8	62.5%	20	26	76.9%
Patient Safety	Patient(s) concurrently taking two medications (nitrate and phosphodiesterase type 5 inhibitor) with interacting properties	14	14	100.0%	42	42	100.0%
Patient Safety	Patient(s) taking ACE- inhibitor or angiotensin receptor blocker (ARB) that had serum creatinine test in last 12 reported months.	7	7	100.0%	15	17	88.2%
Quantros Outcomes Insights	Quantros Outcomes Insights	-	-	70.72 Percentile	-	-	65.19 Percentile

Step 2: Calculate measure effectiveness

Evidence-based medicine (EBM) measures

Effectiveness is calculated for each EBM quality measure as the ratio of the provider's compliance to their peers.

EBM Effectiveness = Provider Compliance / Peer Compliance

Quantros Outcomes Insights Measures

Quantros Outcomes Insights acts as its own quality category as an aggregation of unplanned encounters, complications, and mortality defined by Quantros. Quantros rated providers are given a national percentile.

A provider's Quantros effectiveness is the difference between a provider's percentile and their peers plus one.

Quantros Effectiveness = 1 + (Provider Outcomes Insights – Average Peer Outcomes Insights)

Table 2.0 below breaks down provider and peer compliance into an effectiveness per measure.

Table 2.0: Quality measure effectiveness

Quality Category	Quality Measure	Dr. Brown's Compliance	Peer Compliance	Effectiveness
Care Pattern	Patient(s) with an LDL cholesterol test in last 24 reported months	96.7%	87.8%	1.10
Care Pattern	Patient(s) that had an ambulatory visit for CAD care in last 12 reported months	73.3%	66.7%	1.10
Disease Management	Patient(s) currently taking an ACE-inhibitor or angiotensin receptor blocker (ARB)	53.8%	43.6%	1.24
Disease Management	Patient(s) currently taking a statin	64.3%	47.6%	1.35
Medication Adherence	Patient(s) compliant with prescribed ACE-inhibitor-containing medication (minimum compliance 80%)	50.0%	85.7%	0.58
Medication Adherence	Patient(s) compliant with prescribed calcium channel blocker-containing medication (minimum compliance 80%)	100.0%	87.5%	1.14
National Standard	Patient(s) with cardiovascular disease that received a high-intensity or moderate-intensity statin medication	62.5%	71.1%	0.88
National Standard	Men 21-75 years of age with cardiovascular disease that received a high-intensity or moderate-intensity statin medication	62.5%	76.9%	0.81
Patient Safety	Patient(s) concurrently taking two medications (nitrate and phosphodiesterase type 5 inhibitor) with interacting properties	100.0%	100.0%	1.00
Patient Safety	Patient(s) taking ACE-inhibitor or angiotensin receptor blocker (ARB) that had serum creatinine test in last 12 reported months	100.0%	88.2%	1.13
Quantros Outcomes Insights	Quantros Outcomes Insights	70.72 Percentile	65.19 Percentile	1.06

Step 3: Assign measures to quality category

Quality measures are assigned to one of the quality measure categories (Found in Figure 1.0). Categories are determined by the Optum Symmetry tool and Quantros Outcomes Insights aggregation of unplanned encounters, complications, and mortality indicators into their overall Outcomes Insights category.

Step 4: Calculate category effectiveness

Quality categories equally weight each measure when calculating category-level effectiveness. Categories could have multiple measures or just one. In either scenario, the measure compliance is equally weighed and aggregated to create category level effectiveness.

Using the data from Table 2.0 above, Table 3.0 below depicts the effectiveness for all categories measured.

To calculate the Disease Management category effectiveness in this example, 1.30 = (1.24 + 1.35) / 2

Table 3.0: Category effectiveness

Quality Category	Effectiveness
Care Pattern	1.10
Disease Management	1.30
Medication Adherence	0.86
National Standard	0.85
Patient Safety	1.07
Outcomes Insights	1.06

Step 5: Calculate quality performance

Each quality category is equally weighted to create an overall effectiveness for the provider.

Dr. Brown's Effectiveness = (1.10 + 1.30 + 0.86 + 0.84 + 1.07 + 1.06) / 6 = 1.04

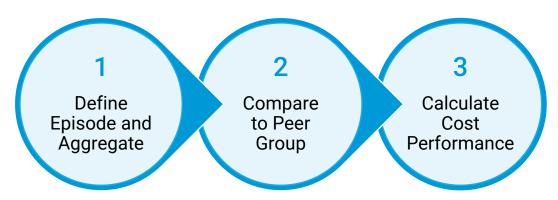
Across all quality measures, Dr. Brown is 4% more compliant than her peers on average.

Note: A quality effectiveness baseline is set at 1.00 for purposes of this example only. Baselines are dependent on average peer group compliance

b. Cost-efficiency performance calculation

A provider's cost-efficiency performance calculation is the ratio between a provider and their case-mix adjusted peer group. This ratio is computed by defining the provider's episodic costs and case mix and comparing the provider to their peer group where the group's utilization is set to match the provider's case-mix adjustment.

The cost-efficiency performance calculation is divided into the following three-step process. The steps are paired with an example provider, a fictional gynecologist, Dr. Smith, to assist in understanding how each step in the process works.



For purposes of this example, Dr. Smith is treating the following population:

Specialty:	Obstetrics and Gynecology
MSA:	Seattle Bellevue Kent (SBK)
Conditions Treated:	9
Total Episodes:	24

Step 1: Define episode and aggregate

The ETG methodology captures services provided and organizes claims data into meaningful episodes of care. For a provider to be eligible for a cost-efficiency performance calculation, a provider must have at least ten (10) episodes across all ETGs. Each ETG must have at least three (3) peers treating the same condition.

The peers' episodic costs and case mix based on individual provider is defined. A provider's peers must all match on the provider's MSA, same credentialed specialty, and the ETGs in which the provider has treated.

Average costs by ETG (condition and severity) are calculated for each provider and their peer group.

Step 2: Compare to peer group

An average allowed amount is created for both the provider and the peer group, using the provider's case mix for each in order to case mix adjust the peer's average allowed to match the provider.

Overall Dr. Smith Average Allowed = \sum Dr. Smith Episode Count * Dr. Smith Average Allowed

Overall Peer Average Allowed = \sum Dr. Smith Episode Count * Peer Average Allowed

Table 4.0 below illustrates Dr. Smith's average allowed per ETG and the average allowed for his peer group.

Table 4.0: Provider and Peer Group Average Allowed

*The case volumes of the peer group are adjusted to match that of the provider to ensure adequate case mix

ETG Description		Dr. Smith	Peer Group		
E16 Description	Episodes	Average Allowed	Episodes*	Average Allowed	
Contraceptive management without surgery	9	786	56 ⇒ 9	822	
Conditional exam	6	372	48 🔿 6	370	
Routine exam	2	495	23 🗪 2	316	
Other disease of the female genital tract, without surgery	2	183	27 🗪 2	475	
Obesity, without complications, without comorbidity, without surgery	1	460	15	263	
Other disorder of the breast, without surgery	1	556	18 🔿 1	278	
Joint degeneration of the back, without complications, with comorbidity, without surgery	1	903	20 🗪 1	1,508	
Nonmalignant breast tumor with complications, without comorbidity, without surgery	1	96	14 🗪 1	501	
Vaginal yeast infection	1	364	17	401	

Step 3: Calculate Cost Performance

A provider's performance calculation is the ratio between their average allowed and the case-mix adjusted peer group. This ratio is made to define how much more/less efficient the provider is compared to their peers within the same conditions and severity.

Dr. Smith's Cost-Efficiency Performance = 543 / 589 = .9215

Dr. Smith is roughly 8% less cost-efficient than his peers treating the same conditions.

III. Program considerations

This section includes information on the following program considerations:

a. Provider performance reconsideration

- b. Program exclusions
 - a. Quality of Care reviews
 - b. Special Investigation Unit (SIU) reviews
- c. COVID-19

a. Provider performance reconsideration

The Premera Premier Provider program offers providers and their approved delegates an opportunity to request a correction or change to quality and cost-efficiency data collected in their performance calculation. Premera reserves the right to make any such requested change in its sole discretion.

Please contact your Premera assigned Provider Network Executive to request reconsideration of performance.

b. Program exclusions

Premera reserves the right to exclude providers in its sole discretion for any reason, including, but not limited to, situations when there may be a sanction against a provider's license, or a provider has lost their license. This exclusion right also applies to providers currently under Quality of Care and Special Investigation Unit reviews.

Quality of Care reviews

Quality of Care complaint reviews occur if a member, provider, or Premera employee expresses concern about the quality of care received by a member. In this case, Premera takes the following steps:

- Document and investigate the concern
- Investigate case using our standard processes
- Request pertinent information and/or medical record documentation as needed
- Seek review by Premera medical clinicians, peers, or board-certified specialists as needed

The Premera Premier Provider program assesses open Quality of Care reviews on a quarterly basis. When a provider is currently under investigation, the provider may be excluded from the program until the investigation is complete, subject to Premera discretion.

Special Investigation Unit (SIU) reviews

The Premera Premier Provider program assesses open Special Investigation Unit (SIU) reviews on a quarterly basis. Providers who are under pre-payment review with the SIU may be excluded from the program until the investigation is complete, subject to Premera discretion.

c. COVID-19

A new COVID-19 diagnosis code has been incorporated into a range of ETG base classes depending upon the clinical manifestations of the infection. To facilitate recognition of COVID-19 patients and episodes, a new condition status code was added to all versions of the Optum Symmetry platform.

Disclaimer

The provider performance designations provided by the Premera Premier Provider program only reflect a partial assessment of quality and cost-efficiency performance based on claims data and should not be the sole basis for decision-making as such measures have a risk of error. Premera participating providers are independent practitioners; they are not employees or agents of Premera. Treatment decisions are made exclusively by the treating provider and their member. Premera provides members with helpful information to allow them to make informed decisions. The quality and cost-efficiency performance designations used in evaluating providers for the Premera Premier Provider program are intended for that purpose only. Premera does not guarantee the quality or cost-efficiency of the actual services provided by contracted providers.

Appendix A: Terminology

EBM (Evidence-Based Medicine)

Quality measures that identify adherence to established standards of care and use enrollment and claims data to identify potential deviations in member care from evidence-based guidelines

ETG (Episode Treatment Group)

Construct of resource-homogenous episodes of care that can be compared across members, providers, and populations

MSA (Metropolitan Statistical Area)

Defined by the U.S. census, it is the formal definition of a region that consists of a city and surrounding communities that are linked by social and economic factors

NPI (National Provider Identifier)

A unique identification number for covered healthcare providers. Covered healthcare providers and all health plans and healthcare clearinghouses must use the NPIs in the administrative and financial transactions adopted under the Health Insurance Portability and Accountability Act (HIPAA). The NPI is a 10-position, intelligence-free numeric identifier (10-digit number)

Quality Categories

Domains of quality that group similar metrics together into a type. Quality categories within the program include:

- National Standard
- Disease Management
- Patient Safety
- Care Pattern
- Medication Adherence
- Overuse
- Unplanned Encounters*
- Complications*
- Mortality*

^{*} Unplanned Encounters, Complications, and Mortality are combined into Quantros Outcomes Insights

Appendix B: Quality Measure Library

The Premera Premier Provider program Quality Measure Library consists of curated measures clinically significant to the program's 12 assessed specialties.

Condition or Procedure	Quality Measure	Measure Description	Specialty
ADHD	ADHD Follow-up Care for Children Prescribed ADHD Medication	Patient(s) with an outpatient, intensive outpatient, or partial hospitalization follow-up visit with a prescribing provider during the 30 days after the initial ADHD prescription	Pediatric Primary Care Primary Care
Access to Care	Adults' Access to Preventive/Ambulatory Health Services	Patient(s) 20 years of age and older who had a preventive or ambulatory care visit during the last 12 months of the report period	Primary Care
Access to Care	Children and Adolescents' Access to PCPs 25 Months- 6 Years of Age	Patient(s) 25 months to 6 years of age who had a PCP visit during the 12 months prior to the end of the report period	Pediatric Primary Care Primary Care
Access to Care	Children and Adolescents' Access to PCPs 7-11 Years of Age	Patient(s) 7-11 years of age who had a PCP visit during the 24-month report period	Pediatric Primary Care Primary Care
Access to Care	Children and Adolescents' Access to PCPs 12-19 Years of Age	Patient(s) 12-19 years of age who had a PCP visit during the 24-month report period	Pediatric Primary Care Primary Care
Adolescent Vaccinations	Vaccinations for Adolescents	Patient(s) 13 years old at the end of the report period who had three HPV vaccinations at least 14 days apart, or two HPV vaccinations at least 146 days apart, between their ninth and thirteenth birthdays	Pediatric Primary Care Primary Care
Adolescent Wellness	Wellness Visit 12 Months	Patient(s) 12–21 years of age who had one comprehensive wellness visit with a primary care provider (PCP) or an OB/GYN in the last 12 reported months	OB/GYN Pediatric Primary Care Primary Care
Alcohol and Other Drug Dependence	Follow-Up After Emergency Department (ED) Visit for Alcohol and Other Drug Dependence	Patient(s) 13 years and older with an ED visit for alcohol and other drug abuse or dependence who had a follow- up visit within 30 days	Psychiatry Pediatric Primary Care Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Alcohol and Other Drug Dependence	Treatment Initiation 13–17 Years of Age	Patient(s) between the ages of 13 and 17 with a new episode of alcohol or drug (AOD) abuse or dependence who initiated treatment within 14 days of the diagnosis	Psychiatry Pediatric Primary Care Primary Care
Alcohol and Other Drug Dependence	Treatment Initiation 18+ Years of Age	Patient(s) age 18 years or older with a new episode of alcohol or drug abuse or dependence who initiated treatment within 14 days of the diagnosis	Psychiatry Primary Care
Alcohol and Other Drug Dependence	Treatment Initiation with Follow-Up Visits	Patient(s) age 18 years or older with a new episode of alcohol abuse or dependence who initiated treatment and had two or more follow-up visits within 34 days of the initiation visit (i.e., engaged in treatment)	Psychiatry Primary Care
Asthma	Emergency Department Encounter 12 Months	Patient(s) who did not have an asthma-related emergency department encounter in last 12 reported months	Pediatric Primary Care Primary Care Pulmonary Medicine
Asthma	Hospitalization 12 Months	Patient(s) who did not have an asthma-related hospitalization in last 12 reported months	Pediatric Primary Care Primary Care Pulmonary Medicine
Asthma	Hospitalization or Encounter 3 Months	Patient(s) with an asthma- related hospitalization or ER encounter in last 3 reported months or frequently using short-acting beta2-agonist inhalers who had an ambulatory visit in last 3 reported months	Pediatric Primary Care Primary Care Pulmonary Medicine
Asthma	Pulmonary or Allergy Consultation 12 Months	Patient(s) exhibiting problematic asthma control who had pulmonary or allergy consultation in last 12 reported months	Pediatric Primary Care Primary Care Pulmonary Medicine
Asthma	Pediatric Uncontrolled Asthma	Pediatric patient(s) with presumed uncontrolled or partly controlled asthma using an inhaled corticosteroid or acceptable alternative	Pediatric Primary Care Primary Care Pulmonary Medicine

Condition or Procedure	Quality Measure	Measure Description	Specialty
Asthma	Ambulatory Visit 12 Months	Patient(s) who had an ambulatory visit for asthma care in last 12 reported months	Pediatric Primary Care Primary Care Pulmonary Medicine
Asthma	Osteoporosis Screening	Adult(s) 40 years and older taking chronic oral corticosteroids who had osteoporosis screening in last 24 reported months	Primary Care Pulmonary Medicine
Asthma	Asthma Medication Ratio 5–64 Years of Age	Patient(s) between the ages of 5 and 64 with an asthma medication ratio >= 0.50 during the report period	Pediatric Primary Care Primary Care Pulmonary Medicine
Asthma	Asthma Medication Ratio 5– 11 Years of Age	Patient(s) between the ages of 5 and 11 with an asthma medication ratio >= 0.50 during the report period	Pediatric Primary Care Primary Care Pulmonary Medicine
Asthma	Asthma Medication Ratio 12–18 Years of Age	Patient(s) between the ages of 12 and 18 with an asthma medication ratio >= 0.50 during the report period	Pediatric Primary Care Primary Care Pulmonary Medicine
Asthma	Medication Adherence to Asthma Medication 80% Leukotriene Modifier Inhaled Glucocorticoids	Patient(s) compliant with respective prescribed asthma medication (minimum compliance 80%)	Pediatric Primary Care Primary Care Pulmonary Medicine
Atrial Fibrillation	Warfarin Prothrombin Time Tests	Patient(s) taking Warfarin who had 3 or more prothrombin time tests in last 6 reported months	Cardiology Primary Care
Atrial Fibrillation	Thromboembolism Risk	Patient(s) at high risk for thromboembolism who are currently taking warfarin, an oral thrombin inhibitor, or an oral factor Xa inhibitor	Cardiology Primary Care
Atrial Fibrillation	Serum Creatinine Test 12 Months	Patient(s) taking digoxin who had serum creatinine test in last 12 reported months	Cardiology Primary Care
Atrial Fibrillation	Serum Potassium Test 12 Months	Patient(s) taking digoxin who had serum potassium test in last 12 reported months	Cardiology Primary Care
Atrial Fibrillation	Serum ALT or AST Test 12 Months	Patient(s) taking amiodarone who had serum ALT or AST test in last 12 reported months	Cardiology Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Atrial Fibrillation	Thyroid Stimulating Hormone (TSH) Test 12 Months	Patient(s) taking amiodarone who had thyroid stimulating hormone (TSH) test in last 12 reported months	Cardiology Endocrinology Primary Care
Atrial Fibrillation	Cardiology Consultation	Patient(s) exhibiting problematic atrial fibrillation control who had cardiology consultation in last 12 reported months	Cardiology Primary Care
Atrial Fibrillation	Atrial Fibrillation Medication Compliance 80% Calcium Channel Blocker Specifically Indicated for Atrial Fibrillation Beta-Blocker-Containing Digoxin Amiodarone Dronedarone Oral Thrombin Inhibitor Clopidogrel Oral Factor Xa Inhibitor	Patient(s) compliant with respective prescribed atrial fibrillation medication (minimum compliance 80%)	Cardiology Primary Care
Breast Cancer	Annual Mammogram	Patient(s) who had an annual mammogram	OB GYN Primary Care
Breast Cancer	Physician Visit	Patient(s) who had an annual physician visit	OB GYN Primary Care
Breast Cancer Screening	Screening Mammogram	Patient(s) 52–74 years of age who had a screening mammogram in last 27 reported months	OB GYN Primary Care
Bronchitis	Avoidance of Antibiotic Treatment in Adults for Acute Bronchitis	Patient(s) with a diagnosis of acute bronchitis who did not have a prescription for an antibiotic on or three days after the initiating visit	Primary Care
Cervical Cancer Screening	Cervical Cancer Screening	Women who had appropriate screening for cervical cancer (commercial enrollment)	OB GYN Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Coronary Artery Disease	CAD Medication Compliance 80%	Patient(s) compliant with respective prescribed coronary artery disease (CAD) medication (minimum compliance 80%)	Cardiology Primary Care
Coronary Artery Disease	CAD - Statin	Patient(s) currently taking a statin	Cardiology Primary Care
Coronary Artery Disease	CAD – ACE-Inhibitor or ARB	Patient(s) currently taking an ACE-inhibitor or angiotensin receptor blocker (ARB)	Cardiology Primary Care
Coronary Artery Disease	Myocardial Infarction Beta- Blocker	Patient(s) with a myocardial infarction in the past who are currently taking a beta-blocker	Cardiology Primary Care
Coronary Artery Disease	Medication Interaction	Patient(s) concurrently taking two medications (nitrate and phosphodiesterase type 5 inhibitor) with interacting properties	Cardiology Primary Care
Coronary Artery Disease	Serum Potassium Test 12 Months	Patient(s) taking ACE-inhibitor or angiotensin receptor blocker (ARB) who had serum potassium test in last 12 reported months	Cardiology Primary Care
Coronary Artery Disease	Serum Creatinine Test 12 Months	Patient(s) taking ACE-inhibitor or angiotensin receptor blocker (ARB) who had serum creatinine test in last 12 reported months	Cardiology Primary Care
Coronary Artery Disease	LDL Test 24 Months	Patient(s) with an LDL cholesterol test in last 24 reported months	Cardiology Primary Care
Coronary Artery Disease	LDL Result <100mg/dL	Patient(s) with most recent LDL result < 100mg/dL	Cardiology Primary Care
Coronary Artery Disease	Ambulatory Visit for CAD Care	Patient(s) who had an ambulatory visit for CAD care in last 12 reported months	Cardiology Primary Care
Coronary Artery Disease	Acute Myocardial Infarction	Patient(s) with an acute myocardial infarction in the last 36 months who are currently taking a beta-blocker	Cardiology Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Cardiovascular Disease	Statin Therapy for Patients with Cardiovascular Disease	Patient(s) with cardiovascular disease who received a high- intensity or moderate-intensity statin medication	Cardiology Primary Care
Cardiovascular Disease	Statin Therapy for Male Patients Ages 21–75 with Cardiovascular Disease	Men 21–75 years of age with cardiovascular disease who received a high- or moderate- intensity statin medication	Cardiology Primary Care
Cardiovascular Disease	Statin Therapy for Female Patients Ages 40–75 with Cardiovascular Disease	Women 40–75 years of age with cardiovascular disease who received a high-intensity or moderate-intensity statin medication	Cardiology Primary Care
Cardiovascular Disease	Statin Medication Adherence 80%	Patient(s) with statin adherence (proportion of days covered) at least 80% during the treatment period	Cardiology Primary Care
Cardiovascular Disease	Statin Medication Adherence for Male Patients Ages 21 – 75	Men 21–75 years of age with statin adherence (proportion of days covered) at least 80% during the treatment period	Cardiology Primary Care
Cardiovascular Disease	Statin Medication Adherence for Female Patients Ages 40-75	Women 40-75 years of age with statin adherence (proportion of days covered) at least 80% during the treatment period	Cardiology Primary Care
Cervical Cancer Screening	Non-Recommended Cervical Cancer Screening	Patient(s) 16–20 years of age who had a cervical cancer screening (cervical cytology or HPV test) in the last 12 reported months	OB GYN Primary Care
Cervical Dysplasia	PAP, Hysterectomy, Other Procedure 12–15 Months	Patient(s) with cervical dysplasia who had a PAP smear, hysterectomy, or other cervical procedure within 12– 15 months of the initial diagnosis	OB GYN Primary Care
Childhood Vaccinations	Childhood Immunizations Varicella	Patient(s) 2 years old at the end of the report period who had a varicella immunization between their first and second birthday	Pediatric Primary Care Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Childhood Vaccinations	Childhood Immunizations MMR	Patient(s) 2 years old at the end of the report period that had an MMR immunization between their first and second birthday	Pediatric Primary Care Primary Care
Childhood Vaccinations	Childhood Immunizations Hep A	Patient(s) 2 years old at the end of the report period who had one hepatitis A immunization between their first and second birthday	Pediatric Primary Care Primary Care
Childhood Vaccinations	Childhood Immunizations Influenza	Patient(s) 2 years old at the end of the report period who had two influenza vaccinations by their second birthday	Pediatric Primary Care Primary Care
Chlamydia Screening	Chlamydia Screening 16-24 Years of Age	Patient(s) 16 - 24 years of age who had a chlamydia screening test in last 12 reported months	OB GYN Primary Care
Chlamydia Screening	Chlamydia Screening 21-24 Years of Age	Patient(s) 21–24 years of age who had a chlamydia screening test in last 12 reported months	OB GYN Primary Care
Chronic Kidney Disease (CKD)	ARB Medication Compliance	Patient(s) compliant with prescribed angiotensin receptor blocker (ARB)-containing medication (minimum compliance 80%)	Endocrinology Primary Care
Chronic Kidney Disease	Statin Medication Compliance	Patient(s) compliant with prescribed statin-containing medication (minimum compliance 80%)	Endocrinology Primary Care
Chronic Kidney Disease	Statin Medication 50+ Years of Age	Patient(s) 50 years of age or older currently taking a statin	Endocrinology Primary Care
Chronic Kidney Disease	Annual Physician Visit	Patient(s) who had an annual physician visit	Endocrinology Primary Care
Chronic Kidney Disease	Proteinuria ACE-inhibitor	Patient(s) with proteinuria currently taking an ACE- inhibitor or angiotensin II receptor antagonist	Endocrinology Primary Care
Chronic Kidney Disease	Serum Creatinine 12 Months	Patient(s) who had a serum creatinine in last 12 reported months	Endocrinology Primary Care
Chronic Kidney Disease	Hemoglobin or Hematocrit 12 Months	Patient(s) with stage 3 or more advanced CKD who had	Endocrinology Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
		a hemoglobin or hematocrit in last 12 reported months	
Chronic Kidney Disease	LDL Test 24 Months	Adult(s) with stage 3 or more advanced CKD who had an LDL cholesterol test in last 24 reported months	Endocrinology Primary Care
Chronic Kidney Disease	HDL Test 24 Months	Adult(s) with stage 3 or more advanced CKD who had an HDL cholesterol test in last 24 reported months	Endocrinology Primary Care
Chronic Kidney Disease	Triglyceride Test 24 Months	Adult(s) with stage 3 or more advanced CKD who had a triglyceride test in last 24 reported months	Endocrinology Primary Care
Colon Cancer	Full Colonoscopy	Patient(s) newly diagnosed with colon cancer who had a full colonoscopy	Gastroenterology
Colon Cancer	PET Scan	Patient(s) newly diagnosed with colon cancer who did not have a PET scan	Gastroenterology
Colon Cancer Surveillance	Surveillance Colonoscopy 1 Year	Patient(s) newly diagnosed with non-obstructing colon cancer who had a surveillance colonoscopy approximately one year after diagnostic colonoscopy	Gastroenterology
Colon Cancer Surveillance	Surveillance Colonoscopy 90 Days	Patient(s) newly diagnosed with non-obstructing colon cancer who did not have a surveillance colonoscopy within 90 days after diagnostic colonoscopy	Gastroenterology
Colon Cancer Surveillance	Surveillance Colonoscopy 91-180 Days	Patient(s) newly diagnosed with non-obstructing colon cancer who did not have a surveillance colonoscopy between 91 days to 180 days after diagnostic colonoscopy	Gastroenterology
Colon Cancer Surveillance	Surveillance Colonoscopy 181-270 Days	Patient(s) newly diagnosed with non-obstructing colon cancer who did not have a surveillance colonoscopy between 181 days to 270 days after diagnostic colonoscopy	Gastroenterology
Colon Cancer Surveillance	Surveillance Colonoscopy 271-334 Days	Patient(s) newly diagnosed with non-obstructing colon	Gastroenterology

Condition or Procedure	Quality Measure	Measure Description	Specialty
		cancer who did not have a surveillance colonoscopy between 271 days to 334 days after diagnostic colonoscopy	
Chronic obstructive pulmonary disease (COPD)	COPD Exacerbation: Inhaled Bronchodilator Therapy	Patient(s) 40 years of age and older with COPD exacerbation who received a bronchodilator within 30 days of the hospital or ED discharge	Primary Care Pulmonary Medicine
COPD	COPD Exacerbation: Systemic Corticosteroid Therapy	Patient(s) 40 years of age and older with COPD exacerbation who received a systemic corticosteroid within 14 days of the hospital or ED discharge	Primary Care Pulmonary Medicine
COPD	COPD, Use of Spirometry Testing in Assessment and Diagnosis	Patient(s) who had appropriate spirometry testing to confirm COPD diagnosis	Primary Care Pulmonary Medicine
COPD	Pulmonary Consultation	Patient(s) with indications who had pulmonary consultation in last 12 reported months	Primary Care Pulmonary Medicine
Depression	Antidepressant Medication Compliance 80% Tricyclic Selective Serotonin Reuptake Inhibitor Bupropion Serotonin and Norepinephrine Uptake Inhibitor-Containing Nefazodone Mirtazapine Antipsychotic-Containing Prescribed Lithium Vilazodone Vortioxetine	Patient(s) compliant with prescribed respective antidepressant medication (minimum compliance 80%)	Psychiatry Primary Care
Depression	Antidepressant Medication Management - 6 Months (Effective Continuation Phase Treatment)	Patient(s) with a major depression who start an antidepressant medication who remained on treatment for at least 6 months (effective continuation phase treatment)	Psychiatry Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Depression	Antidepressant Medication Management - 12 Weeks (Effective Acute Phase Treatment)	Patient(s) with major depression who start an antidepressant medication who remained on treatment for at least 12 weeks (effective acute phase treatment)	Psychiatry Primary Care
Depression	Mental Health Evaluation	Patient(s) with evidence of severe depression who had a mental health evaluation in last 3 months	Psychiatry Primary Care
Depression	Annual Provider Visit 18+	Patient(s) 18 years of age or older taking a medication for depression treatment who had an annual provider visit	Psychiatry Primary Care
Depression	Annual Provider Visit Under 18	Patient(s) less than 18 years of age taking a medication for depression treatment who had a provider visit in last 6 reported months	Psychiatry Primary Care Pediatric Primary Care
Depression	Lithium TSH Testing	Patient(s) taking lithium who had a serum TSH test in last 12 reported months	Psychiatry Primary Care Pediatric Primary Care
Depression	Lithium Serum Creatinine Testing	Patient(s) taking lithium who had a serum creatinine in last 12 reported months	Psychiatry Primary Care Pediatric Primary Care
Depression	Lithium Level Testing	Patient(s) taking lithium who had a lithium level in last 6 reported months	Psychiatry Primary Care Pediatric Primary Care
Depression	Psychiatric Consultation	Patient(s) who are currently taking lithium or an antipsychotic-containing medication who had a psychiatric consultation in last 6 reported months	Psychiatry Primary Care Pediatric Primary Care
Depression	Discharge Mental Health Evaluation 7 Days 30 Days	Patient(s) hospitalized for depression who had a mental health evaluation within 7 or 30 days after discharge	Psychiatry Pediatric Primary Care Primary Care
Depression	Discharge Mental Health Evaluation or Provider Visit 7 Days 30 Days	Patient(s) hospitalized for depression who had mental health evaluation or visit with a primary care provider for depression within 7 or 30 days after discharge	Psychiatry Pediatric Primary Care Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Developmental Screening	Developmental Screening in the First Three Years of Life	Children 1–3 years of age at the end of the report period who were screened for risk of developmental, behavioral, and social delays using a standardized tool	Pediatric Primary Care Primary Care
Diabetes Care	Diabetic Retinopathy Screening	Patient(s) 18 -75 years of age who had an annual screening test for diabetic retinopathy	Endocrinology Primary Care
Diabetes	Endocrinology Consultation for Those Using Insulin Pump	Patient(s) using an insulin pump who had endocrinology consultation in last 12 reported months	Endocrinology Pediatric Primary Care Primary Care
Diabetes	Self-Monitoring Glucose Testing	Adult(s) taking insulin with evidence of self-monitoring blood glucose testing	Endocrinology Primary Care
Diabetes	Diabetes Hospitalization 12 Months	Patient(s) who did not have a diabetes related hospitalization in last 12 reported months	Endocrinology Pediatric Primary Care Primary Care
Diabetes	Serum Creatinine 12 Months	Adult(s) who had a serum creatinine in last 12 reported months	Endocrinology Primary Care
Diabetes	HbA1c test 6 Months	Patient(s) who had at least one HbA1c test in the last 6 reported months	Endocrinology Pediatric Primary Care Primary Care
Diabetes	2 HbA1c Tests 12 Months	Patient(s) who had at least 2 HbA1c tests in last 12 reported months	Endocrinology Pediatric Primary Care Primary Care
Diabetes	ACE-Inhibitor or ARB	Patient(s) with a diagnosis of diabetic nephropathy, proteinuria, or chronic renal failure currently taking an ACE- inhibitor or angiotensin receptor blocker (ARB)	Endocrinology Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Diabetes	Diabetic Medication Compliance 80% ACE-Inhibitor-Containing Angiotensin Receptor Blocker-Containing Biguanide-Containing Thiazolidinedione- Containing Sulfonylurea Statin-Containing GLP-1 Agonist Dipeptidyl Peptidase (DPP)-4 Inhibitor- Containing SGLT2 Inhibitor- Containing Long or Intermediate- Acting Insulin	Patient(s) compliant with respective prescribed diabetic medication (minimum compliance 80%)	Endocrinology Pediatric Primary Care Primary Care
Diabetes	LDL Test 24 Months	Adult(s) with an LDL cholesterol in last 24 reported months	Endocrinology Primary Care
Diabetes	HDL Test 24 Months	Adult(s) with an HDL cholesterol test in last 24 reported months	Endocrinology Primary Care
Diabetes	Triglyceride Test 24 Months	Adult(s) with a triglyceride test in last 24 reported months	Endocrinology Primary Care
Diabetes	HbA1c Result 9.0% or Lower	Patient(s) with most recent HbA1c result 9.0% or lower	Endocrinology Primary Care
Diabetes	Statin Therapy for Patients with Diabetes	Patient(s) 40–75 years of age with diabetes who received a statin medication	Endocrinology Primary Care
Diabetes	Emergency Department Encounter 12 Months	Patient(s) who did not have a diabetes related emergency department encounter in last 12 reported months	Endocrinology Pediatric Primary Care Primary Care
Diabetes	Serum Potassium 12 Months	Patient(s) taking an ACE- inhibitor or angiotensin receptor blocker (ARB) who had a serum potassium (K+) in last 12 reported months	Endocrinology Primary Care
Diabetes	Serum Creatinine 12 Months	Patient(s) taking a biguanide, ACE-inhibitor, or angiotensin receptor blocker (ARB) who	Endocrinology Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
		had a serum creatinine in last 12 reported months	
Diabetes	Serum ALT or AST Test 12 Months	Patient(s) taking a thiazolidinedione, who had serum ALT or AST test in last 12 reported months	Endocrinology Primary Care
Diabetes	Ambulatory Care 12 Months	Patient(s) who had ambulatory care for diabetes in last 12 reported months	Endocrinology Pediatric Primary Care Primary Care
Diabetes	Diabetic Complications Endocrinology Consultation	Patient(s) with evidence of specific diabetic complications who had endocrinology consultation in last 6 reported months	Endocrinology Pediatric Primary Care Primary Care
Diabetes	Diabetes and Cardiovascular Disease Statin Use	Patient(s) with DM and cardiovascular disease who are currently taking a statin	Cardiology Endocrinology Primary Care
Diabetes	Diabetes and Myocardial Infarction Beta-Blocker	Patient(s) with DM and a myocardial infarction in the past who are currently taking a beta-blocker	Cardiology Endocrinology Primary Care
Diabetes Care	Diabetes Care HbA1c Test 12 Months	Patient(s) 18–75 years of age who had a HbA1c test in last 12 reported months	Endocrinology Primary Care
Diabetes Care	Poor Diabetic Control	Patient(s) 18–75 years of age with evidence of poor diabetic control, defined as the most recent HbA1c result value greater than 9.0%	Endocrinology Primary Care
Diabetes Care	Good Diabetic Control	Patient(s) 18–64 years of age with lab results who have evidence of good diabetic control, defined as the most recent HbA1c result value less than 7.0% in selected populations	Endocrinology Primary Care
Diabetes Care	HbA1c Result Less Than 8.0%	Patient(s) 18–75 years of age with lab results with most recent HbA1c result value less than 8.0%	Endocrinology Primary Care
Drug-Disease Interactions	Accidental Fall or Hip Fracture	Elderly patients who had an accidental fall or hip fracture who took an anticonvulsant, nonbenzodiazepine hypnotic,	Psychiatry Orthopedics Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
		SSRI, antipsychotic, benzodiazepine, or tricyclic antidepressant after the incident	
Drug-Disease Interactions	Elderly Patients with Dementia	Elderly patients with dementia who took an antipsychotic, benzodiazepine, tricyclic antidepressant, H2 receptor antagonist, nonbenzodiazepine hypnotic or anticholinergic agent after the earliest record of dementia	Psychiatry Neurology Primary Care
Drug-Disease Interactions	Chronic Kidney Disease	Elderly patients with chronic kidney disease who took a Cox-2 selective or non-aspirin NSAID after the earliest record of chronic kidney disease	Endocrinology Primary Care
Epilepsy	Epilepsy ER Encounters Neurology Consult 3 Months	Patient(s) with one or more hospitalizations or two or more emergency room encounters for epilepsy who had neurology consultation in last 3 reported months	Neurology Pediatric Primary Care Primary Care
Epilepsy	Epilepsy Medication Adherence 80% Phenytoin Valproic Acid Ethosuximide Gabapentin Lamotrigine Zonisamide Levetiracetam Topiramate Pregabalin Lacosamide Carbamazepine or derivatives	Patient(s) compliant with respective prescribed epilepsy medicine (minimum compliance 80%)	Neurology Pediatric Primary Care Primary Care
Heart Failure	Emergency Department Encounter	Patient(s) who did not have a heart failure related emergency department encounter in last 12 reported months	Cardiology Primary Care
Heart Failure	Hospitalization 12 Months	Patient(s) who did not have a heart failure related hospitalization in last 12 reported months	Cardiology Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Heart Failure	Annual Physician Visit	Patient(s) who had an annual physician visit	Cardiology Primary Care
Heart Failure	Cardiology Consultation	Patient(s) with indications who had cardiology consultation in last 24 reported months	Cardiology Primary Care
Heart Failure	ACE Inhibitor	Patient(s) currently taking an ACE-inhibitor or acceptable alternative	Cardiology Primary Care
Heart Failure	Beta Blocker for Management	Patient(s) currently taking a beta-blocker specifically recommended for heart failure management	Cardiology Primary Care
Heart Failure	Heart Failure and Atrial Fibrillation	Patient(s) with heart failure and atrial fibrillation currently taking warfarin, an oral thrombin inhibitor, or an oral factor Xa inhibitor	Cardiology Primary Care
Heart Failure	Heart Failure Medication Compliance 80% ACE-Inhibitor-Containing Beta-Blocker-Containing Aldosterone Receptor Antagonist-Containing Digoxin Angiotensin Receptor Blocker (ARB)-Containing Hydralazine-Containing Prescribed Nitrate	Patient(s) compliant with respective prescribed heart failure medication (minimum compliance 80%)	Cardiology Primary Care
Heart Failure	Serum Potassium Test 12 Months	Patient(s) taking ACE-inhibitor, angiotensin receptor blocker (ARB), selective aldosterone receptor antagonist, or digoxin who had serum potassium test in last 12 reported months	Cardiology Primary Care
Heart Failure	Contraindicated Class I Medication	Patient(s) taking contraindicated Class I antiarrhythmic medication (excludes patients with diastolic heart failure or right heart failure only)	Cardiology Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Hyperlipidemia	Medication Adherence to Hyperlipidemia Medications 80% Statin-Containing Bile Acid Sequestrant Nicotinic Acid-Containing Fibric Acid Cholesterol Absorption Inhibitor Omega-3 Acid Ethyl Ester PCSK9 Inhibitors	Patient(s) compliant with respective prescribed hyperlipidemia medication (minimum compliance 80%)	Cardiology Primary Care
Hyperlipidemia	Annual Serum ALT or AST Test	Patient(s) taking a nicotinic acid-containing medication who had an annual serum ALT or AST test	Cardiology Primary Care
Hyperlipidemia	LDL Test 24 Months	Patient(s) with an LDL cholesterol test in last 24 reported months	Cardiology Primary Care
Hyperlipidemia	Recent LDL Result	Patient(s) with CHD, DM, or other CHD equivalent with the most recent LDL result	Cardiology Primary Care
Hyperlipidemia	HDL Test 24 Months	Patient(s) with an HDL cholesterol test in last 24 reported months	Cardiology Primary Care
Hyperlipidemia	Triglyceride Test 24 Months	Patient(s) with a triglyceride test in last 24 reported months	Cardiology Primary Care
Hypertension	 Hypertension Medication Adherence 80% ACE-Inhibitor-Containing Angiotensin Receptor Blocker (ARB)-Containing Diuretic-Containing Calcium Channel Blocker-Containing Beta-Blocker-Containing Alpha-Adrenergic Blocker-Containing Direct Vasodilator- Containing Aldosterone Receptor Antagonist-Containing 	Patient(s) compliant with respective prescribed hypertension medication (minimum compliance 80%)	Cardiology Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Hypertension	Serum Potassium Test 12 Months	Patient(s) taking an ACE- inhibitor, angiotensin receptor blocker (ARB), diuretic, or aldosterone receptor antagonist-containing medication who had a serum potassium in last 12 reported months	Cardiology Primary Care
Hypertension	Annual Visit	Patient(s) who had an annual physician visit	Cardiology Primary Care
Hypertension	Serum Creatinine 12 Months	Patient(s) who had a serum creatinine in last 12 reported months	Cardiology Primary Care
Hypertension	Blood Pressure 18–85 Years of Age	Patient(s) 18–85 years of age with hypertension and most recent blood pressure less than 140/90 mm Hg in the last 12 months	Cardiology Primary Care
Hypertension	Blood Pressure 18–59 Years of Age (Without Diabetes or CKD)	Patient(s) 18–59 years of age with hypertension (without diabetes mellitus or CKD) and most recent blood pressure less than 140/90 mm Hg in the last 12 months	Cardiology Primary Care
Hypertension	Blood Pressure 18–85 Years of Age (With Diabetes or CKD)	Patient(s) 18–85 years of age with hypertension and diabetes mellitus and/or CKD with most recent blood pressure less than 140/90 mm Hg in the last 12 months	Cardiology Endocrinology Primary Care
Inflammatory Bowel Disease	ALT or AST Test 6 Months	Patient(s) taking methotrexate, azathioprine or mercaptopurine who had serum ALT or AST test in last 6 reported months	Gastroenterology Primary Care
Inflammatory Bowel Disease	CBC Test 3 Months	Patient(s) taking methotrexate, sulfasalazine, mercaptopurine, or azathioprine who had a CBC in last 3 reported months	Gastroenterology Pediatric Primary Care Primary Care
Inflammatory Bowel Disease	Serum Creatinine 6 Months	Patient(s) taking methotrexate who had a serum creatinine in last 6 reported months	Gastroenterology Pediatric Primary Care Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Inflammatory Bowel Disease	Osteoporosis Screening	Adult(s) 40 years and older taking chronic corticosteroids who had osteoporosis screening in last 24 reported months	Gastroenterology Primary Care
Inflammatory Bowel Disease	Gastroenterology Consultation	Patient(s) with complex inflammatory bowel disease treatment regimens or chronic corticosteroid therapy who had gastroenterology consultation in last 6 reported months	Gastroenterology Pediatric Primary Care Primary Care
Inflammatory Bowel Disease	Colonoscopy 24 Months	Patient(s) 18 years of age or older with ulcerative colitis or Crohns colitis who had a colonoscopy in last 24 reported months	Gastroenterology Primary Care
Inflammatory Bowel Disease	Inflammatory Bowel Disease Medication Adherence 80% Tumor Necrosis Factor Inhibitor Azathioprine Mercaptopurine Oral Mesalamine Methotrexate Sulfasalazine	Patient(s) compliant with respective prescribed inflammatory bowel disease medication (minimum compliance 80%)	Gastroenterology Pediatric Primary Care Primary Care
Influenza Immunization	Influenza Immunization	Patient(s) 6 months of age or older who received the influenza immunization	Pediatric Primary Care Primary Care
Low Back Pain	Low Back Pain, Use of Imaging Studies	Patient(s) with uncomplicated low back pain who did not have imaging studies	Orthopedics Primary Care
Medication Monitoring	Annual Monitoring for Patients on Persistent Medications - ACE or ARB	Adult patient(s) persistently taking angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs) who received a serum potassium AND serum creatinine within the last 12 reported months	Primary Care Cardiology
Medication Monitoring	Annual Monitoring for Patients on Persistent Medications - Diuretics	Adult patient(s) persistently taking diuretics who received a serum potassium AND serum creatinine within the last 12 reported months	Primary Care Cardiology

Condition or Procedure	Quality Measure	Measure Description	Specialty
Mental Illness	Follow-Up After Emergency Department Visit for Mental Illness 6+ Years of Age 7 Days 30 Days	Patient(s) six years of age or older with an ED visit for mental illness or intentional self-harm who had a follow-up visit within 7 or 30 days	Psychiatry Pediatric Primary Care Primary Care
Mental Illness	Follow-Up After Emergency Department Visit for Mental Illness 18-64 Years of Age 7 Days 30 Days	Patient(s) 18–64 years of age with an ED visit for mental illness or intentional self-harm who had a follow-up visit within 7 or 30 days	Psychiatry Primary Care
Migraine	Frequent Use of Acute Medications	Patient(s) without frequent use of acute medications	Neurology Pediatric Primary Care Primary Care
Migraine	Imaging of Head Not Medically Indicated	Adult(s) with an imaging study of the head who was not medically indicated	Neurology Primary Care
Migraine	Acute Migraine Medications with Prophylactic	Adult(s) with frequent use of acute medications who also received prophylactic medications	Neurology Primary Care
Migraine	Frequent ER Encounters 6 Months	Patient(s) with frequent ER encounters or frequent acute medication use who had an ambulatory visit in last 6 reported months	Neurology Pediatric Primary Care Primary Care
Migraine	 Migraine Medication Adherence 80% Antiepileptics for Migraine Prophylaxis Beta-Blocker-Containing Calcium Channel Blocker-Containing Tricyclic Antidepressant Serotonin- Norepinephrine Reuptake Inhibitor ACE-Inhibitor Alpha Agonist 	Patient(s) compliant with respective prescribed migraine medications (minimum compliance 80%)	Primary Care Pediatric Primary Care Neurology
Migraine	Meperidine for Management	Patient(s) who did not receive meperidine for management of a migraine	Neurology Pediatric Primary Care Primary Care
Multiple Sclerosis	Interferon CBC 12 Months	Patient(s) taking interferon who had a CBC with differential in last 12 reported months	Neurology Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Multiple Sclerosis	Interferon ALT/AST 12 Months	Patient(s) taking interferon who had serum ALT or AST test in last 12 reported months	Neurology Primary Care
Multiple Sclerosis	Neurology Consult 12 Months	Patient(s) who had neurology consultation in last 12 reported months	Neurology Primary Care
Multiple Sclerosis	Dimethyl Fumarate CBC 12 Months	Patient(s) taking dimethyl fumarate who had a CBC with differential in last 12 reported months	Neurology Primary Care
Multiple Sclerosis	Medication Adherence to Multiple Sclerosis Medication 80% Interferon Glatiramer Fingolimod Dimethyl Fumarate Teriflunomide	Patient(s) compliant with respective prescribed multiple sclerosis medication (minimum compliance 80%)	Neurology Pediatric Primary Care Primary Care
Obesity and Overweight	Glucose or Hemoglobin a1C Test 36 Months	Patient(s) who had a blood glucose or hemoglobin A1C test in last 36 reported months	Pediatric Primary Care Primary Care
Obesity and Overweight	LDL Test 36 Months	Adult(s) with an LDL cholesterol test in last 36 reported months	Primary Care
Obesity and Overweight	HDL Test 36 Months	Adult(s) with an HDL cholesterol test in last 36 reported months	Primary Care
Obesity and Overweight	Triglyceride Test 36 Months	Adult(s) with a triglyceride test in last 36 reported months	Primary Care
Obesity and Overweight	Bariatric Surgery Hospitalization	Patient(s) with bariatric surgery who had no evidence of a defined complication during hospitalization or 30 days after discharge	General Surgery Primary Care
Opioid Abuse	Treatment Initiation	Patient(s) age 18 years or older with a new episode of opioid abuse or dependence who initiated treatment within 14 days of the diagnosis	Psychiatry Primary Care
Opioid Abuse	Treatment Initiation with Follow-Up Visits	Patient(s) age 18 years or older with a new episode of opioid abuse or dependence who initiated treatment and had two or more follow-up visits within 34 days of the	Psychiatry Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
		initiation visit (i.e., engaged in AOD treatment)	
Osteoporosis	Contraindicated Bisphosphonate Medication	Patient(s) with specific co- morbidities or decreased creatinine clearance rates who were taking contraindicated bisphosphonate medication	Orthopedics Primary Care
Osteoporosis	Osteoporosis Medication Adherence 80% Oral Bisphosphonate Estrogen Raloxifene	Patient(s) compliant with respective prescribed osteoporosis medication (minimum compliance 80%)	Orthopedics Primary Care
Pharyngitis	Appropriate Pharyngitis Testing	Patient(s) treated with an antibiotic for pharyngitis who had a Group A streptococcus test	Pediatric Primary Care Primary Care Pulmonary Medicine
Pneumonia	Community-Acquired Bacterial Pneumonia (CAP)	Patient(s) with a diagnosis of community-acquired bacterial pneumonia who were treated with a recommended antibiotic	Pediatric Primary Care Primary Care Pulmonary Medicine
Pneumonia	Pneumonia CXR	Adult(s) with community- acquired bacterial pneumonia who have a CXR	Primary Care Pulmonary Medicine
Pneumonia Vaccination	Pneumonia Vaccination	Patient(s) 65 years of age or older with an encounter during the report period who received the pneumococcal vaccination or reported previous receipt of the vaccination	Primary Care Pulmonary Medicine
Pregnancy Management	Chlamydia Screening	Pregnant women less than 25 years of age who had chlamydia screening	OB GYN Primary Care
Pregnancy Management	HBsAg Testing	Pregnant women who had HBsAg testing	OB GYN Primary Care
Pregnancy Management	HIV Testing	Pregnant women who had HIV testing	OB GYN Primary Care
Pregnancy Management	Syphilis Screening	Pregnant women who had syphilis screening	OB GYN Primary Care
Pregnancy Management	Strep Testing	Pregnant women who received Group B Streptococcus testing	OB GYN Primary Care
Pregnancy Management	Category D Medication	Pregnant women who received Category D medication	OB GYN Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Pregnancy Management	Category X Medication	Pregnant women who received Category X medication	OB GYN Primary Care
Prenatal and Postpartum Care	Prenatal Visit 42 Days Including Bundled Services	Women who received a prenatal visit in the first trimester or within 42 days of enrollment (including bundled prenatal services)	OB GYN Primary Care
Prenatal and Postpartum Care	Prenatal Visit 42 Days Excluding Bundled Services	Women who received a prenatal visit in the first trimester or within 42 days of enrollment (excluding bundled prenatal services)	OB GYN Primary Care
Prenatal and Postpartum Care	Postpartum Care Including Bundled Services	Women who received postpartum care (including bundled postpartum services)	OB GYN Primary Care
Prenatal and Postpartum Care	Postpartum Care Excluding Bundled Services	Women who received postpartum care (excluding bundled postpartum services)	OB GYN Primary Care
Prostate Cancer	Prostate Cancer Antigen Test 12 Months	Patient(s) who had a prostate specific antigen test in last 12 reported months	Primary Care
Prostate Cancer	Examination or Visit	Patient(s) who had an annual physician visit or evidence of a digital rectal examination	Primary Care
Prostate Cancer Screening	PSA-Based Screening in Older Men	Patient(s) 70 years of age and older who had a prostate-specific antigen (PSA)-based screening test in the last 12 reported months	Primary Care
Rheumatoid Arthritis	Disease-Modifying Anti- Rheumatic Drug Therapy	Patient(s) who had a prescription dispensed for a disease modifying antirheumatic drug (DMARD) during the report period	Primary Care Rheumatology
Rheumatoid Arthritis	CBC 3 Months	Patient(s) taking methotrexate, sulfasalazine, gold, or leflunomide who had a CBC in last 3 reported months	Primary Care Rheumatology
Rheumatoid Arthritis	Serum ALT AST 3 Months	Patient(s) taking methotrexate, sulfasalazine, or leflunomide who had serum ALT or AST test in last 3 reported months	Primary Care Rheumatology

Condition or Procedure	Quality Measure	Measure Description	Specialty
Rheumatoid Arthritis	Complex Treatment Consult	Patient(s) with complex RA treatment regimens or complications who had rheumatology consultation in last 6 reported months	Primary Care Rheumatology
Rheumatoid Arthritis	Chronic Corticosteroids Consultation	Patient(s) taking chronic corticosteroids who had rheumatology consultation in last 6 reported months	Primary Care Rheumatology
Rheumatoid Arthritis	Osteoporosis Screening	Adult(s) 40 years and older taking chronic corticosteroids who had osteoporosis screening in last 24 reported months	Primary Care Rheumatology
Rheumatoid Arthritis	Ambulatory Visit	Patient(s) who had an ambulatory visit for RA care in last 12 reported months	Primary Care Rheumatology
Rheumatoid Arthritis	Eye Exam 12 Months	Patient(s) taking hydroxychloroquine who had an eye exam in last 12 reported months	Primary Care Rheumatology
Rheumatoid Arthritis	Serum Creatinine 6 Months	Patient(s) taking methotrexate who had a serum creatinine in last 6 reported months	Primary Care Rheumatology
Rheumatoid Arthritis	Juvenile RA Eye Exam	Pediatric patient(s) with JRA who had an eye exam in the last 12 reported months	Pediatric Primary Care Primary Care Rheumatology
Rheumatoid Arthritis	 Medication Adherence 80% Hydroxychloroquine Methotrexate Sulfasalazine Leflunomide Subcutaneous tumor necrosis factor inhibitor Kinase inhibitors 	Patient(s) compliant with respective prescribed RA medication (minimum compliance 80%)	Primary Care Rheumatology
Schizophrenia or Bipolar Disorder	Adherence to Antipsychotic Medications for Individuals with Schizophrenia	Patient(s) with schizophrenia who remained on antipsychotic medication for at least 80% of their treatment period	Psychiatry Primary Care
Schizophrenia or Bipolar Disorder	Diabetic Screening in Schizophrenic Patients	Patient(s) with schizophrenia, schizoaffective disorder, or bipolar disorder taking an antipsychotic medication who were screened for diabetes during the report period	Psychiatry Primary Care

Condition or Procedure	Quality Measure	Measure Description	Specialty
Sinusitis	Treated with First Line Antibiotic	Patient(s) treated with an antibiotic for acute sinusitis who received a first line antibiotic	Pediatric Primary Care Primary Care
Sinusitis	Radiographic Test	Patient(s) who did not have a sinus radiographic test	Pediatric Primary Care Primary Care
Sinusitis	CT or MRI Test	Patient(s) who did not have a sinus computerized axial tomography (CT) or magnetic resonance imaging (MRI) test	Pediatric Primary Care Primary Care
Sinusitis	Injection Antibiotic	Patient(s) with acute sinusitis who did not receive an injection antibiotic on the first day	Pediatric Primary Care Primary Care
Sinusitis	Injection Antibiotic Less Than 18 Years of Age	Patient(s) less than 18 years of age with acute sinusitis who did not receive an injection antibiotic on the first day	Pediatric Primary Care Primary Care
Sinusitis	Injection Antibiotic 18 Years of Age or Older	Patient(s) 18 years of age or older with acute sinusitis who did not receive an injection antibiotic on the first day	Primary Care
Transitions of Care	Patient Engagement 18-64 Years of Age	Patient(s) 18–64 years of age who had patient engagement within 30 days after discharge	All Specialties
Transitions of Care	Patient Engagement 65+ Years of Age	Patient(s) 65 years of age or older who had patient engagement within 30 days after discharge	All Specialties
Transitions of Care	Medication Reconciliation 65+ Years of Age	Patient(s) 65 years of age or older who had medication reconciliation on or within 30 days after discharge	All Specialties
Upper Respiratory Infection (URI)	Upper Respiratory Infection (URI), Appropriate Treatment	Patient(s) with a diagnosis of upper respiratory infection who did not have a prescription for an antibiotic on or three days after the initiating visit	Pediatric Primary Care Primary Care Pulmonary Medicine
Use of Opioid Medications	Use of Opioid Medications Multiple Fills	Patient(s) 18 years of age or older who filled opioid prescriptions from four or more different prescribers	Primary Care Orthopedics General Surgery Neurology OB/GYN Rheumatology

Condition or Procedure	Quality Measure	Measure Description	Specialty
Use of Opioids and Benzodiazepines	Concurrent Use of Opioids and Benzodiazepines	Patient(s) with concurrent use of prescription opioids and benzodiazepines	Psychiatry Primary Care Orthopedics General Surgery Neurology OB/GYN Rheumatology
Weight Assessment	BMI Documentation 3-17 Years of Age	Patient(s) 3 - 17 years of age who had an outpatient visit with a PCP or OB/GYN and had evidence of BMI percentile documentation during the report period	Pediatric Primary Care Primary Care
Weight Assessment	BMI Documentation 12-17 Years of Age	Patient(s) 12 - 17 years of age who had an outpatient visit with a PCP or OB/GYN and had evidence of BMI percentile documentation during the report period	Pediatric Primary Care Primary Care
Well-Care Visit	Well-Child Visits in the First 15 Months of Life	Patient(s) who had six or more well-child visits with a PCP during the first 15 months of life	Pediatric Primary Care Primary Care
Well-Care Visit	Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life	Patient(s) 3 - 6 years of age who had one well-child visit with a PCP in the last 12 reported months	Pediatric Primary Care Primary Care

Appendix C: ETG base classes

This section contains an exhaustive list of all ETGs available within the Optum Symmetry tool.

ETG Base Class	Description
130100	AIDS
130200	HIV sero-positive w/o AIDS
130400	Sepsis
130600	Other infectious diseases
130800	Immunodeficiencies
139900	Infectious diseases signs & symptoms
162000	Lipidoses (Gauchers Disease, Fabry Disease, Mucolipidosis I-III)
162100	Hyper-functioning thyroid gland
162200	Hypo-functioning thyroid gland
162300	Non-toxic goiter
162400	Malignant neoplasm of thyroid gland

ETG Base Class	Description
162500	Non-malignant neoplasm of thyroid gland
162600	Other diseases of thyroid gland
163000	Diabetes
163100	Malignant neoplasm of pancreatic gland
163200	Non-malignant neoplasm of pancreas
163300	Malignant neoplasm of pituitary gland
163400	Non-malignant neoplasm of pituitary gland
163500	Hyper-functioning adrenal gland
163600	Hypo-functioning adrenal gland
163700	Malignant neoplasm of adrenal gland
163800	Non-malignant neoplasm of adrenal gland
163900	Hyper-functioning parathyroid gland
164000	Hypo-functioning parathyroid gland
164100	Malignant neoplasm of parathyroid gland
164200	Non-malignant neoplasm of parathyroid gland
164300	Female sex gland disorders
164400	Male sex gland disorders
164500	Nutritional deficiency
164600	Gout
164700	Hyperlipidemia, other
164800	Obesity
164900	Dehydration
165100	Other metabolic disorders
165200	Cystic fibrosis
165300	Other diseases of endocrine glands
169900	Endocrine disease signs & symptoms
206800	Neutropenia
206900	Thrombocytopenia
207000	Hemophilia
207200	Leukemia
207300	Other malignancies of blood & lymphatic systems
207400	Sickle-cell anemia
207600	Myelodysplastic syndromes
207800	Lymphoma
207900	Multiple myeloma
208000	Anemia of chronic diseases
208200	Iron deficiency anemia
208900	Other hematologic diseases
209900	Hematology signs & symptoms
238800	Mood disorder, depressed
238900	Mood disorder, bipolar

ETG Base Class	Description
239000	Dementia
239100	Mental disorders, organic & drug-induced
239200	Autism spectrum disorders
239300	Psychotic & schizophrenic disorders
239400	Personality disorder
239700	Eating disorder
239800	Anxiety disorder or phobias
240000	Psychosexual disorder
240100	Attention deficit disorder
240200	Development disorder
240300	Somatoform disorder
240400	Intellectual disability
240600	Other neuropsychological or behavioral disorders
249900	Psychiatric diseases signs & symptoms
271100	Cocaine or amphetamine dependence
271200	Acute alcohol intoxication
271400	Alcohol dependence
271500	Opioid or barbiturate dependence
271600	Other drug dependence
314000	Viral meningitis
314100	Bacterial & fungal meningitis
314200	Viral encephalitis
314300	Nonviral encephalitis
314400	Parasitic encephalitis
314700	Brain abscess
314800	Spinal abscess
315000	Inflammation of central nervous system, other
315100	Multiple sclerosis
315200	Epilepsy
315300	Malignant central nervous system metastases
315400	Malignant neoplasm of central nervous system
315600	Non-malignant neoplasm of central nervous system
316000	Cerebral vascular disease
316300	Brain trauma
316400	Alzheimer's disease
316500	Spinal trauma
316600	Amyotrophic lateral sclerosis
316700	Hereditary & degenerative diseases of central nervous system, other
316800	Parkinson's disease
316900	Migraine headache
317100	Congenital disorders of central nervous system

ETG Base Class	Description
317300	Inflammation of cranial nerves
317400	Complex regional pain syndrome
317500	Carpal tunnel syndrome
317700	Inflammation of non-cranial nerves, except carpal tunnel
318100	Traumatic disorders of cranial nerves
318300	Traumatic disorders of non-cranial nerves
318400	Congenital disorders of peripheral nerves
318600	Other neurological diseases
319900	Neurological diseases signs & symptoms
350100	Internal eye infection
350300	External eye infection, except conjunctivitis
350400	Conjunctivitis
350600	Inflammatory eye disease
350800	Malignant neoplasm of eye, internal
350900	Malignant neoplasm of eye, external
351000	Non-malignant neoplasm of eye, internal
351100	Non-malignant neoplasm of eye, external
351500	Glaucoma
351700	Cataract
351900	Trauma of eye
352100	Congenital anomaly of eye
352400	Diabetic retinopathy
352600	Non-diabetic vascular retinopathy
352800	Other vascular disorders of eye except retinopathies
353000	Macular degeneration
353200	Other degenerative disorders of eye
353600	Visual disturbances
353700	Other & unspecified diseases & disorders of eye & adnexa
385000	Heart or heart/lung transplant
386500	Ischemic heart disease
386600	Pulmonary heart disease
386800	Congestive heart failure
386900	Cardiomyopathy
387000	Aortic aneurysm
387100	Heart failure, diastolic
387200	Cardiac infection
387400	Valvular disorder
387500	Severe ventricular rhythms
387600	Severe heart block
387700	Other conduction disorders
387800	Atrial fibrillation & flutter

ETG Base Class	Description
388100	Hypertension
388300	Cardiac congenital disorder
388600	Cardiac trauma
388700	Other cardiac diseases
389000	Arterial inflammation
389200	Arterial embolism/thrombosis
389500	Non-cerebral, non-coronary atherosclerosis
389700	Arterial aneurysm, except aorta
389800	Other non-inflammatory arterial diseases
390100	Arterial trauma
390300	Embolism & thrombosis of veins
390400	Disorders of lymphatic channels
390500	Phlebitis & thrombophlebitis of veins
390600	Varicose veins of lower extremity
390700	Other minor inflammatory diseases of veins
390900	Venous trauma
391000	Other diseases of veins
399900	Cardiovascular diseases signs & symptoms
402000	Infections of oral cavity
402200	Inflammation of oral cavity
402400	Trauma of oral cavity
402600	Other diseases of oral cavity
402900	Otitis media
403100	Tonsillitis, adenoiditis, or pharyngitis
403200	Rhinitis, allergic & non-allergic
403300	Acute sinusitis
403500	Chronic sinusitis
403700	Other infections of ear/nose/throat
404100	Other inflammatory conditions of ear/nose/throat
404300	Malignant neoplasm of ear/nose/throat
404500	Non-malignant neoplasm of ear/nose/throat
404700	Congenital & acquired anomalies of ear/nose/throat
404900	Hearing disorders
405100	Trauma to ear/nose/throat
405300	Other disorders of ear/nose/throat
406100	Obstructive sleep apnea
406200	Other sleep disorders
409900	Otolaryngology diseases signs & symptoms
437000	Lung transplant
437200	Viral pneumonia
437400	Bacterial lung infections

ETG Base Class	Description
437600	Fungal & other pneumonia
437800	Pulmonary tuberculosis
438000	Disseminated tuberculosis
438300	Acute bronchitis
438500	Minor infectious pulmonary diseases, other than acute bronchitis
438800	Asthma
439300	Chronic obstructive pulmonary disease
439700	Occupational & environmental pulmonary diseases
439800	Other inflammatory lung diseases
440000	Malignant lung metastases
440100	Malignant neoplasm of pulmonary system
440300	Non-malignant neoplasm of pulmonary system
440400	Chest trauma, open
440600	Chest trauma, closed
440800	Pulmonary congenital anomalies
441000	Pulmonary embolism
441200	Acute respiratory distress syndrome
441500	Other pulmonary disorders
449900	Pulmonary Medicine diseases signs & symptoms
473100	Infection of stomach & esophagus
473300	Inflammation of esophagus
473500	Gastritis &/or duodenitis
473800	Ulcer
474000	Malignant neoplasm of stomach & esophagus
474200	Non-malignant neoplasm of stomach & esophagus
474400	Trauma of stomach or esophagus
474500	Anomaly of stomach or esophagus
474700	Appendicitis
474900	Diverticulitis & diverticulosis
475000	Other infectious diseases of intestines & abdomen
475100	Celiac disease
475200	Other inflammation of intestines & abdomen
475300	Inflammatory bowel disease
475400	Malignant neoplasm of large intestine
475500	Malignant neoplasm of small intestine & abdomen
475600	Non-malignant neoplasm of intestines & abdomen
475800	Trauma of intestines & abdomen
476000	Congenital anomalies of intestines & abdomen
476100	Vascular diseases of intestines & abdomen
476300	Bowel obstruction
476400	Irritable bowel syndrome

ETG Base Class	Description
476600	Hernias, except hiatal
476800	Hiatal hernia
476900	Other diseases of intestines & abdomen
477100	Infection of rectum or anus
477400	Hemorrhoids
477600	Inflammation of rectum or anus
477800	Malignant neoplasm of rectum or anus
478000	Non-malignant neoplasm of rectum or anus
478200	Trauma of rectum or anus, open
478300	Trauma of rectum or anus, closed
478500	Other diseases & disorders of rectum & anus
479900	Gastroenterology diseases signs & symptoms
521000	Liver transplant
521400	Infectious hepatitis
521600	Non-infectious hepatitis
521800	Cirrhosis
521900	Acute pancreatitis
522000	Chronic pancreatitis
522300	Cholelithiasis
522400	Malignant liver metastases
522500	Malignant neoplasm of hepatobiliary system
522700	Non-malignant neoplasm of hepatobiliary system
523000	Trauma of hepatobiliary system
523200	Other diseases of hepatobiliary system
529900	Hepatology diseases signs & symptoms
555000	Kidney transplant
555200	Acute renal failure
555400	Chronic renal failure
555600	Acute renal inflammation
555800	Chronic renal inflammation
556000	Nephrotic syndrome
556100	Other renal conditions
559900	Nephrology diseases signs & symptoms
587100	Infection of upper genitourinary system
587200	Sexually transmitted diseases, primary
587300	Sexually transmitted diseases, disseminated
587400	Infection of lower genitourinary system, not sexually transmitted
587800	Kidney stones
588000	Inflammation of genitourinary system, except kidney stones
588200	Malignant neoplasm of prostate
588400	Non-malignant neoplasm of prostate

ETG Base Class	Description
588600	Malignant neoplasm of genitourinary system, except prostate
588800	Non-malignant neoplasm of genitourinary system, except prostate
589000	Trauma to genitourinary system
589200	Urinary incontinence
589300	Male infertility
589500	Other diseases of genitourinary system
589900	Urological diseases signs & symptoms
601100	Pregnancy, with delivery
602100	Ectopic pregnancy
602200	Spontaneous abortion
602300	Induced abortion
602400	Pregnancy, not yet delivered
609900	Obstetric signs & symptoms
633200	Infection of ovary &/or fallopian tubes
633500	Infection of uterus
633700	Infection of cervix
633900	Monilial infection of vagina (yeast)
634000	Infection of vagina except monilial
634200	Endometriosis
634300	Inflammatory condition of female genital tract, except endometriosis
634400	Malignant neoplasm of cervix
634500	Malignant neoplasm of ovaries
634600	Malignant neoplasm of uterus
634700	Non-malignant neoplasm of female genital tract
634900	Conditions associated with menstruation
635100	Conditions associated with infertility
635300	Other diseases of female genital tract
635600	Malignant neoplasm of breast
635800	Non-malignant neoplasm of breast
636000	Other disorders of breast
639900	Gynecological signs & symptoms
666700	Acne
666800	Contact dermatitis
666900	Psoriasis
667000	Chronic skin ulcers
667200	Bacterial infection of skin
667300	Viral skin infection
667500	Fungal skin infection
667600	Parasitic skin infection
667800	Other inflammation of skin
668000	Malignant neoplasm of skin, major

ETG Base Class	Description
668100	Malignant neoplasm of skin, minor
668200	Non-malignant neoplasm of skin
668700	Burns
668901	Open wound - foot & ankle
668902	Open wound - lower leg
668903	Open wound - hip & thigh
668904	Open wound - hand & forearm
668905	Open wound - elbow & upper arm
668906	Open wound - shoulder
668907	Open wound - head & face
668909	Open wound - trunk
668912	Open wound - unspecified
669001	Skin trauma, except burn & open wound - foot & ankle
669002	Skin trauma, except burn & open wound - lower leg
669003	Skin trauma, except burn & open wound - hip & thigh
669004	Skin trauma, except burn & open wound - hand & forearm
669005	Skin trauma, except burn & open wound - elbow & upper arm
669006	Skin trauma, except burn & open wound - shoulder
669007	Skin trauma, except burn & open wound - head & face
669009	Skin trauma, except burn & open wound - trunk
669010	Skin trauma, except burn & open wound - other
669012	Skin trauma, except burn & open wound - unspecified
669100	Other skin disorders
669900	Dermatological signs & symptoms
711101	Infection of bone & joint - foot & ankle
711102	Infection of bone & joint - knee & lower leg
711103	Infection of bone & joint - thigh, hip & pelvis
711104	Infection of bone & joint - hand, wrist & forearm
711105	Infection of bone & joint - elbow & upper arm
711106	Infection of bone & joint - shoulder
711112	Infection of bone & joint - unspecified
711200	Juvenile rheumatoid arthritis
711400	Adult rheumatoid arthritis
711600	Lupus
711700	Autoimmune rheumatologic diseases, except lupus
711901	Major joint inflammation - foot & ankle
711902	Major joint inflammation - knee & lower leg
711903	Major joint inflammation - thigh, hip & pelvis
711904	Major joint inflammation - hand, wrist & forearm
711905	Major joint inflammation - elbow & upper arm
711906	Major joint inflammation - shoulder

ETG Base Class	Description
711908	Major joint inflammation - back
711910	Major joint inflammation - other
711912	Major joint inflammation - unspecified
712000	Osteoporosis
712201	Joint degeneration, localized - foot & ankle
712202	Joint degeneration, localized - knee & lower leg
712203	Joint degeneration, localized - thigh, hip & pelvis
712204	Joint degeneration, localized - hand, wrist & forearm
712205	Joint degeneration, localized - elbow & upper arm
712206	Joint degeneration, localized - shoulder
712208	Joint degeneration, localized - back
712211	Joint degeneration, localized - neck
712212	Joint degeneration, localized - unspecified
712901	Open fracture or dislocation of lower extremity - foot & ankle
712902	Open fracture or dislocation of lower extremity - knee & lower leg
712903	Open fracture or dislocation - thigh, hip & pelvis
712904	Open fracture or dislocation of upper extremity - hand, wrist & forearm
712905	Open fracture or dislocation of upper extremity - elbow & upper arm
712906	Open fracture or dislocation of upper extremity - shoulder
712907	Open fracture or dislocation - head & face
712909	Open fracture or dislocation - trunk
713101	Closed fracture or dislocation of lower extremity - foot & ankle
713102	Closed fracture or dislocation of lower extremity - knee & lower leg
713103	Closed fracture or dislocation - thigh, hip & pelvis
713104	Closed fracture or dislocation of upper extremity - hand, wrist & forearm
713105	Closed fracture or dislocation of upper extremity - elbow & upper arm
713106	Closed fracture or dislocation of upper extremity - shoulder
713107	Closed fracture or dislocation - head & face
713109	Closed fracture or dislocation of trunk
713600	Malignant bone metastases
713800	Malignant neoplasm of bone & connective tissue, head & neck
713900	Malignant neoplasm of bone & connective tissue, other than head & neck
714000	Non-malignant neoplasm of bone & connective tissue, head & neck
714100	Non-malignant neoplasm of bone & connective tissue, other than head & neck
714301	Joint derangement - foot & ankle
714302	Joint derangement - knee & lower leg
714303	Joint derangement - thigh, hip & pelvis
714304	Joint derangement - hand, wrist & forearm
714305	Joint derangement - elbow & upper arm
714306	Joint derangement - shoulder
714312	Joint derangement - unspecified

ETG Base Class	Description
714501	Major injury, other than fracture or dislocation - foot & ankle
714502	Major injury, other than fracture or dislocation - knee & lower leg
714503	Major injury, other than fracture or dislocation - thigh, hip & pelvis
714504	Major injury, other than fracture or dislocation - hand, wrist & forearm
714505	Major injury, other than fracture or dislocation - elbow & upper arm
714506	Major injury, other than fracture or dislocation - shoulder
714509	Major injury, other than fracture or dislocation - trunk
714512	Major injury, other than fracture or dislocation - unspecified
714601	Minor orthopedic injury - foot & ankle
714602	Minor orthopedic injury - knee & lower leg
714603	Minor orthopedic injury - thigh, hip & pelvis
714604	Minor orthopedic injury - hand, wrist & forearm
714605	Minor orthopedic injury - elbow & upper arm
714606	Minor orthopedic injury - shoulder
714607	Minor orthopedic injury - head & face
714608	Minor orthopedic injury - back
714609	Minor orthopedic injury - trunk
714611	Minor orthopedic injury - neck
714612	Minor orthopedic injury - unspecified
714801	Minor joint inflammation - foot & ankle
714802	Minor joint inflammation - knee & lower leg
714803	Minor joint inflammation - thigh, hip & pelvis
714804	Minor joint inflammation - hand, wrist & forearm
714805	Minor joint inflammation - elbow & upper arm
714806	Minor joint inflammation - shoulder
714812	Minor joint inflammation - unspecified
714901	Other orthopedic disorders - foot & ankle
714902	Other orthopedic disorders - knee & lower leg
714903	Other orthopedic disorders - thigh, hip & pelvis
714904	Other orthopedic disorders - hand, wrist & forearm
714905	Other orthopedic disorders - elbow & upper arm
714906	Other orthopedic disorders - shoulder
714908	Other orthopedic disorders - back
714911	Other orthopedic disorders - neck
714912	Other orthopedic disorders - unspecified
715101	Orthopedic deformity - foot & ankle
715102	Orthopedic deformity - knee & lower leg
715103	Orthopedic deformity - thigh, hip & pelvis
715104	Orthopedic deformity - hand, wrist & forearm
715105	Orthopedic deformity - elbow & upper arm
715106	Orthopedic deformity - shoulder

ETG Base Class	Description
715107	Orthopedic deformity - head & face
715108	Orthopedic deformity - back
715109	Orthopedic deformity - trunk
715111	Orthopedic deformity - neck
715112	Orthopedic deformity - unspecified
719108	Low back pain syndrome
719901	Orthopedic signs & symptoms - foot & ankle
719902	Orthopedic signs & symptoms - knee & lower leg
719903	Orthopedic signs & symptoms - thigh, hip & pelvis
719904	Orthopedic signs & symptoms - hand, wrist & forearm
719905	Orthopedic signs & symptoms - elbow & upper arm
719906	Orthopedic signs & symptoms - shoulder
719908	Orthopedic signs & symptoms - back
719911	Orthopedic signs & symptoms - neck
719912	Orthopedic signs & symptoms - unspecified
748000	Uncomplicated neonatal management
748100	Chromosomal anomalies
748300	Chemical dependency related disorders, antenatal origin
748400	Mechanical related disorders, antenatal origin
748500	Other disorders, antenatal origin
748700	Other neonatal disorders, perinatal origin
748800	Neonatal prematurity
749900	Neonatal diseases signs & symptoms
779000	Exposure to infectious diseases
779100	Immunization encounter, professional services
779300	Prophylactic procedures, other than inoculation & exposure to infectious diseases
779400	Routine exam
779600	Contraceptive management
779700	Conditional exam
779800	Major specific procedures not classified elsewhere
780000	Minor specific procedures not classified elsewhere
780100	Other preventative & administrative services
780200	Administrative services
821000	Late effects & late complications
821100	Environmental trauma
821200	Poisonings & toxic effects of drugs
869900	Isolated signs, symptoms & non-specific diagnoses, or conditions
900100	Screenings & vaccinations incidental to other services - glaucoma
900200	Screenings & vaccinations incidental to other services - PAP test
900300	Screenings & vaccinations incidental to other services - mammogram
900400	Screenings & vaccinations incidental to other services - prostate

ETG Base Class	Description
900500	Screenings & vaccinations incidental to other services - sigmoidoscopy/colonoscopy
900600	Screenings & vaccinations incidental to other services - cholesterol
900700	Screenings & vaccinations incidental to other services - vaccinations
900800	Screenings & vaccinations incidental to other services - sickle-cell anemia
900900	Screenings & vaccinations incidental to other services - sexually-transmitted disease
901000	Ongoing Rx Tx wo Prov intervention - Non-HIV antiviral treatment
901100	Ongoing Rx Tx wo Prov intervention - HIV/AIDS antiviral treatment
901200	Ongoing Rx Tx wo Prov intervention - Leprosy treatment
901300	Ongoing Rx Tx wo Prov intervention - Diabetes mellitus treatment
901400	Ongoing Rx Tx wo Prov intervention - Hyperuricemia/gout treatment
901500	Ongoing Rx Tx wo Prov intervention - Impotence treatment
901600	Ongoing Rx Tx wo Prov intervention - Antihyperlipidemic treatment
901700	Ongoing Rx Tx wo Prov intervention - Nutritional treatment
901800	Ongoing Rx Tx wo Prov intervention - Pancreatic enzyme replacement treatment
901900	Ongoing Rx Tx wo Prov intervention - Respiratory enzyme deficiency treatment
902000	Ongoing Rx Tx wo Prov intervention - Thyroid hormone replacement treatment
902100	Ongoing Rx Tx wo Prov intervention - Testosterone replacement treatment
902200	Ongoing Rx Tx wo Prov intervention - Weight reduction treatment
902300	Ongoing Rx Tx wo Prov intervention - Colony stimulating treatment
902400	Ongoing Rx Tx wo Prov intervention - Anxiety/panic disorder treatment
902500	Ongoing Rx Tx wo Prov intervention - Depression treatment
902600	Ongoing Rx Tx wo Prov intervention - Mania/affective disorder treatment
902700	Ongoing Rx Tx wo Prov intervention - Psychosis/schizophrenia treatment
902800	Ongoing Rx Tx wo Prov intervention - Anticonvulsant treatment
902900	Ongoing Rx Tx wo Prov intervention - Alzheimer's disease treatment
903000	Ongoing Rx Tx wo Prov intervention - Migraine treatment
903100	Ongoing Rx Tx wo Prov intervention - Multiple sclerosis/ALS treatment
903200	Ongoing Rx Tx wo Prov intervention - Parkinson's syndrome treatment
903300	Ongoing Rx Tx wo Prov intervention - Glaucoma treatment
903400	Ongoing Rx Tx wo Prov intervention - Anticoagulant treatment
903500	Ongoing Rx Tx wo Prov intervention - Antiplatelet treatment
903600	Ongoing Rx Tx wo Prov intervention - Antiarrhythmic treatment
903700	Ongoing Rx Tx wo Prov intervention - Hypertension/heart disease treatment
903800	Ongoing Rx Tx wo Prov intervention - Fluoride treatment
903900	Ongoing Rx Tx wo Prov intervention - Sinusitis/rhinitis treatment
904000	Ongoing Rx Tx wo Prov intervention - Asthma treatment
904100	Ongoing Rx Tx wo Prov intervention - Bronchodilator treatment
904200	Ongoing Rx Tx wo Prov intervention - Emphysema/COPD treatment
904300	Ongoing Rx Tx wo Prov intervention - Inflammatory bowel disease treatment
904400	Ongoing Rx Tx wo Prov intervention - Irritable bowel disease treatment
904500	Ongoing Rx Tx wo Prov intervention - Acid peptic disease treatment

ETG Base Class	Description
904600	Ongoing Rx Tx wo Prov intervention - Benign prostatic hypertrophy treatment
904700	Ongoing Rx Tx wo Prov intervention - Incontinence treatment
904800	Ongoing Rx Tx wo Prov intervention - Vaginal antifungal treatment
904900	Ongoing Rx Tx wo Prov intervention - Acne treatment
905000	Ongoing Rx Tx wo Prov intervention - Antifungal/skin treatment
905100	Ongoing Rx Tx wo Prov intervention - Topical retinoid treatment
905200	Ongoing Rx Tx wo Prov intervention - Arthritis/anti-inflammatory treatment
905300	Ongoing Rx Tx wo Prov intervention - Osteoporosis/bone disease treatment
905400	Ongoing Rx Tx wo Prov intervention - Skeletal muscle spasm treatment
905500	Ongoing Rx Tx wo Prov intervention - Contraceptive treatment
905600	Ongoing Rx Tx wo Prov intervention - Hormonal replacement treatment
905700	Ongoing Rx Tx wo Prov intervention - Insomnia treatment
905800	Ongoing Rx Tx wo Prov intervention - Pain treatment
998700	All blank diagnosis and procedure codes
998900	Record requires a diagnosis code for the procedure code
999100	Orphan drug record
999200	Valid NDC, DCC unassigned to ETG
999300	Invalid NDC
999400	Invalid provider type
999500	Record outside date range
999600	Invalid procedure code
999700	Invalid diagnosis code
999800	Inconsistent diagnosis/procedure matched record
999900	Orphan record