

# Aexcel<sup>®</sup>

## Specialist Designation In Aetna Performance Network

### Methodology Guide

# Aexcel 2012

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## Background on Aexcel Performance Networks

As one of the oldest and largest insurers in America, Aetna has an obligation and an opportunity to transform health care. We believe a better health care system is more transparent and consumer friendly and also recognizes physicians for their efficient and effective use of health care resources.

Our Aexcel physician performance program is a component of our overall transparency efforts. Aexcel is a designation for specialists who:

- are part of the broader Aetna network of participating providers
- have met certain clinical performance and efficiency standards

Aexcel originated from discussions with large employer groups who were challenged by rising health care costs. Patients, in turn, were becoming increasingly engaged as consumers of health care. As such, they wanted access to information about physicians to help them make informed health care decisions before seeking care from a physician.

As Aexcel is implemented throughout the country, we make sure that affected physicians are aware of its introduction to their area beforehand. We also review the program with specialty societies and other groups within organized medicine. Our goal is to work collaboratively with physicians, employers and consumers to transform health care in a way that works for all constituents.

We chose to address physician specialty care in developing this program for several reasons:

1. Specialty care is more episodic than primary care
2. Specialty care drives most of the advances in treatment, procedures, pharmaceuticals and diagnostic imaging, as well as the cost increases that accompany these advances
3. The following specialty categories chosen as part of Aexcel represent approximately 70 percent of specialty costs and control approximately 50 percent of our plan sponsors' total medical costs

### Aexcel physician specialty categories

Cardiology	Neurology	Otolaryngology/ENT
Cardiothoracic surgery	Neurosurgery	Plastic surgery
Gastroenterology	Obstetrics and Gynecology	Urology
General surgery	Orthopedics	Vascular surgery

## How We Evaluate Physicians

### Case Volume

All physicians participating in Aetna's network are included in the clinical performance evaluation using 5 categories of measures. However, each physician group must have at least 10 cases in one of the applicable claims based measures or 30 case across the applicable claims based measures for evaluation of clinical performance based on the claim-based measures category.

For evaluation of efficiency, we identify specialists/groups currently participating in Aetna's network who have managed at least 20 episodes of care for Aetna members over the past 3 years.

Physicians must pass clinical performance criteria and have the minimum volume of episodes for efficiency to be considered for Aexcel designation.

### Clinical Performance Evaluation

Clinical performance means how well physicians meet certain recognized measures of clinical care. We use NQF endorsed measures where available and where not available we use clinical guidelines established by leading medical associations and considered part of standard clinical practice. These medical associations are well regarded by physicians and include the American College of Cardiology American Medical Association, American College of Obstetricians and Gynecologists, Agency for Healthcare Research and Quality, and National Committee for Quality Assurance

A physician or physician group must meet at least 1 of the Clinical Performance criteria outlined below:

#### Certification by External Entity

- At least 50% of specialists in the group have either NCQA or BTE recognition. NCQA recognition programs include Diabetes Care, Cardiac/Stroke Care and Low Back/Spine Care. BTE recognition programs include Hypertension, Chronic Obstructive Pulmonary Disease, Cardiac, Congestive Heart Failure, Asthma, Diabetes, Spine, Patient Centered Medical Home and Coronary Artery Disease.

#### Practice Improvement Module for Board Certification Maintenance of Certification

- At least 50% of specialists in a group have completed the Performance Improvement Module (PIMs) activity, generally in combination with the maintenance of board certification, within the previous two years and on or after September 1, 2008. If a physician's Board does not identify Performance Improvement Module, a physician may still be able to qualify by completing **MOC** Part 4 activity requirements within his/her specialty. MOC Part 4 activity is a practice improvement program specifically designated by the appropriate board.

#### Use of Technology

- At least 50% of specialists in a group has earned BTE or NCQA Physician Office Link designation and/or,
- have incorporated a Certification Commission for Health Information Technology (CCHIT)-endorsed electronic medical record and/or ePrescribing software in their practice.
  - >Measured by data set provided to Aetna by national vendors (sourced from PQPR-adoption of e.prescribing measure ID 100224)
  - >Self reported by submitting attestation form

#### Alignment with Aetna Institutes of Quality® (IOQ)

- The physician maintains an active medical staff appointment at an Aetna Institutes of Quality (IOQ) bariatric surgery facility or orthopedic facility and his/her primary specialty is the specialty for which the

facility is recognized for IOQ. IOQ is a designation for facilities that have demonstrated quality care based on measures of clinical performance, access and efficiency.

- Passing this criterion will not apply to a group practice unless 75% of the physicians are identified as IOQ physicians at one of the IOQ facilities. For additional information about Aetna's IOQ program, please visit **[www.aetna.com](http://www.aetna.com)**.

## Claims-Based Measures

Claims-based measures are case-mix adjusted as necessary. All are associated with improved patient care. To be evaluated for a claims-based clinical measure, physician groups must have a minimum threshold of 10 cases in an applicable measure or 30 cases across all applicable measures. The results of each measure are combined into an overall weighted index. Physician groups whose overall weighted index are either 0.90 or above or where their overall weighted index is in the top 96% rank order for that market and specialty are considered to pass clinical. Then statistical significance is applied to the bottom 4% and only those results that are not statistically significant at a .05 significance level for being in the bottom 4% for clinical scores are considered to pass clinical.

- Metrics include:

Name	Explanation	Based on Measure	NOF Endorsed	Specialties
ACE Inhibitor/Angiotensin Receptor (ARB) use in Members with Heart Failure	<b>Use of ACE inhibitor or ARB for patients with heart failure</b> -- How often patients cared for by a cardiologist take medications that have been proven to effectively treat heart failure	AMA www.ama-assn.org/ama/pub/category/2946.html	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology
Annual Monitoring for Patients on Persistent ACE Inhibitors/Angiotensin Receptor Blocker (ACE/ARB)	<b>Annual monitoring of ACE inhibitor or ARB</b> – Patients on ACE inhibitor or ARB who had at least one serum potassium monitoring test and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology
Annual Monitoring for Patients on Persistent Digoxin	<b>Annual monitoring of digoxin</b> – Patients on digoxin who had at least one serum potassium monitoring test and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology
Annual Monitoring for Patients on Persistent Diuretics	<b>Annual monitoring of diuretics</b> – Patients on a diuretic who had at least one serum potassium monitoring test and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology
Annual Monitoring for Patients on Persistent Anticonvulsants (roll up)	<b>Annual monitoring of anticonvulsant therapy.</b> Patients on anticonvulsants who had at least one drug serum concentration level monitoring test	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Neurosurgery, Neurology
Appropriate Treatment for Children with Upper Respiratory Infection (URI)	<b>Appropriate Treatment for Children with a diagnosis of Upper Respiratory infection (URI).</b> Patients between the ages of 3 months and 18 years of age who were <i>inappropriately</i> treated with an antibiotic for a diagnosis of Upper Respiratory Infection.	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Otolaryngology
Lipid Lowering Drug Therapy for Prevention of Ischemic Heart Disease.	<b>Use of cholesterol-lowering medications (statin) for patients with CAD</b> -- How often patients cared for by a cardiologist take medications that have been proven to effectively treat high cholesterol in people with heart disease	AMA www.ama-assn.org/ama/pub/category/2946.html	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, OB/GYN

Beta Blocker Therapy- Prior Myocardial Infarction	<b>Use of beta blocker for patients with history of heart attacks</b> -- How often patients cared for by a cardiologist take medications that have been proven to prevent heart attacks in people with heart disease	AMA www.ama-assn.org/ama/pub/category/2946.html	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, OB/GYN
Diabetes Annual Hemoglobin A1c Screening	<b>Testing for appropriate HbgA1C levels in the diabetic population.</b> Patients between the ages of 18 and 75 years with type 1 or type 2 diabetes who had screening and monitoring for HbgA1C as recommended by the American Diabetes Association.	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, Gastroenterology, OB/GYN
Diabetes Annual Lipid Screening	<b>Testing for appropriate Lipid levels in the diabetic population.</b> Patients between the ages of 18 and 75 years with type 1 or type 2 diabetes who had screening and monitoring for Lipid Levels as recommended by the American Diabetes Association.	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, Gastroenterology, OB/GYN
Diabetes Medical Attention for Nephropathy	<b>Diabetes - Medical Attention for Nephropathy</b> - Patients between the ages of 18 and 75 years with type 1 or type 2 diabetes who had Medical Attention for Nephropathy as recommended by the American Diabetes Association.	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, Gastroenterology, OB/GYN
Diabetes Annual Retinal Eye Exam	<b>Testing for appropriate Retinal Eye exams in the diabetic population.</b> Patients between the ages of 18 and 75 years with type 1 or type 2 diabetes who had a Retinal exam performed as recommended by the American Diabetes Association.	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, OB/GYN
IVD: Complete Lipid Profile and LDL Control < 100	<b>IVD: Complete Lipid Profile and LDL Control &lt;100</b> - Patients between the ages of 18 and 75 years who were discharged from an acute care setting after an Acute Myocardial Infarction, Coronary Artery Bypass Graft (CABG) or Percutaneous Transluminal Coronary Angioplasty (PTCA) and had an LDL-C lab level result <100.	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, OB/GYN
Diabetes Annual Lipid Control < 100	<b>Testing for appropriate Lipid (LDL-C) levels &lt;100 in the diabetic population.</b> Patients between the ages of 18 and 75 years with type 1 or type 2 diabetes who had screening and monitoring for LDL-C levels <100.	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, Gastroenterology, OB/GYN
Diabetic Hemoglobin A1c Management	<b>Testing for HbgA1C levels &gt;9% in the diabetic population.</b> Patients between the ages of 18 and 75 years with type 1 or type 2 diabetes who had HbgA1C results >9%.	NCQA www.ncqa.org/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, Gastroenterology, OB/GYN
Breast Cancer Surveillance	<b>Breast CA-CA Surveillance</b> - The percentage of female patients with a history of breast cancer at any time in the past, who had a Mammogram, Ultrasound, PET Scan or MRI in the measurement period.	Active Health Management www.activehealth.net/	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	General Surgery, OB/GYN

Prostate Cancer Surveillance	<b>Prostate CA – CA Surveillance</b> - The percentage of males with a history of prostate cancer that have had their PSA monitored in the past 12 months.	Active Health Management <a href="http://www.activehealth.net/">www.activehealth.net/</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Urology
Follow-Up Colonoscopy After Initial Diagnosis and Treatment of Colorectal Cancer.	<b>Follow-Up after Initial Diagnosis &amp; Treatment of Colorectal CA: Colonoscopy</b> - Patients who have been newly diagnosed and resected for colorectal cancer who have received a follow-up colonoscopy/sigmoidoscopy within 15 months of resection.	Health Benchmarks <a href="http://www.healthbenchmarks.com">www.healthbenchmarks.com</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Gastroenterology, General Surgery, OB/GYN
Migraine- Adults with Frequent Use of Acute Medications that also Received Prophylactic Medications	<b>Adult(s) with Frequent Use of Acute Medications that also Received Prophylactic Medications</b> - The percentage of patients, 18 years and older, identified with migraines, who frequently take acute (abortive) medications and are also taking a prophylactic medication for migraine control.	Ingenix <a href="http://www.ingenix.com/">www.ingenix.com/</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Neurology, OB/GYN
Post MI: ACE Inhibitor or Angiotensin Receptor Blocker (ARB)Therapy	<b>Use of ACE inhibitor or ARB for patients with coronary artery disease (CAD) and diabetes</b> -- How often patients cared for by a cardiologist take medications that have been proven to effectively treat those with CAD and diabetes	AMA <a href="http://www.ama-assn.org/ama/pub/category/2946.html">www.ama-assn.org/ama/pub/category/2946.html</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, OB/GYN
Hypertension- Serum Creatinine in the Past 12 Months	<b>Hypertension patients with a serum creatinine in the last 12 months</b> - The percentage of patients 18 years of age and older with hypertension (HTN) who had a serum creatinine test anytime during the 12 month assessment period.	Ingenix <a href="http://www.ingenix.com/">www.ingenix.com/</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, OB/GYN
Chronic Kidney Disease – Lipid Profile Monitoring	<b>Chronic Kidney Disease – Lipid Profile Monitoring</b> - The percentage of patients age 18 and over with chronic kidney disease that have been screened for dyslipidemia with a lipid profile.	Active Health Management <a href="http://www.activehealth.net">www.activehealth.net</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, Gastroenterology, OB/GYN
Chronic Kidney Disease with LDL Greater than or Equal to 130 – Use of Lipid Lowering Agent	<b>Chronic Kidney Disease with LDL Greater than or equal to 130 – consider adding a lipid lowering agent</b> - The percentage of patients age 18 and over with chronic kidney disease with LDL greater than or equal to 130 and received a lipid lowering agent.	Active Health Management <a href="http://www.activehealth.net">www.activehealth.net</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, Gastroenterology, OB/GYN
Diabetes with LDL Greater than 100 – Use of a Lipid Lowering Agent	<b>Diabetes with LDL greater than 100 – Use of a lipid lowering agent</b> - The percentage of diabetic patients who are either 41 - 75 years of age OR 18-40 years of age with Diabetes and Hypertension, with an LDL level greater than 100 mg/dL and a current fill for a lipid lowering agent.	Active Health Management <a href="http://www.activehealth.net">www.activehealth.net</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Cardiology, Gastroenterology, OB/GYN
Appropriate Work Up Prior To Endometrial Ablation Procedure	<b>Appropriate Work Up Prior To Endometrial Ablation Procedure</b> - The percentage of female patients who had an endometrial ablation procedure in the 12 month period prior to an endometrial biopsy.	Health Benchmarks <a href="http://www.healthbenchmarks.com">www.healthbenchmarks.com</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	OB/GYN

Inpatient Adverse Event Rate	<b>Absence of an adverse event</b> – Measurement used to determine the absence of an adverse event during an inpatient hospital stay. Complications can occur during a hospitalization that could be avoided. We look for an absence of complications or adverse events during inpatient stays being managed by a physician	The adverse event rate/index (number of complications or problems for hospitalized patients) is Aetna Internally Built	No	Cardiology, Cardiothoracic Surgery, Otolaryngology, General Surgery, Vascular Surgery, Neurosurgery, Neurology, Plastic Surgery, OB/GYN, Orthopedic Surgery, Urology
Outpatient Procedure Adverse Event Rate	<b>Absence of an adverse event related to an outpatient procedure(s).</b> The rate is defined as the proportion of procedures where an undesirable (adverse) event occurs within 30 days following the procedure.	The adverse event rate/index (number of complications or problems within 30 days of an outpatient procedure) is Aetna Internally Built	No	General Surgery, Otolaryngology, Gastroenterology, Obstetrics/Gynecology, Orthopedics, Plastic Surgery, Urology, Ophthalmology
Breast Cancer Screening	<b>Breast cancer screening rate</b> – How often patients between the ages of 40 and 69 years, cared for by an Ob/Gyn, who should be getting mammograms are actually getting this test	NCQA <a href="http://www.ncqa.org/">www.ncqa.org/</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	OB/GYN
Cervical Cancer Screening	<b>Cervical cancer screening rate</b> – How often patients between the ages of 24 and 64 years, cared for by an Ob/Gyn, who should be getting a cervical PAP test are actually getting this test.	NCQA <a href="http://www.ncqa.org/">www.ncqa.org/</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	OB/GYN
Osteoporosis Management in Members Who Had a Fracture	<b>Osteoporosis management following fracture</b> – Patients age 50 years and older with a fracture of the hip, spine or distal radius who had a central DXA measurement ordered or performed, or pharmacologic therapy prescribed	Based on AMA measure <a href="http://www.ama-assn.org/ama/pub/category/2946.html">www.ama-assn.org/ama/pub/category/2946.html</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Orthopedic Surgery
Hospital 30- day Readmit Rate	<b>Absence of an unexpected readmission to a hospital</b> – Measurement used to determine the absence of a patient being unexpectedly readmitted to the hospital within 30 days after being discharged from the hospital. There are complications that occur that would require a patient to be readmitted to a facility after discharge from a hospital. We measure the absence of those readmissions for physicians who are managing the first inpatient stay.	The readmission rate (rate of unanticipated hospital readmissions within 30 days of discharge) is Aetna Internally Built	No	Cardiology, Cardiothoracic Surgery, Otolaryngology, General Surgery, Vascular Surgery, Neurosurgery, Neurology, Plastic Surgery, OB/GYN, Orthopedic Surgery, Urology
Tympanostomy Tube Hearing Test	<b>Tympanostomy Tube Hearing Test</b> - The percentage of patients the ages of 2 years and 12 years who had a hearing test in the 6 month time period before tympanostomy tube(s) were inserted.	Resolution Health <a href="http://www.resolutionhealth.com/558.html">www.resolutionhealth.com/558.html</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Otolaryngology

Use of Appropriate Medications for People with Asthma Ages 5 - 56 years old (composite measure)	<b>Use of Appropriate medication in asthma</b> -This measure evaluates members 5 to 56 years of age who have been identified as having persistent asthma and who were appropriately prescribed medication during the 24 month assessment period	NCQA <a href="http://www.ncqa.org/">www.ncqa.org/</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Otolaryngology
Warfarin- INR Monitoring	<b>Warfarin - INR Monitoring</b> -The percentage of members taking warfarin who had PT/INR (prothrombin time (PT) test/International normalized ratio) anytime in the measurement period.	Active Health Management <a href="http://www.activehealth.net">www.activehealth.net</a>	Yes <a href="http://www.qualityforum.org/">www.qualityforum.org/</a>	Neurology, Vascular Surgery, Cardiology, Cardiothoracic Surgery, Gastroenterology, General Surgery, Neurosurgery, OB/GYN

### Efficiency Evaluation

Efficiency is a combination of physician treatment patterns, health care resource utilization and cost. When evaluating the costs physicians incur for treating Aetna members, all costs are taken into account, not just office visits. Aetna uses Symmetry Health Data Systems' software and its Episode Treatment Groups<sup>®</sup> (ETGs<sup>®</sup>) version 7.5 illness classification system to build episodes of care to measure a physician's efficiency. Episodes of care methodology focuses on all of the costs (inpatient, outpatient, professional, office, lab, pharmacy and ancillary) required to care for a patient's underlying medical condition.

### Comparison to Peers

We compare all the resources used to treat a physician's patients to those of other physicians in the same specialty and geographic location. If a physician is a part of a group practice, we evaluate the entire group. In this case, performance measurement results of other physicians in the group practice will have an impact on each individual physician's evaluation.

### Risk Adjustment

Some physicians may care for more patients with chronic or complex conditions in a given time period than their peers; therefore, we evaluate physicians by comparing their services for patients with similar conditions. We apply risk-adjustment factors to account for differences in the use of health care resources among individuals. Use of health care resources can differ among patients because of things like age, gender, chronic disease risk and insurance product type.

### Volume Requirement

Physicians must have a minimum of 20 episodes of care over a 3-year period to be evaluated for efficiency. Episodes are attributed to physicians based upon who was responsible for the majority of the care. For example, surgical episodes are attributed to the physician who performed the major surgery before a physician who performed minor surgery in the same episode. If there were two physicians who performed the major surgery or two physicians who performed the minor surgery, the episode would be attributed to the physician with the highest allowed charges. For non-surgical episodes, the episode is attributed to the physician with the highest number of visits.

We chose 20 as a minimum based on a comparison of results using random samples of various volume levels, including 20, 30 and 100. We found there was a reasonably similar result for groups with at least 20 episodes as there were at the higher levels. Furthermore, using 20 episodes as a minimum allows us to be more inclusive in our program.

### **Provider Scoring**

Scoring is done at the provider group level for volume. A provider group can include from one to many individual providers. Each group meeting the 20 or more episode volume requirement is considered for designation as long as it passes at least one of the clinical performance measures. Each group will receive an observed (actual rate) to expected (case-mix-adjusted) ratio score. The expected value for this score is the case-mix-adjusted average allowed amount for each episode attributed to that group.

### **Statistical Significance of Efficiency index**

Statistical significance is determined by using a weighted students t-test to compare each physician group's overall efficiency index to the peer group's efficiency index as determined by indirect standardization of the episode index for each age, gender, chronic disease risk, Pharmacy Insurance coverage and utilization, year of episode, and insurance product type combination. Each physician/physician group is compared within specialty and market to the peer's mean Observed/Expected index. The weights for each episodic observation are the expected dollars for the episode. All hypothesis tests are two-tailed and conducted at the 0.10 significance level. Physicians pass the efficiency standard when their results meet the minimum 20-episode volume and are determined to be efficient at a statistically significant level. All other physicians do not pass the efficiency standard.

### **Network Adequacy**

The Aexcel designation is intended to maintain member access to a network of specialty physicians. Under the designation process, the local market medical director, network market head and regional medical director may determine that the resulting network is insufficient to meet the unique market network adequacy requirements. In such cases, a Medical Director, designated by the Regional Medical Director and/or Regional Manager, may make additional Aexcel specialty designations to meet network adequacy needs.

### **Periodic Physician Re-Evaluation for Aexcel Designation**

We re-evaluate a physician's performance at least every two years. As a result, a physician's Aexcel designation status could change. Physicians who previously did not receive Aexcel designation may now meet the criteria. Similarly, physicians who are currently designated may lose their designation because they did not meet the volume, clinical performance or efficiency standards. This could be due to a physician's individual performance or because the overall performance of the physician's peers in his or her market, whom the physician is measured against, has improved.

Regardless of whether a physician receives Aexcel designation, he or she remains a participating physician in Aetna's broader network.

We realize that physicians, members and employers alike are impacted by changes to the composition of Aetna networks. We do our best to consider member and physician disruption during the Aexcel evaluation process.

### **Data Variability**

As Aexcel continues to evolve we look for opportunities to further enhance our methodology and evaluation process based on new clinical evidence, feedback from members, providers and employers, as well as evolving industry trends.

While we are committed to using the best available information, there are certain data limitations:

- The clinical quality claims-based measures and efficiency information is based on Aetna member data only. Combined claim data from multiple payers (e.g. insurance companies, self-insured and government plans)

may provide a more complete picture of physician performance but is not yet available. We support industry-wide data collection initiatives and when this credible combined data becomes available, we will consider using it in our evaluations.

- The claim data used to evaluate physicians does not include all procedures, lab or pharmacy data - only those for which Aetna has claim data. Doctors may perform health care services for which they do not provide us with information. Also because of the way claims are submitted by doctors and/or processed by Aetna, health care service details may not always be available in the claim data we use. Therefore, we strongly encourage physicians to reach out to us with additional data they might have in medical charts that is not available to us through claims data.

## **Aexcel as a Guide**

Aexcel information is intended to be only a guide for when a member chooses a specialist within the Aexcel specialist categories. There are many ways to evaluate doctor practices and members should consult with their existing doctor and the specialists that they're selecting before making a decision. All ratings have a risk of error and, therefore, should not be the sole basis for selecting a doctor.

We recommend members consider the following when selecting a doctor:

- Consult with their doctor regarding their health care decisions
- View specialist clinical quality and cost efficiency information as one factor in their health care decision
- Aexcel designation is not a guarantee as to the quality of the service a member receives or the outcome of any treatment by that specialist
- If you have a Choose and Save benefit, choose Aexcel physicians who use Choose and Save facilities to maximize your benefit
- If a specialist is currently not designated for Aexcel:
  - this does not mean the doctor does not provide quality services
  - we might not have sufficient data to evaluate this doctor; and/or
  - this doctor might be in the process of appealing their designation status

## Clinical Performance Evaluation Process

A physician or physician group must meet at least one of the clinical performance criteria (previously outlined beginning on page 5):

### Certification by External Entity

### Practice Improvement Module for Maintenance of Board Certification

### Use of Technology

### Alignment with Aetna Institutes of Quality® (IOQ)

### Claims Based Measures

#### Application of Claims Based Measures:

##### Step 1

All Aetna participating physicians in a geographic market<sup>1</sup> who practice in the selected specialty (for example, all cardiologists in the Aetna network in Atlanta) are reviewed.

Physicians are rank-ordered according to an overall index score. Index measures are based on established, evidence-based measures of clinical performance.

Each measure is case-mix adjusted as appropriate and a physician or physician group must have at least 10 cases in any given measure or 30 cases across their claims based measures, for claims-based clinical performance measures evaluation. The denominator can represent unique members or events depending on the measure. In some measures, such as breast cancer screening, the denominator is members. In some measures, such as adverse event rate, the denominator is each event, and a member can have multiple events. Only scored measures are included in the index score; measures are weighted according to the number of eligible cases.

##### Step 2

We identify physicians with the lowest index scores. Physicians whose measured outcomes fall at or below the 4<sup>th</sup> percentile of the peer group are then reviewed further (Steps 3-6) and may be excluded from consideration for Aexcel designation, unless other clinical criteria is met.

##### Step 3

For all physicians and physician groups as identified at or below the 4<sup>th</sup> percentile of their peer group, we calculate the probability that the total number of successes across all appropriate

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<sup>1</sup> In 2012, Aexcel is offered in 40 markets including, Arizona, Atlanta, Austin, Central Valley CA, Chicago IL, Cincinnati, Cleveland, Colorado, Columbus, Connecticut, Dallas/Fort Worth, Delaware, Detroit, **El Paso, TX**; Houston, Indianapolis, Kansas City, KS and MO; **Las Vegas**; Los Angeles, Louisville, Maine, **Massachusetts**; Metropolitan DC (including Maryland, DC and Northern Virginia), Metropolitan New York, North Florida, Northern CA, Northern New Jersey, Oklahoma City, Orlando, Pittsburgh, Richmond, San Antonio TX, San Diego, Seattle/W.Washington, South FL (Dade and Broward Counties), **Southern New Jersey**, Tampa, and Tulsa.

measures is less than or equal to the total number of observed successes for each physician or physician group. Our calculations are based on the multivariate binomial probability distribution. Thus we calculate:

$$P_r\{Y \leq x_1 + x_2 + \dots + x_k\}$$

where  $Y = X_1 + X_2 + \dots + X_k$  is the sum of  $k$  independent binomial random variables;

$X_i, i = 1, 2, \dots, k$  denotes the  $i^{\text{th}}$  summand with distribution  $X_i \sim B_i(n_i, p_i)$ ;

$x_i, i = 1, 2, \dots, k$  denotes the number of successes observed for the  $i^{\text{th}}$  measure;

$n_i$  denotes the number of cases for the  $i^{\text{th}}$  measure; and

$p_i$  denotes the observed success rate of the peer group for the  $i^{\text{th}}$  measure.

The distribution of  $Y$  is given by the discrete convolution formula; namely,

$$\begin{aligned} P_r\{Y \leq y\} &= \sum_{z_1=0}^y \sum_{z_2=0}^{y-z_1} \dots \sum_{z_k=0}^{y-\sum_{j=1}^{k-1} z_j} P_r\{Z_1 = z_1, Z_2 = z_2, \dots, Z_k = z_k\} \\ &= \sum_{z_1=0}^y \sum_{z_2=0}^{y-z_1} \dots \sum_{z_k=0}^{y-\sum_{j=1}^{k-1} z_j} P_r\{Z_1 = z_1\} P_r\{Z_2 = z_2\} \dots P_r\{Z_k = z_k\} \end{aligned}$$

where the last step follows by independence. For physicians and physician groups with a large number of cases and a large number of appropriate measures,  $P_r\{Y \leq x_1 + x_2 + \dots + x_k\}$  is estimated based on the normal approximation for binomial distribution; namely,

$$P_r\{Y \leq y\} = P_r\{X_1 + X_2 + \dots + X_k \leq y\}$$

$$\approx P_r\{W_1 + W_2 + \dots + W_k \leq y\}$$

$$= P_r\{W \leq y\}$$

where  $W_i, i = 1, 2, \dots, k$  are normal distributed random variables with mean  $n_i p_i$  and variance

$n_i p_i (1 - p_i)$ . Thus,  $W$  is normally distributed with mean  $\sum_{i=1}^k n_i p_i$  and variance  $\sum_{i=1}^k n_i p_i (1 - p_i)$ .

If this lower tailed probability is less than 0.05; the physician or physician group is excluded from Aexcel designation.

**Step 4**

An Aetna medical director reviews measure detail reports of physicians remaining in the lowest group using available clinical data. Some cases have logical clinical explanations and are eliminated from the index score, allowing additional physicians to be considered for Aexcel designation.

**Step 5**

Detailed clinical performance data for each measure is mailed to the physicians remaining in the lowest group. An Aetna medical director is available to discuss this data. Every physician has the opportunity to provide additional information for reconsideration. For example, a physician still has the opportunity to provide information about the use of NQF-endorsed health information technology.

**Step 6**

Physicians who meet the clinical performance standards are then evaluated on the efficiency of their care.

## General Statements on the Claims Based Clinical Performance Measures

### 1. Current Procedure Terminology

All references are to Current Procedure Terminology© 2009 American Medical Association. All rights reserved.

### 2. Physician Attribution

Attribution logic is addressed for each specific measure.

The Enterprise Provider Database (EPDB) is a database that houses provider and network data. There are two types of provider data: community and network participation data.

- Community data is information that is generally known about a provider. Examples are name, social security number, tax identification number, service location(s), billing address(es), and education.
- Provider network participation data (PNP) is information specific to a provider's contract or participation with Aetna. Examples are fees, fee codes, risk groups, effective and expiration network participation dates, network specialties, directory information. Only participating providers are considered for Aexcel.
- Twelve specialties (cardiology, cardiothoracic surgery, gastroenterology, general surgery, obstetrics and gynecology, orthopedics, otolaryngology, neurology, neurosurgery, plastic surgery, urology and vascular surgery) are included within the Aexcel network, and the appropriate specialty is addressed within the measurement specifications. For a complete list of sub-specialties refer to [Appendix A](#).

**Visit logic:** The Aetna Data Warehouse Procedure Group contains the historic and current evaluation and management (physician visit) codes as well as CPTII codes that give assessment information on a member gathered during a physician visit and HCPC codes that indicate physician visits for specific care.

These procedure codes represent contact with the member where a physical assessment was completed by a physician provider. We have not limited the scope of the evaluation and management codes included (assessments in the outpatient, ER or inpatient settings), but rather have limited the attribution of the visit based on the place of service on the claim or encounter.

Each measure defines the specialty that is included for attribution. Within EPDB each provider/provider group is assigned a provider type and a specialty. We have grouped the codes that represent the specific specialties to define provider attribution.

### 3. Lab Data Integrity

We have found that a data integrity issue exists for certain areas of the country due to capitation arrangements with labs, where we do not receive all the encounter data for lab services performed. For HMO-based membership, we determine if data integrity issues exist by reviewing lab utilization. If a member's primary care physician (PCP) has a low level of utilization, all attributed members for that PCP are excluded at the member ID level for measures requiring a lab test (even if the measure is attributed to another physician). (PPO plan data is not subject to the same problem since capitation arrangements do not apply and we receive the claims for those tests.)

#### **4. Claims Lag**

We add three months on to the end of the measurement timeframe before we extract the data from our warehouse to allow for medical claim lag. This ensures the majority of medical claims have been submitted to be included in our data. No lag is required for Pharmacy claims because pharmacy claims are adjudicated in real-time so they are retrieved according to the timeframe in the measure for the pharmacy claims. Pharmacy claims can be extracted as soon as the end of month data is loaded into the warehouse or later if the end date is used to limit the timeframe.

#### **5. Case Mix Adjustment**

Case mix classifies data characteristics into groups that are homogenous to allow for a basis of comparison. A case mix adjustment is applied to each clinical performance measure, as appropriate. For example, the Ob/Gyn and cardiology clinical performance measures are not case mix adjusted because the measures themselves only apply to the population who should be receiving the diagnostic test or medication. If a certain type of pre-existing condition would exclude the member from receiving the test or medication, they are excluded from measurement and not counted in the physician/physician group's member list.

For this reason, it was not necessary to adjust all provider results to account for differences in the age, gender and severity level of their patient population. However, because the measurement for each provider includes all of their Aetna members regardless of the type of medical product (HMO-based or PPO-based plans), we did case-mix adjust the results by the types of medical products of the Aetna members in the provider's panel. We were concerned that incomplete capture of capitated services (encounters) for HMO-based plan members could negatively impact providers who had a greater proportion of Aetna HMO-based members among their Aetna patient population compared to providers with a greater proportion of Aetna PPO-based members in their patient population. Any case mix adjustment that is included in a measure is documented in the detailed specifications.

The expected value for all measures, except adverse event, is calculated based on the results of indirect standardization using case mix adjustment. The expected value for adverse event is calculated using regression analysis.

#### **6. Medical Case**

Aetna Medical Case Logic summarizes clinical events by linking or associating all of the claims submitted for a member during the same treatment occurrence. All Aetna Data Warehouse claim and encounter details are run through medical case logic. All specialist and ancillary claims that are within the starting and ending dates of service for these cases are attached to the case. For inpatient cases, a room and board bill is required based on the revenue code or benefit code. A bill from a different facility would trigger a new case. An example would be a transfer to an acute care facility, skilled nursing or rehabilitation facility.

Once a case is defined, a series of clinical attributes are defined for the case. For example, each medical case is assigned a Diagnostic Related Group (DRG) to aid in the analysis. A DRG is assigned to each case using DRG Grouper software. The array of codes fed to the Grouper is arranged based on a clinical algorithm and service date basis, thus delivering the most clinically appropriate DRG for the case. Aetna has defined algorithms that identify a managing provider for each case.

#### **7. Health Profile Database**

The Aetna Informatics Health Profile Database (HPD) is a foundation database used to identify Aetna members with any of 84 chronic diseases or medical conditions tracked in the HPD table. The identification algorithms are comprised of medical, pharmacy, and clinical laboratory data from physician claims and encounters, specialist claims, pharmacy, facilities, laboratories and others. The HPD database is refreshed monthly.

The HPD consists of two major components:

### **Disease Identification and Prevalence**

The chronic diseases and medical conditions included in HPD are selected based on the following considerations: 1.) the disease is chronic in nature, 2.) represents a significant burden of illness, and 3.) generates significant medical costs. In addition, diseases were chosen where improved processes of care might lead to better outcomes.

Clinical selection criteria have been established for each disease in HPD. The Aetna Clinical Groups are used in the generation of these criteria. These groups are a hierarchical grouping of diagnosis and procedure codes used for classifying all International Classification of Diseases 9th revision (ICD-9) and Current Procedure Terminology 4th revision (CPT-4) codes. Complex inclusion and exclusion logic has been developed to reduce the occurrence of a false positive rate on specific indicators.

Members are selected for inclusion in one or more HPD disease categories using “one hit” criteria or one occurrence of any of the specific diagnosis criteria, including ICD-9, CPT, pharmacy, and laboratory codes. This selection process is designed to loosely identify members for the calculation of prevalence of chronic diseases and clinical conditions in a population and to identify a pool of members for more rigorous identification and ad hoc reporting.

### **Disease Indicator Flag**

A more stringent identification criteria for members with chronic diseases and clinical conditions is beneficial for targeted interventions, case management, and member education through disease management programs. The use of a multiple selection criteria improves the sensitivity of the identification process.

DM=Y - Members flagged with a disease identification indicator of “Y” have fully met the disease-specific identification criteria defined as “hits” in two of five databases or a total of three “hits” in any of the databases except where exclusion logic applies. One date of service must fall within the prior 18 months. The 18-month timeframe is calculated from the file effective date.

DM=N – Members flagged with a disease identification indicator of “N” have not fully met the identification criteria. This category may potentially be useful for early identification of chronic diseases.

DM=H – Members flagged with a disease identification indicator of “H” were at one time identified but have either termed or no longer meet the criteria for identification; e.g., no date of service in the last 18 months.

**Use of HPD in Clinical Measures:** For members to be included in a specific measure, the DM=Y or H is used to ensure that the member is being treated for the specific disease or condition. For measures that require member exclusion based on knowledge of another disease or condition, the existence of that disease code in the HPD, which is equivalent to a single claim for that condition, is considered evidence of the excluded value.

## **8. Clinical Group Definitions**

**UPG, or Aetna Procedure Groups**, represent the grouping of similar CPT–4 and ICD–9 procedure codes that refer to specific procedures performed for similar pathophysiologic processes for the same organ system. Currently, there are over 26 thousand procedure codes, which map into 191 internally defined procedure groups, or UPGs. Each procedure group is categorized as to whether it is major procedure (e.g. heart surgery), a minor procedure (e.g. colonoscopy), diagnosis, or other.

**UDG, or Aetna Diagnosis Groups**, represent a grouping of similar ICD–9 diagnosis codes that refer to the same pathophysiologic process affecting the same organ system. Currently, there are over 16,000 diagnosis codes, which map into 198 diagnosis groups, or UDGs.

**DRG, Diagnosis Related Group**, DRG stands for Diagnosis Related Group. It is an industry standard originally devised by the federal government. “A DRG Code is one of over 750 classifications of diagnoses and procedure driven reasons for inpatient care for which patients demonstrate similar resource consumption and length of stay patterns.”

**ERG**, Symmetry Episode Risk Groups® (ERGs®) predict current and future health care usage for individuals and groups by creating individual risk measures that incorporate episodes-of-care methodology, medical and pharmacy claims information, and demographic variables

**Internal Diagnostic Related Group (IDRG)** is an aggregate of HCFA DRGs which represent the outputs of reasonably distinct clinical processes. The IDRG logic is used in the medical case adverse event and length of stay modeling to group the DRGs into similar subsets based on the members critical path (clinical reason for hospitalization) and then into the IDRG specialty for modeling.

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# Individual Clinical Measure Descriptions for Claims Based Measures

## Inpatient Adverse Event Rate (Measure ID 100256)

**Measure Endorsed by NQF: No**

**Based on Aetna Internally Developed Measure**

### Description

This measure evaluates the care received by people who are admitted to hospitals. Assessment of overall care that members receive while managed by a physician practice during an inpatient hospitalization.

The adverse event data for the Aexcel measure is extracted from the medical case. It is the actual rate of unexpected adverse health events experienced by a specialist's hospitalized patients compared to a case-mix adjusted average rate of similar cases

### Understanding Adverse Events

An adverse event is a negative, unanticipated consequence of care. Examples include a wound infection within an elective surgery case, hospital-acquired pneumonia or deep vein thrombosis after hip replacement surgery. All cases are included in the modeling for adverse events, however not all of these are included in the Aexcel specialist measurement. Only those deemed clinically appropriate are used in Aexcel. A subset of adverse events related to anesthesia and drug-induced complications have been excluded from this measure because these are complications that are not likely controlled by care directed by the managing provider of the medical case.

Medical case logic assigns an adverse event to a case if there is a secondary diagnosis that has all of the following characteristics:

- The diagnosis is unlikely to have been present on admission.
- The diagnosis is unlikely to be a coexisting condition.
- The diagnosis is unlikely to reflect the normal progression of the principal diagnosis.
- The diagnosis is logically consistent with the occurrence of an adverse event.

### Modeling Adverse Events

Medical case obtains its original data from medical, pharmacy, and lab claims as well as member and provider data. When considering a case, we take into account factors that are not under the control of the hospital that may have an impact on the likelihood of having an adverse event. Examples of patient specific factors that impact outcomes include age, gender, admission type (elective, emergency, transfer from another facility, etc.), and co morbidities (clinical conditions present at the time of hospital admission). A regression-based methodology is applied to the inpatient data to account and adjust for these patient specific factors. With this approach, adjusted expected rates are calculated. Expected rates are compared with observed rates. This comparison of observed to expected provides a valid measure of performance specific to the population of interest. And, since the calculated data has been adjusted for clinical and demographic factors, an equitable comparison can be made across hospitals, providers or geography.

Cases are grouped by DRG to align with provider practice specialties such as cardiology, cardiothoracic surgery, gastroenterology and general surgery. Each group of DRG cases are modeled based on the specialty definition.

Each case is interrogated for secondary diagnosis codes that Aetna has targeted as representing a possible adverse event. The case is checked to see if it is an elective admission or an emergency admission. Due to the known instability of members admitted for urgent care, some adverse event ICD9 codes are only considered for elective admissions.

Some complications are anticipated, such as the member that has cardiac surgery but goes on to have a post-operative heart attack. This ICD9 diagnosis code would not be counted as an adverse event. The exclusion logic

organized by specialty model, excludes the count for adverse event diagnosis codes present in an admission, based on the IDRG of the case, to avoid the inappropriate counting of complications that are unfortunate but anticipated.

<b>Eligible Population</b>	
<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Age at inpatient admission greater than or equal to 1
<b>Continuous Enrollment</b>	Continuous Enrollment - Member must be active as of the medical case start date through the medical case stop date within 24 month assessment period.
<b>Clinical Subset</b>	The DRG is an Aetna derived grouping that reflects the most significant clinical reason for a Medical Case. The DRG subset is used to identify the most appropriate inpatient cases to be evaluated based on the provider's specialty using the diagnosis and procedure codes that the specialist is expected to manage.
<b>Measurement Period</b>	24 Months
<b>Benefit</b>	Medical
<b>Visit</b>	At least one inpatient claim associated with the medical case (within IP length of stay) during the 24 month assessment period where the provider is considered the managing provider for the medical case.
<b>Provider Specialty</b>	Cardiology, Cardiothoracic Surgery, Otolaryngology, General Surgery, Vascular Surgery, Neurosurgery, Neurology, Plastic Surgery, Ob/Gynecology, Orthopedic Surgery, Urology, Gastroenterology specialty designation.

<b>Administrative Specification</b>	
<b>Denominator</b>	All inpatient "Events" on the Case Point in Time table and that are relevant to that specialties core practice. Adverse event DRG filter are included except where the length of stay is an outlier. For all cases the expected adverse event rate will be brought in.
<b>Numerator</b>	The numerator will be based off the Case Point in Time Table Aexcel 2012 AE (adverse event) generic screen.

## Exclusion

The exclusion logic excludes the count for adverse event diagnosis codes present in an admission, based on the IDRG of the case, to avoid the inappropriate counting of complications that are unfortunate but anticipated. In addition, we calculate the 99<sup>th</sup> percentile threshold for length of stay based on Aetna's national data base for each DRG for all inpatient stays. If the case is in the 99<sup>th</sup> percentile, the case is excluded from the expected calculation and the denominator for the provider.

This measure excludes discharge related to expired or transfer to acute inpatient facility or against medical advice.

Table H: Codes to Identify expired or transfer to acute inpatient facility or against medical advice

Description	Discharge Status Codes
Expired, transfer to acute inpatient facility or against medical advice.	02, 07, 61, 20, 21, 22, 23, 24, 25, 26, 29, 41, 42

## Provider Attribution

Each Cardiology, Cardiothoracic Surgery, Otolaryngology, General Surgery, Vascular Surgery, Neurosurgery, Neurology, Plastic Surgery, Ob/Gynecology, Orthopedic Surgery, Urology, Gastroenterology specialty designation.

This measure is evaluating the Managing Specialist on CASE. For each Member/Physician/IP stay combination credit/no credit is given. Attribution is assigned to the responsible managing provider in Medical Case. Deduping is not needed because the measure is already at member/provider/IP level. (Paid managing specialist is NOT used because for encounter there are no \$'s assigned to the claims. For surgical cases the logic is high cost provider, for medical cases it is high visit count provider)

## Case Mix Adjustment

An adjusted average rate is generated and is expressed as the Expected Adverse Event Rate. Every case generates this expected or predicted probability. The expected value is calculated based on the results of case-mix regression modeling that take into account many clinical and demographic variables that include, but are not limited to age, gender, region, product, admission type, discharge status, co-existing condition and the DRG group. A p value is generated and applied if statistically significant.

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## Hospital 30 Day Readmit Rate (Measure ID 100252)

**Measure Endorsed by NQF: No**

**Based on Aetna Internally Developed Measure**

### Description

A case-mix adjusted rate of unanticipated hospital readmissions within 30 days of discharge. This measures the readmission for a specialist or specialty group. Readmission is defined as the proportion of hospitalizations managed by the specialist or specialty group that are followed by a subsequent hospitalization related to the same condition or a recognized complication of the condition within 2 to 30 days of the discharge date of the first hospitalization. This measure excludes readmissions that would have been expected based on the clinical nature of the case. The actual readmission rate is compared with the adjusted average readmission rate for the specialist or specialty group. The average level of performance is adjusted by DRG.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Greater than or equal to 1 years of age at time of admission (of the denominator case).
<b>Continuous Enrollment</b>	During the month of the inpatient admission through the month after discharge
<b>Clinical Subset</b>	The DRG is an Aetna derived grouping that reflects the most significant clinical reason for a hospitalization. The DRG subset is used to identify the most appropriate inpatient cases to be evaluated based on the provider's specialty.
<b>Measurement Period</b>	23 month denominator period and 24 month numerator period
<b>Benefit</b>	Medical
<b>Visit</b>	Each member/physician/IP stay combination for responsible managing provider in medical case during the measurement time period.
<b>Provider Specialty</b>	Cardiology, Cardiothoracic Surgery, Otolaryngology, General Surgery, Vascular Surgery, Neurosurgery, Neurology, Plastic Surgery, Ob/Gynecology, Orthopedic Surgery, Urology specialty designation.

Administrative Specification	
<b>Denominator</b>	All acute inpatient cases that are relevant to the specialties core practice. All cases in this Readmission DRG filter are included except where the length of stay is an outlier.
<b>Numerator</b>	An inpatient hospitalization occurring within 2 to 30 days of an inpatient discharge (denominator) with any one of, or all of the following attributes: <ul style="list-style-type: none"> <li>➤ If the Managing Specialist is the same on both cases;</li> <li>➤ The MDC is the same on both cases; and/or</li> <li>➤ The DRG on the second admission is considered a complication of the prior admission.</li> </ul>

### Exclusion

In an effort to separate cases believed to be sequential or appropriate readmissions from those that aren't, the following exclusion criteria are used:

- Exclude setting the readmission flag if the second case admission date occurs on the same day or the following day (to avoid incorrectly counting transfers) as the discharge day of the previous admission. (This assumes that the second admission is an acute-care transfer or appropriate continuation of the first admission).
- Exclude setting the readmission flag if the case is elective surgery based on the following logic:
  - If the DRG\_kind = 'S' (surgical) and the hcfa\_admit\_type = '3' (elective)
- Exclude setting the readmission flag if the second admission case is any admission type (elective, urgent or emergency): where the DRG indicates care that predictably follows the first admission and represents appropriate care (i.e., Chemotherapy, Transplant), delivery, or an acute injury that, by nature, cannot be related to a previous admission.

In addition, we calculate the 99<sup>th</sup> percentile based on the DRG for all inpatient stays. If the case is in the 99<sup>th</sup> percentile, the case is excluded from the expected calculation and as a denominator for the provider. This measure excludes discharge related to expired or transfer to acute inpatient faculty or against medical advice.

Table H: Codes to Identify expired or transfer to acute inpatient faculty or against medical advice.

Description	Discharge Status Codes
Expired, transfer to acute inpatient faculty or against medical advice.	02,07, 61, 20,21,22,23,24,25,26,28,29,41,42

## Provider Attribution

Each Cardiology, Cardiothoracic Surgery, Otolaryngology, General Surgery, Vascular Surgery, Neurosurgery, Neurology, Plastic Surgery, Ob/Gynecology, Orthopedic Surgery, Urology specialty designation.

This measure is evaluating the Managing Specialist on CASE, as listed in [Appendix A](#). For each Member/Physician/IP stay combination credit/no credit is given. Attribution is assigned to the responsible managing provider in Medical Case. Deduping is not needed because the measure is already at member/provider/IP level. (Paid managing specialist is NOT used because for encounters there are no \$'s assigned to the claims. For surgical cases the logic is high cost provider, for medical cases it is high visit count provider.

## Case Mix Adjustment

This measure is Case Mix adjusted by DRG and Medicare vs. Commercial membership, provider specialty

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## Breast Cancer Screening (Measure ID 100076)

**Measure Endorsed by NQF: Yes**

**Based on NCQA Measure**

### Description

The percentage of women 40-69 years of age who had a visit to an Obstetrics/Gynecology during the most recent 24 month measurement time period and who had a mammogram to screen for breast cancer.

### Eligible Population

<b>Product lines</b>	All products (commercial, Medicare and Medicaid).
<b>Ages</b>	Women 40–69 years.
<b>Continuous Enrollment</b>	Medical coverage required for most recent 12 months of the assessment period. For members with no numerator event (screening mammogram), 24 months continuous enrollment is required. A single gap up to 45 days in enrollment is allowed each 12-month period.
<b>Measurement Period</b>	Twenty-four-month measurement time period to identify the numerator.
<b>Benefit</b>	Medical.
<b>Visit</b>	At least one outpatient visit to an Obstetrics/Gynecology provider during the measurement time period, if there is a qualifying numerator event. If no numerator qualifying event, two visits are required.
<b>Provider Specialty</b>	Obstetrics/Gynecology specialty designation

### Administrative Specification

<b>Denominator</b>	The eligible population.
<b>Numerator</b>	Members in the denominator who received at least a single mammogram (Table G) anytime during the assessment period

Table G: Codes to Identify Breast Cancer Screening

CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure	UB Revenue
76090-76092, 77055-77057	G0202, G0204, G0206	V76.11, V76.12	87.36, 87.37	0401, 0403

### Exclusion

Members with either a bilateral mastectomy, or unilateral mastectomy (performed on two different dates of service at least 14 days apart) at anytime prior or on the last day of the assessment period. All date frames available on the data warehouse are reviewed (three full years of history plus the current year). Refer to Table H for codes to identify exclusions.

Table H: Codes to Identify Exclusions

Description	CPT	ICD-9-CM Procedure
Bilateral mastectomy	19180, 19200, 19220, 19240, 19303-19307 <b>With</b> Modifier .50 or modifier code 09950*	85.42, 85.44, 85.46, 85.48
Unilateral mastectomy (members must have 2 separate occurrences on 2 different dates of service)	19180, 19200, 19220, 19240, 19303-19307	85.41, 85.43, 85.45, 85.47

\*.50 and 09950 modifier codes indicate the procedure was bilateral and performed during the same operative session.

### Provider Attribution

Each Obstetrics/Gynecology specialty provider for members who have had at least one outpatient claim with the provider in the most recent 12 months and one qualifying numerator event during the 24-month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found, a minimum of two outpatient visits, on different dates of service, with the same provider and at least one of the two outpatient visits occurring during the most recent 12-month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

### Case Mix Adjustment

Case mix adjustment by line of business, product and region.

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## Breast Cancer Surveillance (Measure ID 100248)

Measure Endorsed by NQF: Yes

Based on Active Health Management Measure

### Description

Percentage of female patients with breast cancer who had breast cancer surveillance (Mammogram, Ultrasound, PET Scan, MRI) in the past 12 months

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be at least 18 years old at start of reporting period.
<b>Continuous Enrollment</b>	12 months of Continuous Medical Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	Twelve month measurement time period to identify the numerator.
<b>Benefit</b>	Medical.
<b>Visit</b>	At least one outpatient visit to a provider with one of the specialties listed below, during the measurement time period, if there is a numerator qualifying event. If no numerator qualifying event, then two visits are required.
<b>Provider Specialty</b>	General Surgery, Obstetrics/Gynecology specialty designation.

Administrative Specification	
<b>Denominator</b>	Females ages 18 and older at the beginning of the 12 month assessment period who had breast cancer at any time prior to the measurement period as identified with HPD disease_cd =BRC and DM_eligibility_cd=Y or H , and who meet Provider Attribution criteria and Continuous Enrollment.
<b>Numerator</b>	Females in the denominator who had breast cancer surveillance (Mammogram, Ultrasound, PET Scan, MRI) any time during the 12 month assessment period.

Table G: Codes to identify Breast Cancer Surveillance

CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure	UB Revenue
76082, 76083, 76090-76092, 76096, 76645, 77032, 77051, 77052, 77055-77057, 3014F, 3340F, 3341F, 3342F, 3343F, 3344F, 3345F, 3350F, 5060F, 5062F, 76093, 76094, 77058, 77059, C8903, C8904, C8905, C8906, C8907, C8908, 0159T	G0202, G0204, G0206, G0252-G0254, G8111, G8113, S8080,	V76.11, V76.12, 793.80, 793.81, V76.1, V76.10, V76.19	87.36, 87.37	401, 403

### Exclusion

Members with either a bilateral mastectomy, or unilateral mastectomy (performed on 2 different dates of service at least 14 days apart) at anytime prior or on the last day of the assessment period.

Members with presence of at least 1 mastectomy unilateral procedure in the past 15 months or at anytime prior to or on the last day of the assessment period.

Members that have received at least 1 Chemotherapy/Radiation Therapy procedure in the past 15 months at anytime prior to or on the last day of the assessment period.

Members with presence of at least 1 Biopsy/excision of breast lesion procedure in the past 15 months or at anytime prior to or on the last day of the assessment period.

Members with presence of at least 1 bilateral breast implant procedure in the past anytime prior or on the last day of the assessment period.

Members with BRC as defined in the HPD with a D or E are to be excluded. D = member does not have the disease. E = member expired.

All date frames available on the data warehouse are reviewed (three full years of history plus the current year).

Refer to Table H for codes to identify exclusions.

Table H: Codes to Identify Exclusions

Description	ICD-9-CM Procedure	CPT
Bilateral mastectomy	19180, 19200, 19220, 19240, 85.42, 85.44, 85.46, 85.48, 19303, 19304, 19305, 19306, 19307	
Unilateral mastectomy (members must have 2 separate occurrences on 2 different dates of service)	19180, 19200, 19220, 19240, 85.41, 85.43, 85.45, 85.47	19303, 19304, 19305, 19306, 19307

Description	ICD-9-CM Procedure	CPT	UB Revenue
Chemotherapy/Radiation Therapy (at least 1 procedure in the past 15 months at anytime prior to or on the last day of the assessment period)	00.10, 92.20, 92.2, 92.22, 92.23, 92.24, 92.25, 92.26, 92.28, 92.29, 99.25, 99.28	19298, 36640, 36823, 51720, 57155, 58346, 76370, 76873, 76950, 76960, 77261, 77262, 77263, 77280, 77285, 77290, 77295, 77300, 77301, 77305, 77310, 77315, 77321, 77326, 77327, 77328, 77331, 77332, 77333, 77334, 77336, 77370, 77380, 77381, 77399, 77401, 77402, 77403, 77404, 77406, 77407, 77408, 77409, 77411, 77412, 77413, 77414, 77416, 77417, 77419, 77420, 77425, 77427, 77430, 77431, 77432, 77470, 77499, 77520, 77522, 77523, 77525, 77781, 77782, 77783, 77784, 77799, 92974, 96400, 96401, 96402, 96405, 96406, 96408, 96409, 96410, 96411, 96412, 96413, 96414, 96415, 96416, 96417, 96420, 96422, 96423, 96425, 96440, 96445, 96450, 96542, 96545, 96549, C8953, C8954, C8955, C9205, C9207, C9213, C9214, C9215, G0355, G0359, G9021, G9022, G9023, G9024, G9025, G9026, G9027, G9028, G9029, G9030, G9031, G9032, J9202, J9225, J9226, J9303, Q0083, Q0084, Q0085, S9330, S9331,	331, 332, 333, 335
1 bilateral breast implant	85.54	19342, 19340	

## Provider Attribution

Each General Surgery, Obstetrics/Gynecology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated for the numerator event. If no numerator event is found, a minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Line of business

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## Cervical Cancer Screening (Measure ID 100080)

Measure Endorsed by NQF: Yes

Based on NCQA Measure

### Description

The percentage of women 24–64 years of age who had a visit to an Obstetrics/Gynecology during the measurement time period and received a Pap test to screen for cervical cancer.

### Eligible Population

<b>Product lines</b>	All products (commercial, Medicare and Medicaid).
<b>Ages</b>	Women 24–64 years as of the end date of the measurement time period.
<b>Continuous Enrollment</b>	Medical coverage for the most recent 12 months of the assessment period. For members with no numerator event 36 months continuous enrollment is required. A single gap up to 45 days in enrollment each year is allowed each 12-month period.
<b>Measurement Period</b>	Thirty-six-month measurement time period to identify the numerator.
<b>Benefit</b>	Medical
<b>Visit</b>	At least, one outpatient visit to an Obstetrics/Gynecology provider during the measurement time period with a Numerator qualifying event. If no numerator qualifying event, then two visits are required.
<b>Provider Specialty</b>	Obstetrics/Gynecology specialty designation.

### Administrative Specification

<b>Denominator</b>	The eligible population.
<b>Numerator</b>	Members in the denominator who had one or more Pap test (Table I) during the assessment period.

Table I: Codes to identify Cervical Cancer screening

CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure	UB Revenue	LOINC
88141-88143, 88147, 88148, 88150, 88152-88155, 88164-88167, 88174, 88175	G0123, G0124, G0141, G0143-G0145, G0147, G0148, P3000, P3001, Q0091	V72.32, V76.2	91.46	0923	10524-7, 18500-9, 19762-4, 19764-0, 19765-7, 19766-5, 19774-9, 33717-0, 47527-7, 47528-5

**Exclusion**

Members with a history of total hysterectomy (no residual cervix) at any time prior to the end of the assessment period. (Table J)

Members whose attributed provider has statistically low lab utilization.

Table J: Codes to Identify Exclusions

Description	CPT	ICD-9-CM Diagnosis	ICD-9-CM Procedure
Hysterectomy	51925, 56308, 58150, 58152, 58200, 58210, 58240, 58260, 58262, 58263, 58267, 58270, 58275, 58280, 58285, 58290-58294, 58550-58554, 58570-58573, 58951, 58953, 58954, 58956, 59135	618.5, V67.01, V76.47	68.4-68.8

**Provider Attribution**

Each Obstetrics/Gynecology provider for members who have had at least one outpatient claim with the provider in the most recent 12 month period and one qualifying numerator event during the 36 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found, a minimum of two outpatient visits, on different dates of service, with the same provider and at least one of the two outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent. Duplications of the same provider/provider group and member combination are eliminated.

**Case Mix Adjustment**

Line of business

**Lab Data Integrity**

Lab data integrity applies.

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**Follow-Up Colonoscopy After Initial Diagnosis & Treatment of Colorectal Cancer (Measure ID 100280)**

**Measure Endorsed by NQF: Yes**

**Based on Health Benchmarks Measure**

**Description**

This measure evaluates all eligible members who have been newly diagnosed and resected for colorectal cancer who have received a follow-up colonoscopy/sigmoidoscopy within 15 months of resection.

**Eligible Population**

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Ages All
<b>Continuous Enrollment</b>	Fifteen months of continuous Medical Enrollment required during the rolling numerator period after the 'index date' (INDEX DATE = date of resection AND colon CA dx No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 15 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	27 Months Denominator: 12 month period before the start of the 15 month rolling numerator period. Numerator: 15 Months from End date of the measurement period
<b>Benefit</b>	Medical.
<b>Visit</b>	At least one outpatient visit to a provider with one of the specialties listed below, during the measurement time period or surgical procedure performed by provider (see provider attribution section)
<b>Provider Specialty</b>	Gastroenterology, General Surgery, Obstetrics/Gynecology specialty designation.

## Administrative Specification

<b>Denominator</b>	Continuously enrolled Members who have been newly resected for a diagnosis of Colon Cancer during the 12 month period prior to the start of the 15 month numerator assessment period. Procedure and DX must occur on the same date to qualify. (This is the INDEX date - Note: Index date is defined as the first instance of resection and Colon Cancer Diagnosis)
<b>Numerator</b>	Members receiving a colonoscopy or sigmoidoscopy as appropriate during the 15months after the index date

Table G: Codes to identify Colonoscopy, Sigmoidoscopy, Partial Colectomy or Proctectomy and Colorectal Cancer

Description	ICD-9CM Procedure	CPT	ICD-9 Diagnosis
Colonoscopy	45.22, 45.23, 45.25, 45.42, 45.43	44388-44394, 44397, 45378-45387, 45391, 45392, G0105, G0121	
Sigmoidoscopy	45.2	G0104, 45330-45335, 45337, 45338-45342, 45345, 3017F	
Partial Colectomy or Proctectomy		44139-44141, 44143-44147, 44160, 44204-44208, 44213, 45110-45114, 45116, 45119, 45123, 45126, 45160, 45170, 45395, 45397	
Colorectal Cancer must be on the same date of service of procedures (Not necessarily the same claim as the procedure)			V10.06, V10.00, 153.0, 153.1, 153.2, 153.3, 153.4, 153.6, 153.7, 153.8, 153.9 154.0, 154.1, 154.8, V10.05

## Exclusion

Members who are status post resection of colon cancer any time prior to the Index date (index date=date of resection and colon CA dx.)  
 Members with a diagnosis of colorectal cancer any time prior to the index date.  
 Members who had prior resection of colon prior to the index date.  
 Members who were in hospice care 0 to 15 months after the index date.

All date frames available on the data warehouse are reviewed (three full years of history plus the current year).

Refer to Table H for codes to identify exclusions.

Table H: Codes to Identify Exclusions

Description	ICD- Diagnosis	CPT	UB Revenue
Colorectal Cancer	V66.7		
Hospice Care		99376, 99377, 99378, G0065, G0182, G0337, Q5001-Q5009, S0255, S0271, S9126, T2042-T2046	115, 125, 135, 145, 155, 235, 650-652, 655-659

\*Code range expired, but still appropriate for retrospective analysis

### Provider Attribution

This measure will have 2 different provider attribution steps applied. Each Gastroenterology, General Surgery, Obstetrics/Gynecology specialty designation will be measured. The General Surgeon requires only the surgical procedure for attribution. No visits are required.

Each Family Practice, Internal Medicine and Gastroenterology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 15 month rolling numerator assessment period. The member may or may not have had the numerator service with a qualifying denominator provider. The numerator must occur during the 15 month assessment period. The member may have seen more than one qualifying denominator provider.

If no numerator event requires at least 2 outpatient visits on different dates of service, with the same provider anytime after the index date, during the 15 month rolling numerator assessment period. Each qualifying denominator provider the member has visited will be evaluated. Only one provider per group per member is attributed. The visit date selected is the most recent. Duplications of the same provider/provider group and member combination are eliminated.

### Case Mix Adjustment

Line of business

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**Chronic Kidney Disease with LDL Greater than or Equal to 130– Use of Lipid Lowering Agent (Measure ID 100304)**

**Measure Endorsed by NQF: Yes**

**Based on Active Health Management Measure**

**Description**

Percentage of patients age 18 and over with chronic kidney disease with LDL greater than or equal to 130 and received a lipid lowering agent.

**Eligible Population**

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be at least 18 at start of the reporting period.
<b>Continuous Enrollment</b>	12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	12 Months
<b>Benefit</b>	Medical and Pharmacy
<b>Visit</b>	At least one outpatient visit to a provider with one of the specialties listed below, and 1 qualifying Numerator event during the 12 month assessment period. If no qualifying numerator event, then two outpatient visits are required.
<b>Provider Specialty</b>	Cardiology, Gastroenterology and Obstetrics/Gynecology specialty designation.

## Administrative Specification

**Denominator** Members age 18 years and above defined by Aetna's HPD as having Chronic Kidney Disease /Chronic Renal Failure (CRF) with LDL greater than or equal to 130 and who meet Continuous Enrollment and Provider Attribution criteria.

Table H: Codes to Identify Chronic Kidney Disease /Chronic Renal Failure (CRF)

Description	Health Profile Database
Chronic Renal failure/chronic kidney disease	Members with a disease code of CRF (DM = Y or H)

And

Table CM: Physician reported LDL level results

CPT II	Description
3050F	LDL-C GREATER THAN OR EQUAL TO 130 MG/DL

Or

Table CN: Lab Results for LDL level

Description	Lab Results
LDL	LDL>=130

**Numerator** Members in denominator who received a lipid lowering agent (tables CO or AP) during the 12 month assessment period as identified by pharmacy claim/physician visit encounter.

Table CO: CPTII Code to identify members who were prescribed Statin therapy

CPT II	Description
4002F	Statin therapy, prescribed

Table AP: Presence of a current refill for a lipid lowering agent

Description
Antihyperlipidemics

**Exclusion**

- Members who have lab data that indicates SGOT or SGPT > 150 (table ER)
- Members who have lab data that indicates CPK > 500 (table ES)
- Member with provider made a change to their lipid treatment during the assessment period.
- Members with metastatic disease or active treatment with chemotherapy or radiation therapy in past six months of assessment period (table E)
- Members with indications of allergy or intolerance or contraindication to adding the drug (tables ET or EQ)

Table E: codes to identify exclusions

Description	CPT
chemotherapy or radiation therapy	J9355, 79000, 79001, 79020, 4164F, 4200F, 4201F

Or

Table EQ: Physician Reported Reasons for not prescribing lipid lowering drug therapy

CPT II	Description
4002F-1P	Other medical reason(s) documented by the practitioner for not prescribing lipid lowering therapy
4002F-2P	Other patient reason (eg, economic, social, religious) for not prescribing lipid lowering therapy
4002F-3P	Other system reason (eg, resources to perform service not available) for not prescribing lipid lowering therapy

Or

Table ER: indicates SGOT or SGPT > 150

Description	Lab Results
AST/SGOT	SGOT (AST) > 150
ALT/SGPT	SGPT (ALT) > 150

Or

Table ES: indicates CPK (Creatine kinase)> 500

Description	Lab Results
CPK (Creatine kinase)	2155-0, 21550, 2157-6, 21576

Table ET: Diagnosis codes for allergy or adverse effect of a lipid lowering drug

EXCLUSION DX CODE
995.0, 995.1, 995.27, 995.29, E942.2

## Provider Attribution

Each Cardiology, Gastroenterology, Obstetrics/Gynecology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated for the numerator event. If no numerator event is found, a minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Specialty and line of business

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## Chronic Kidney Disease – Lipid Profile Monitoring (Measure ID 100292)

**Measure Endorsed by NQF: Yes**

**Based on Active Health Management Measure**

### Description

Percentage of patients age 12 and over with chronic kidney disease that have been screened for dyslipidemia with a lipid profile.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be at least 12 at start of the reporting period.
<b>Continuous Enrollment</b>	12 months of Continuous Medical Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	12 Months
<b>Benefit</b>	Medical
<b>Visit</b>	At least one visit to a outpatient provider with one of the specialties listed below, and 1 qualifying Numerator event during the 12 month assessment period. If no qualifying numerator event, then two outpatient visits are required.
<b>Provider Specialty</b>	Cardiology, Gastroenterology, Obstetrics/Gynecology specialty designation.

## Administrative Specification

<b>Denominator</b>	<p>Members age 12 years and above defined by Aetna's HPD as having Chronic Kidney Disease /Chronic Renal Failure (CRF) and who meet Continuous Enrollment and Provider Attribution criteria.</p> <p>Table H: Codes to Identify Chronic Kidney Disease /Chronic Renal Failure (CRF)</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Chronic Renal failure/chronic kidney disease</td> <td>Members with a disease code of CRF (DM = Y or H)</td> </tr> </tbody> </table>	Description	Health Profile Database	Chronic Renal failure/chronic kidney disease	Members with a disease code of CRF (DM = Y or H)
Description	Health Profile Database				
Chronic Renal failure/chronic kidney disease	Members with a disease code of CRF (DM = Y or H)				
<b>Numerator</b>	<p>Members in denominator who had a Lipid Profile test performed (table AM or AO) or presence of hyperlipidemia (table AN) during the 12 month assessment period as identified by claim/encounter or automated lab data.</p>				

Table AM: LIPID PANEL

Description	CPT
LIPID PANEL	80061, 83700, 83701, 83704, 83715, 83716, 83721, G8019, G8020, G8021, G8039, G8040, G8041, 3011F, 3048F, 3049F, 3050F, 3278F

Or

Table AN: HYPERLIPIDEMIA

Description	ICD-9 CM Diagnosis
HYPERLIPIDEMIA	272.0-272.5, 272.7- 272.9

Or

Table AO: Codes to identify TRIGLYCERIDES VALUE, HDL MONITORING, CHOLESTEROL TOTAL MONITORING, LDL

Description	LOINC Class	LOINC
TRIGLYCERIDES VALUE	TRIGLYC	28554-4, 285544, 3043-7, 30437
HDL MONITORING	HDL	12771-2, 127712, 27340-9, 273409, 35197-3, 351973, 12772-0, 127720
CHOLESTEROL TOTAL MONITORING	CHOLESTEROL	2565-0, 25650, 35200-5, 352005
LDL	LDL	11054-4, 110544, 13459-3, 134593, 13460-1, 134601, 14155-6, 141556, 14814-8, 148148, 14815-5, 148155, 16615-7, 166157, 16616-5, 166165, 17846-7, 178467, 2569-2, 25692, 2574-2, 25742, 28554-4, 285544, 3043-7, 30437, 35198-1, 351981, 9346-8, 93468, 24331-1, 243311

**Exclusion**

Members with metastatic disease or active treatment with chemotherapy or radiation therapy in past six months of assessment period.

Table E: codes to identify exclusions

Description	CPT
chemotherapy or radiation therapy	J9355, 79000, 79001, 79020, 4164F, 4200F, 4201F

## Provider Attribution

Each Cardiology, Gastroenterology, Obstetrics/Gynecology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated for the numerator event. If no numerator event is found, a minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Age, line of business

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## Lipid Lowering Drug Therapy for Prevention of Ischemic Heart Disease (Measure ID 100156)

**Measure Endorsed by NQF: Yes**

**Based on AMA Measure**

### Description

Measures the use of cholesterol-lowering medication in members with ischemic heart disease (IHD). This measure includes only members with an Aetna pharmacy plan and evidence of use.

### Eligible Population

<b>Product lines</b>	All products (commercial, Medicare and Medicaid).				
<b>Ages</b>	Members who are age 18 or greater at the start of the assessment period.				
<b>Diagnosis</b>	Members who are diagnosed with IHD (Table AF), at the start of the assessment period.  Table AF: Codes to Identify IHD/CAD <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Ischemic Heart Disease</td> <td>Members with a disease code of IHD (DM = Y or H)</td> </tr> </tbody> </table>	Description	Health Profile Database	Ischemic Heart Disease	Members with a disease code of IHD (DM = Y or H)
Description	Health Profile Database				
Ischemic Heart Disease	Members with a disease code of IHD (DM = Y or H)				
<b>Continuous Enrollment</b>	Medical coverage during the assessment period and pharmacy coverage with at least one pharmacy claim at any time during the measurement period. A single gap up to 45 days in enrollment is allowed. Gaps of only one day are administrative and are not counted as a distinct enrollment gap. Gap may not be in effect on last day of 12-month assessment period.				
<b>Measurement Period</b>	Twelve months				
<b>Benefit</b>	Medical and pharmacy. The pharmacy benefit must be demonstrated through an Aetna benefit indication during the assessment period. In addition, a pharmacy claim must have been received at any time during the 12-month assessment period.				
<b>Visit</b>	A minimum of two outpatient visits to a Cardiologist, Obstetrics/Gynecology during the measurement time period.				
<b>Provider Specialty</b>	Cardiologist, Obstetrics/Gynecology specialty designation.				

**Administrative Specification**

<b>Denominator</b>	The eligible population.
<b>Numerator</b>	Members in the denominator who have evidence, through either claim encounter or pharmacy data, of lipid lowering drug use (Table AM/AN) during the assessment period.

Table AM: Lipid lowering drugs

Description
Antihyperlipidemics
Niacin

Or

Table AN: CPTII Code to Identify Members who were Prescribed Statin Therapy

CPT II	Description
4002F	Statin therapy, prescribed

**Exclusion**

Members identified in the HPD as not having IHD (Table AE)

Members who have a documented adverse effect of a lipid lowering drug prior to and anytime through the end of the assessment period. (Table AO)

Members whose physician has documentation codes for allergy or adverse effect of a lipid lowering drug. (Table AP)

Members who have a documented lab result for LDL <130 during the measurement period. (Table AQ)

Members who do not have a reported lab result for LDL. Exclusions only applied if the member did not receive lipid lowering therapy.

Table AO: Physician Reported Reasons for Not Prescribing Lipid Lowering Drug Therapy

CPT II	Description
4002F-1P	Other medical reason(s) documented by the practitioner for not prescribing lipid lowering therapy
4002F-2P	Other patient reason (eg, economic, social, religious) for not prescribing lipid lowering therapy
4002F-3P	Other system reason (eg, resources to perform service not available) for not prescribing lipid lowering therapy

Or

Table AP: Diagnosis Codes for Allergy or Adverse Effect of a Lipid Lowering Drug

<b>EXCLUSION DX CODE</b>
995.0, 995.1, 995.27, 995.29
<b>AND</b>
E942.2

Or

Table AQ: Physician Reported LDL Level Results

<b>CPT II</b>	<b>Description</b>
3048F	Most recent LDL-C < 100 mg/dL
3049F	Most recent LDL-C 100-129 mg/dL

Or

Table AR: Lab Results for LDL Level

<b>Description</b>	<b>Lab Results</b>
LDL	LDL lab result is >0 and <=130

### **Provider Attribution**

Each Cardiologist, Obstetrics/Gynecology which the member has visited twice, on different dates, during the assessment period will be evaluated. Credit/No credit will be given to each qualifying provider.

All providers meeting the above requirements are responsible for ensuring the member receives the appropriate pharmacological treatment and are included in the denominator of the measure. The provider ordering the drug may or may not have been associated with the qualifying outpatient provider visit. Only the first eligible qualifying outpatient provider visit is attributed to a unique provider.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

### **Case Mix Adjustment**

Line of business

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## Beta-Blocker Therapy – Prior Myocardial Infarction (Measure ID 100116)

**Measure Endorsed by NQF: Yes**

**Based on AMA Measure**

### Description

This measure is evaluating members aged 18 years and older, as of the beginning of the assessment period, with a diagnosis of coronary artery disease (CAD/ischemic heart disease (IHD)) at the start of the measurement period and with prior MI at any time who were prescribed beta-blocker therapy. (Table U/V)

### Eligible Population

<b>Product lines</b>	All products (commercial, Medicare and Medicaid).									
<b>Ages</b>	All members aged 18 years and older at the start of the assessment period.									
<b>Diagnosis</b>	<p>Diagnosis of CAD/IHD, based on the HPD, at the start of the assessment period who also have prior MI at any time. (Table U/V)</p> <p>Table U: Codes to Identify IHD/CAD</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Ischemic Heart Disease</td> <td>Members with a disease code of IHD (DM = Y or H)</td> </tr> </tbody> </table> <p>And</p> <p>Table V: Codes to Identify History of AMI</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Procedure Group Number</th> </tr> </thead> <tbody> <tr> <td>AMI</td> <td>811</td> </tr> </tbody> </table>		Description	Health Profile Database	Ischemic Heart Disease	Members with a disease code of IHD (DM = Y or H)	Description	Procedure Group Number	AMI	811
Description	Health Profile Database									
Ischemic Heart Disease	Members with a disease code of IHD (DM = Y or H)									
Description	Procedure Group Number									
AMI	811									
<b>Continuous Enrollment</b>	12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid									
<b>Visit</b>	A minimum of two outpatient visits to a Cardiologist during the measurement time period.									
<b>Provider Specialty</b>	Cardiologist, Obstetrics/Gynecology specialty designation.									

**Administrative Specification**

<b>Denominator</b>	The eligible population.
<b>Numerator</b>	Members in the denominator who filled a prescription or whose physician has documented that the member has been prescribed beta-blocker therapy during the assessment period. (Table W/X)

Table W: Table of Beta-Blocker Descriptions

Description
Beta-blockers non selective
Beta-blockers cardio selective
Alpha-beta blockers (Coreg / Carvedilol only)

Or

Table X: CPTII Code – Members Prescribed Beta-Blocker Therapy

CPT II	Description
4006F	Beta-blocker therapy, prescribed

**Exclusion**

Members with a diagnosis of asthma, COPD, hypotension, and second- or third-degree atrioventricular (AV) block without permanent pacemaker prior to the end of the 11<sup>th</sup> month of the assessment period. (Table Y/AA/AB)  
 Members identified in the HPD as not having CAD. (Table Z)

Table Y: Table of Exclusion Codes

EXCLUSION DX CODE
427.81, 493.1, 427.89, 493.11 458, 493.12, 458.1, 493.2, 458.21, 493.21, 458.29, 493.22, 458.8, 493.81, 458.9, 493.82, 493, 493.9, 493.01, 493.91, 493.02, 493.92

Or

Table Z: HPD Exclusions

Description	Health Profile Database
Ischemic Heart Disease (Coronary Artery Disease)	Members with a disease code of IHD (DM = D)

Or

Table AA: Exclusion Codes for AV Block

<b>EXCLUSION DX CODE</b>
426.0, 426.12, 426.13 WITHOUT V45.01

Or

Table AB: Physician Reported Reasons for Not Prescribing Beta-Blocker Therapy

<b>CPT II</b>	<b>Description</b>
4006F-1P	Other medical reason(s) documented by the practitioner for not prescribing beta-blocker therapy
4006F-2P	Other patient reason (eg, economic, social, religious) for not prescribing beta-blocker therapy
4006F-3P	Other system reason (eg, resources to perform service not available) for not prescribing beta-blocker therapy

### **Provider Attribution**

Each Cardiologist, Obstetrics/Gynecology the member has visited, at least twice, in the current measurement time period is included in the measure. The member may or may not have had the numerator service with a qualifying denominator provider.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

### **Case Mix Adjustment**

Case mix adjustment not required for this measure.

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**ACE inhibitor/ Angiotensin Receptor Blocker (ARB) use in Members with Heart Failure (Measure ID 100152)**

**Measure Endorsed by NQF: Yes**

**Based on AMA Measure**

**Description**

Measures the rate of ACE inhibitor or angiotensin receptor blocker (ARB) in members with a history of heart failure (HF) and left ventricular systolic dysfunction (LVSD) (Table M/N). This measure includes only members with an Aetna pharmacy plan and evidence of use.

**Eligible Population**

<b>Product lines</b>	All products (commercial, Medicare and Medicaid).																						
<b>Ages</b>	Members 18 years and older as of the beginning of the measurement time period.																						
<b>Diagnosis</b>	<p>Evidence of heart failure (Table M/N) with LVEF &lt; 40% or with moderately or severely depressed left ventricular systolic function (Table M/N) at the start of the assessment period. Table M: Diagnosis codes for identification of heart failure</p> <table border="1"> <thead> <tr> <th colspan="2">DX Code</th> </tr> </thead> <tbody> <tr> <td>402.01, 428.21, 402.11,</td> <td></td> </tr> <tr> <td>428.22, 402.91, 428.23,</td> <td></td> </tr> <tr> <td>404.01, 428.3, 404.03,</td> <td></td> </tr> <tr> <td>428.31, 404.11, 428.32,</td> <td></td> </tr> <tr> <td>404.13, 428.33, 404.91,</td> <td></td> </tr> <tr> <td>428.4, 404.93, 428.41,</td> <td></td> </tr> <tr> <td>428, 428.42, 428.1,</td> <td></td> </tr> <tr> <td>428.43, 428.2, 428.9</td> <td></td> </tr> </tbody> </table> <p>And Table N: CPTII Code to identify members with LVEF &lt; 40%</p> <table border="1"> <thead> <tr> <th>CPT II</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3021F</td> <td>Left ventricular ejection fraction (LVEF) 40% or documentation of moderately or severely depressed left ventricular systolic function</td> </tr> </tbody> </table>	DX Code		402.01, 428.21, 402.11,		428.22, 402.91, 428.23,		404.01, 428.3, 404.03,		428.31, 404.11, 428.32,		404.13, 428.33, 404.91,		428.4, 404.93, 428.41,		428, 428.42, 428.1,		428.43, 428.2, 428.9		CPT II	Description	3021F	Left ventricular ejection fraction (LVEF) 40% or documentation of moderately or severely depressed left ventricular systolic function
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CPT II	Description																						
3021F	Left ventricular ejection fraction (LVEF) 40% or documentation of moderately or severely depressed left ventricular systolic function																						
<b>Continuous Enrollment</b>	Medical coverage during the assessment period. A single gap up to 45 days in enrollment is allowed. Gaps of only one day are administrative and are not counted as a distinct enrollment gap. Gap may not be in effect on last day of 12-month assessment period. If no numerator event found, then apply continuous enrollment criteria for pharmacy coverage with at least one pharmacy claim at any time during the measurement period.																						
<b>Benefit</b>	Medical and Pharmacy. The pharmacy benefit must be demonstrated through an Aetna benefit indication during the assessment period. In addition, a pharmacy claim must have been received at any time during the assessment period.																						

<b>Visit</b>	A minimum of two outpatient visits to a Cardiologist during the measurement time period.
<b>Provider Specialty</b>	Cardiologist specialty designation.

<b>Administrative Specification</b>	
<b>Denominator</b>	The eligible population.
<b>Numerator</b>	Members in the denominator who have evidence, through claim/encounter/pharmacy data, of receiving an ACE-I or ARB (Table O/P) during the numerator assessment period.

Table O: ACE-I or ARB descriptions

<b>Description</b>
ACE Inhibitor
Angiotensin II Receptor Antagonist
ACE Inhibitor and Calcium Channel Blockers
ACE Inhibitors and Thiazides
Ace II Antagonists and Thiazides

Table P: CPTII Code - ACE-I or ARB

<b>CPT II</b>	<b>Description</b>
4009F	ACE-I or ARB therapy, prescribed

### Exclusion

Members with acute or chronic renal failure, congenital heart disease, hypertrophic obstructive cardiomyopathy, hyperkinetic heart disease or who are pregnant or where the physician has documented valid reason for not prescribing ACE-I or ARB therapy (Table Q/R/S) anytime prior to the last day of the assessment period.

Table Q: Exclusion Criteria

<b>EXCLUSION DX CODE</b>
39.95, 404.93, 54.98, 425.1, 277.6, 440.1, 395, 584.5, 395.2, 584.6, 396, 584.7, 396.2, 584.8, 396.8, 584.9, 403.01, 585.5, 403.11, 585.6, 403.91, 586, 404.02, 747.22, 404.03, 788.5, 404.12, V56.0, 404.13, V56.8, 404.92

Or

Table R: Exclusion Codes for Pregnancy during the Measurement Period

EXCLUSION DX CODE
V22.0, V23.5, V22.1, V23.7, V22.2, V23.81, V23.0, V23.82, V23.1, V23.83, V23.2, V23.84, V23.3, V23.89, V23.41, V23.9, V23.49

Or

Table S: Physician Reported Reasons for Not Prescribing ACE-I or ARB Therapy

CPT II	Description
4009F-1P	Other medical reason(s) documented by the practitioner for not prescribing ACE inhibitor or ARB therapy
4009F-2P	Other patient reason (eg, economic, social, religious) for not prescribing ACE inhibitor or ARB therapy
4009F-3P	Other system reason (eg, resources to perform service not available) for not prescribing ACE inhibitor or ARB therapy

### Provider Attribution

Each Cardiologist the member has visited, at least twice, in the current measurement time period is included in the measure. The member may or may not have had the numerator service with a qualifying denominator provider. Each qualifying denominator provider the member has visited will be evaluated.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

### Case Mix Adjustment

Line of business

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## Diabetic Hemoglobin A1c Management (Measure 100244)

**Measure Endorsed by NQF: Yes**

**Based on NCQA Measure**

### Description

This measure evaluates whether members aged 18 through 75 years with a diagnoses of Diabetes and have poor control based on HbA1C levels greater than 9%

**Note:** Although this measure is sourced from NCQA/NQF – it has been modified and is not 100% compliant with the NCQA measure specification due to known issues in obtaining external lab data. (See Numerator for more detailed information)

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Eligible population</b>	Members 18 through 75 years of age identified in the HPD, with a diagnosis of Type 1 or 2 Diabetes.
<b>Source Data</b>	Medical Case, Medical Claims, Lab
<b>Continuous Enrollment</b>	12 months of Continuous Medical Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	Twelve months
<b>Benefit</b>	Medical
<b>Visit</b>	At least two outpatient visit to a provider with one of the specialties listed below during the 12 month assessment period.
<b>Provider Specialty</b>	Cardiology, Gastroenterology, Obstetrics/Gynecology specialty designation.

**Administrative Specification**

<p><b>Denominator</b></p>	<p>Members 18–75 years of age defined by Aetna's HPD as having Diabetes and who meet continuous enrollment and provider attribution criteria.</p> <p>Table AB: HPD Codes to Identify Diabetes</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Diabetes</td> <td>Members with a disease code of Diabetes (DIA) HPD</td> </tr> </tbody> </table>	Description	Health Profile Database	Diabetes	Members with a disease code of Diabetes (DIA) HPD
Description	Health Profile Database				
Diabetes	Members with a disease code of Diabetes (DIA) HPD				
<p><b>Numerator</b></p>	<p>Members where the result for the most recent HbA1c test during the measurement year reflects POOR control and is &gt;9.0%</p> <p>Members in the denominator with evidence of poor HbA1c control. Poor HbA1c control includes all results greater than 9.0% (table AC and AE) anytime during the measurement period</p>				

Variance from external source:

The NCQA spec requires all members meeting denominator criteria to be included in this measure. In order to ensure Aetna is only measuring LDL results from providers where valid LDL-C data is received, the result value must be between 1 and 450. All member/provider records with an invalid result or a null result are dropped from the measure

**Exclusion**

Any member with a diagnosis of polycystic ovaries, gestational or steroid induced diabetes Table AD who did not have a face-to-face encounter with a diagnosis of diabetes  
 Any member whose attributed provider failed Lab Data Integrity

## Provider Attribution

Each Cardiology, Gastroenterology, Obstetrics/Gynecology, as defined under provider specialty, which the member has visited at least two times on different dates of service, during the current measurement year will be evaluated.

The provider who ordered the HbA1c lab test may or may not have been associated with the qualifying outpatient provider visit. Only the 1st eligible qualifying outpatient provider visit is attributed to a unique provider.

**Note:** Provider Attribution in this measure does **not** include the 12 month look back prior to the current measurement period.

## Case Mix Adjustment

This measure is case mix adjusted by age, product, and specialty.

Table AC: Codes to identify HbA1c tests

CPT	CPT II	LOINC
83036, 83037	3044F, 3045F, 3046F	4548-4, 4549-2, 17856-6

Table AD: Codes to identify exclusions

Description	ICD-9-CM Diagnosis
Polycystic ovaries	256.4
Steroid induced	251.8, 962.0
Gestational diabetes	648.8

Table AE: Codes to identify HbA1c levels >9.0%

CPT II	Description
3046F	HbA1c >9

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**IVD: Complete Lipid Profile and LDL Control <100 (Measure ID 100168)****Measure Endorsed by NQF: Yes****Based on NCQA Measure****Description**

The percentage of members 18–75 years of age who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty (PTCA) from January 1–November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had the following during the measurement year. LDL-C control will be <100.

**Eligible Population**

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be age 18 through 75 years
<b>Continuous Enrollment</b>	12 months of Continuous Medical Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	Numerator = 12 Month Denominator = 24 Months
<b>Benefit</b>	Medical
<b>Visit</b>	Two outpatient visits in the current measurement year to a provider with one of the specialties listed below. The member may have seen more than one qualifying denominator provider. The member may or may not have had the numerator service with a qualifying denominator provider.
<b>Provider Specialty</b>	Cardiology, Obstetrics/Gynecology specialty designation.

## Administrative Specification

### Denominator

Members 18–75 years of age are identified for the denominator in one of two ways, event or diagnosis, and who meet continuous enrollment and provider attribution. Both criteria should be used to identify the eligible population, but a member only needs to be identified in one to be included in the measure.

**Event** - Discharged from any inpatient setting alive for AMI or CABG or discharged from any setting, inpatient or outpatient, for a PTCA on or between January 1 and November 1 of the year prior to the measurement year

Table T: Codes to identify AMI, PTCA and CABG

Description	Medical Case
AMI (inpatient only)	lcd9_dx_group_nbr =11
CABG (inpatient only)	prcdr_group_nbr =6
PTCA (inpatient and outpatient)	prcdr_group_nbr =12

**Diagnosis** - Identify members as having IVD who met at least one of the two criteria below during both the measurement year and the year prior to the measurement year (criteria need not be the same across both years) Table U

- At least one outpatient visit with an IVD diagnosis, or
- At least one acute inpatient visit with an IVD diagnosis

Table U: Codes to identify IVD diagnosis

ICD 9	UB Revenue
411, 413, 414.0, 414.2, 414.8, 414.9, 429.2, 433-434, 440.1, 440.2, 440.4, 444, 445	051x, 0520-0523, 0526-0529, 057x-059x, 077x, 0982, 0983, 010x, 0110-0114, 0119, 0120-0124, 0129, 0130-0134, 0139, 0140-0144, 0149, 0150-0154, 0159, 016x, 020x-022x, 072x, 0987

<b>Numerator</b>	Members in the Denominator whose most recent (last in the assessment period) LDL-C level was <100 mg/dL		
	Table W: LDL level CPT II codes or LOINC code with results <100		
	<b>Description</b>	<b>CPT II</b>	<b>LOINC</b>
LDL-C <100 mg/dL	3048F		
LOINC code result <100			49132-4, 18262-1, 2089-1, 13457-7, 12773-8, 18261-8, 2090-9, 22748-8, 24331-1, 39469-2

**Exclusion**

None for the measure.

**Provider Attribution**

Each Cardiology, Obstetrics/Gynecology specialty provider for members who have had at least 2 outpatient claims with the provider during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

**Case Mix Adjustment**

Case mix adjustment is applied to each clinical performance measure, as appropriate, and classifies data characteristics into groups that are homogenous to allow for a basis of comparison.

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## Diabetes Annual Hemoglobin A1c Screening (Measure ID 100024)

**Measure Endorsed by NQF: Yes**

**Based on NCQA Measure**

### Description

This measure evaluates whether members aged 18 through 75 years with a diagnoses of Diabetes (Type 1 or 2) are receiving diabetic screening and monitoring for HbA1C testing as recommended by the American Diabetes Association

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be age 18 through 75 years
<b>Continuous Enrollment</b>	12 months of Continuous Medical Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	12 Months
<b>Benefit</b>	Medical
<b>Visit</b>	At least one outpatient visit to a provider with one of the specialties listed below, and 1 qualifying Numerator event during the 12 month assessment period. If no qualifying numerator event, then two outpatient visits are required.
<b>Provider Specialty</b>	Cardiology, Gastroenterology, Obstetrics/Gynecology specialty designation.

## Administrative Specification

<b>Denominator</b>	<p>Members 18–75 years of age defined by Aetna's HPD as having Diabetes and who meet continuous enrollment and provider attribution criteria.</p> <p>Table AB: HPD Codes to Identify Diabetes</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Diabetes</td> <td>Members with a disease code of Diabetes (DIA) HPD</td> </tr> </tbody> </table>	Description	Health Profile Database	Diabetes	Members with a disease code of Diabetes (DIA) HPD		
Description	Health Profile Database						
Diabetes	Members with a disease code of Diabetes (DIA) HPD						
<b>Numerator</b>	<p>Members in denominator who had an HbA1C test performed any time during the 12 month assessment period.</p> <p>Table: AC: Codes to identify HbA1c tests</p> <table border="1"> <thead> <tr> <th>CPT</th> <th>CPT II</th> <th>LOINC</th> </tr> </thead> <tbody> <tr> <td>83036, 83037</td> <td>3044F, 3045F, 3046F</td> <td>4548-4, 4549-2, 17856-6</td> </tr> </tbody> </table>	CPT	CPT II	LOINC	83036, 83037	3044F, 3045F, 3046F	4548-4, 4549-2, 17856-6
CPT	CPT II	LOINC					
83036, 83037	3044F, 3045F, 3046F	4548-4, 4549-2, 17856-6					

### Exclusion

- Member that do not have the disease or Diabetes during the assessment period.
- Members that have expired during the assessment period.
- Member with a diagnosis of polycystic ovaries, gestational or steroid induced diabetes (Table AD) who did not have a face-to-face encounter with a diagnosis of Diabetes.
- Member whose attributed provider failed Lab Data Integrity.

Table AD: Codes to identify exclusions

Description	ICD-9-CM Diagnosis
Polycystic ovaries	256.4
Steroid induced	251.8, 962.0
Gestational diabetes	648.8

## Provider Attribution

Each Cardiology, Gastroenterology, Obstetrics/Gynecology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Line of business, age

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## Diabetes Annual Lipid Screening (Measure ID 100008)

Measure Endorsed by NQF: Yes

Based on NCQA Measure

### Description

This measure evaluates whether members aged 18 through 75 years with a diagnoses of Diabetes (Type 1 or 2) are receiving diabetic screening and monitoring for Annual Lipid control as recommended by the American Diabetes Association.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be age 18 through 75 years
<b>Continuous Enrollment</b>	12 months of Continuous Medical Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	12 Months
<b>Benefit</b>	Medical
<b>Visit</b>	At least one outpatient visit to a provider with one of the specialties listed below, and one qualifying Numerator event during the 12 month assessment period. If no numerator qualifying event, then two visits are required.
<b>Provider Specialty</b>	Cardiology, Gastroenterology, Obstetrics/Gynecology specialty designation.

## Administrative Specification

<b>Denominator</b>	<p>Members defined by Aetna's HPD as having Diabetes and who meet continuous enrollment and provider attribution criteria. Members 18–75 years of age defined by Aetna's HPD as having Diabetes and who meet continuous enrollment and provider attribution criteria.</p> <p>Table H: HPD Codes to Identify Diabetes</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Diabetes</td> <td>Members with a disease code of Diabetes (DIA) HPD</td> </tr> </tbody> </table>	Description	Health Profile Database	Diabetes	Members with a disease code of Diabetes (DIA) HPD		
Description	Health Profile Database						
Diabetes	Members with a disease code of Diabetes (DIA) HPD						
<b>Numerator</b>	<p>Members in denominator who had an LDL-C test performed during the 12 month assessment period as identified by claim/encounter or automated lab data.</p> <p>Table HI: Codes identify LDL-C screening</p> <table border="1"> <thead> <tr> <th>CPT</th> <th>CPT II</th> <th>LOINC</th> </tr> </thead> <tbody> <tr> <td>80061, 83700, 83701, 83704, 83721</td> <td>3048F, 3049F, 3050F</td> <td>2089-1, 12773-8, 13457-7, 18261-8, 18262-6, 22748-8, 24331-1, 39469-2, 49132-4</td> </tr> </tbody> </table>	CPT	CPT II	LOINC	80061, 83700, 83701, 83704, 83721	3048F, 3049F, 3050F	2089-1, 12773-8, 13457-7, 18261-8, 18262-6, 22748-8, 24331-1, 39469-2, 49132-4
CPT	CPT II	LOINC					
80061, 83700, 83701, 83704, 83721	3048F, 3049F, 3050F	2089-1, 12773-8, 13457-7, 18261-8, 18262-6, 22748-8, 24331-1, 39469-2, 49132-4					

## Exclusion

- Member that do not have the disease of Diabetes during the assessment period.
- Members that have expired during the assessment period.
- Member with a diagnosis of polycystic ovaries, gestational or steroid induced diabetes.
- Members who did not have a face-to-face encounter with a diagnosis of Diabetes.
- Member whose attributed provider failed Lab Data Integrity.

Table HJ: Codes to identify exclusions

Description	ICD-9-CM Diagnosis
Polycystic ovaries	256.4
Steroid induced	251.8, 962.0
Gestational diabetes	648.8

## Provider Attribution

Each Cardiology, Gastroenterology, Obstetrics/Gynecology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Line of business, age

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## Diabetes Medical Attention for Nephropathy (Measure ID 100160)

**Measure Endorsed by NQF: Yes**

**Based on NCQA Measure**

### Description

This measure evaluates whether members aged 18 through 75 years with a diagnoses of Diabetes (Type 1 or 2) are receiving diabetic screening and monitoring for Medical Attention for Nephropathy as recommended by the American Diabetes Association.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid)
<b>Ages</b>	Member should be age 18 through 75 years
<b>Continuous Enrollment</b>	12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	12 Months
<b>Benefit</b>	Medical and Pharmacy
<b>Visit</b>	At least one outpatient visit to a provider with one of the specialties listed below, and 1 qualifying Numerator event during the 12 month assessment period. If no numerator qualifying event then two visits are required.
<b>Provider Specialty</b>	Cardiology, Gastroenterology, Obstetrics/Gynecology specialty designation.

## Administrative Specification

<b>Denominator</b>	<p>Members defined by Aetna's HPD as having Diabetes and who meet continuous enrollment and provider attribution criteria</p> <p>Table H: HPD Codes to Identify Diabetes</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Diabetes</td> <td>Members with a disease code of Diabetes (DIA) HPD</td> </tr> </tbody> </table>	Description	Health Profile Database	Diabetes	Members with a disease code of Diabetes (DIA) HPD
Description	Health Profile Database				
Diabetes	Members with a disease code of Diabetes (DIA) HPD				
<b>Numerator</b>	<p>Members in the denominator with evidence of medical attention for nephropathy, which can include either a nephropathy screening test, evidence of nephropathy or evidence of ACE-I/ARB therapy anytime during the measurement period.</p>				

Table I: Codes to Identify Nephropathy Screening Tests

Description	CPT	CPT II	LOINC
Nephropathy screening test	82042, 82043, 82044, 84156	3060F, 3061F	1753-3, 1754-1, 1755-8, 1757-4, 2887-8, 2888-6, 2889-4, 2890-2, 9318-7, 11218-5, 12842-1, 13801-6, 14956-7, 14957-5, 14958-3, 14959-1, 13705-9, 14585-4, 18373-1, 20621-9, 21059-1, 21482-5, 26801-1, 27298-9, 30000-4, 30001-2, 30003-8, 32209-9, 32294-1, 32551-4, 34366-5, 35663-4, 40486-3, 40662-9, 40663-7, 43605-5, 43606-3, 43607-1, 44292-1, 47558-2, 49023-5, 50949-7, 53121-0, 53530-2, 53531-0, 53532-8

Table J: Codes to Identify Evidence of Nephropathy

Description	CPT	CPT II*	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure	UB Revenue	LOINC
Urine macro albumin test*	81000-81003, 81005	3062F					5804-0, 20454-5, 50561-0, 53525-2

Evidence of treatment for nephropathy	36145, 36800, 36810, 36815, 36818, 36819-36821, 36831-36833, 50300, 50320, 50340, 50360, 50365, 50370, 50380, 90920, 90921, 90924, 90925, 90935, 90937, 90940, 90945, 90947, 90957-90962, 90965, 90966, 90969, 90970, 90989, 90993, 90997, 90999, 99512	3066F	G0257, G0314-G0319, G0322, G0323, G0326, G0327, G0392, G0393, S9339	250.4, 403, 404, 405.01, 405.11, 405.91, 580-588, 753.0, 753.1, 791.0, V42.0, V45.1, V56	38.95, 39.27, 39.42, 39.43, 39.53, 39.93-39.95, 54.98, 55.4 -55.6	0367, 080x, 082x-085x, 088x	
ACE inhibitor/ARB therapy		4009F					

\*A CPT Category II code indicates a positive result for urine macro albumin

Table K: Codes to Identify ACE Inhibitors/ARBs

Description	Prescription
Angiotensin converting enzyme inhibitors	benazepril captopril enalapril fosinopril lisinopril moexipril perindopril quinapril ramipril trandolapril
Angiotension II Inhibitors	candesartan eprosartan irbesartan losartan olmesartan telmisartan valsartan

Antihypertensive combinations	benazepril-hydrochlorothiazide candesartan-hydrochlorothiazide captopril-hydrochlorothiazide enalapril-hydrochlorothiazide eprosartan-hydrochlorothiazide fosinopril-hydrochlorothiazide hydrochlorothiazide-irbesartan hydrochlorothiazide-lisinopril hydrochlorothiazide-losartan hydrochlorothiazide-moexipril hydrochlorothiazide-olmesartan hydrochlorothiazide-quinapril hydrochlorothiazide-telmisartan hydrochlorothiazide-valsartan
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## Exclusion

Member that do not have the disease of Diabetes during the assessment period.  
Members that have expired during the assessment period.  
Member with a diagnosis of polycystic ovaries, gestational or steroid induced diabetes.  
Members who did not have a face-to-face encounter with a diagnosis of Diabetes.  
Member whose attributed provider failed Lab Data Integrity.

Table L: Codes to identify exclusions

Description	ICD-9-CM Diagnosis
Polycystic ovaries	256.4
Steroid induced	251.8, 962.0
Gestational diabetes	648.8

## Provider Attribution

Each Cardiology, Gastroenterology, Obstetrics/Gynecology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Line of business, age

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## Diabetes Annual Lipid Control <100 (Measure ID 100172)

Measure Endorsed by NQF: Yes

Based on NCQA Measure

### Description

This measure evaluates the percentage of members aged 18 through 75 years with a diagnoses of Diabetes (Type 1 or 2) having a LDL result <100.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be age 18 through 75 years
<b>Continuous Enrollment</b>	12 months of Continuous Medical Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	12 Months
<b>Benefit</b>	Medical
<b>Visit</b>	Two outpatient visits in the current measurement year to a provider with one of the specialties listed below. The member may have seen more than one qualifying denominator provider. The member may or may not have had the numerator service with a qualifying denominator provider.
<b>Provider Specialty</b>	Cardiology, Gastroenterology, Obstetrics/Gynecology specialty designation.

## Administrative Specification

<b>Denominator</b>	<p>Members defined by Aetna's HPD as having diabetes and who meet Continuous Enrollment and Provider Attribution criteria and who had a valid LDL lab result or valid CPT II (Table 1)</p> <p>Table H: HPD Codes to Identify Diabetes</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Diabetes</td> <td>Members with a disease code of Diabetes (DIA) HPD</td> </tr> </tbody> </table>	Description	Health Profile Database	Diabetes	Members with a disease code of Diabetes (DIA) HPD				
Description	Health Profile Database								
Diabetes	Members with a disease code of Diabetes (DIA) HPD								
<b>Numerator</b>	<p>Members in denominator who had an LDL-C level &gt; 0 or &lt;100 during the 12 month assessment period as identified by claim/encounter or automated lab data.</p> <p>Table I: Codes to identify LDL-C &lt;100mg/dl</p> <table border="1"> <thead> <tr> <th>Description</th> <th>CPTII</th> </tr> </thead> <tbody> <tr> <td>LDL-C &gt;0 or &lt;100mg/dl</td> <td>3048F</td> </tr> </tbody> </table> <p>Or</p> <p>LDL-C Codes with LDL-C &lt;100mg/dl</p> <table border="1"> <thead> <tr> <th>Description</th> <th>LOINC</th> </tr> </thead> <tbody> <tr> <td>LDL-C &gt;0 or &lt;100</td> <td>2089-1, 12773-8, 13457-7, 18261-8, 18262-6, 22748-8, 24331-1, 39469-2</td> </tr> </tbody> </table>	Description	CPTII	LDL-C >0 or <100mg/dl	3048F	Description	LOINC	LDL-C >0 or <100	2089-1, 12773-8, 13457-7, 18261-8, 18262-6, 22748-8, 24331-1, 39469-2
Description	CPTII								
LDL-C >0 or <100mg/dl	3048F								
Description	LOINC								
LDL-C >0 or <100	2089-1, 12773-8, 13457-7, 18261-8, 18262-6, 22748-8, 24331-1, 39469-2								

## Exclusion

- Member that do not have the disease of Diabetes during the assessment period.
- Members that have expired during the assessment period.
- Member with a diagnosis of polycystic ovaries, gestational or steroid induced diabetes.
- Members who did not have a face-to-face encounter with a diagnosis of Diabetes.
- Member whose attributed provider failed Lab Data Integrity.

Table J: Codes to identify exclusions

Description	ICD-9-CM Diagnosis
Polycystic ovaries	256.4
Steroid induced	251.8, 962.0
Gestational diabetes	648.8

### Provider Attribution

Each Cardiology, Gastroenterology, Obstetrics/Gynecology specialty provider for members who have had at least 2 outpatient claims with the provider during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

### Case Mix Adjustment

Risk, line of business, specialty

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## Diabetes Annual Retinal Eye exam Screening (Measure ID 100016)

Measure Endorsed by NQF: Yes

Based on NCQA Measure

### Description

This measure evaluates whether members aged 18 through 75 years with a diagnoses of Diabetes (Type 1 or 2) are receiving diabetic screening and monitoring for Annual Retinal Eye exam control as recommended by the American Diabetes Association.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be age 18 through 75 years
<b>Continuous Enrollment</b>	12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	12 Months
<b>Benefit</b>	Medical
<b>Visit</b>	At least one outpatient visit to a provider with one of the specialties listed below and 1 qualifying Numerator event during the 12 month assessment period. If no numerator qualifying event, then two visits are required.
<b>Provider Specialty</b>	Cardiology, Obstetrics/Gynecology specialty designation.

**Administrative Specification**

<p><b>Denominator</b></p>	<p>Members defined by Aetna's Health Profile Database as having Diabetes and who meet continuous enrollment and provider attribution criteria.</p> <p>Table H: HPD Codes to Identify Diabetes</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Diabetes</td> <td>Members with a disease code of Diabetes (DIA) HPD</td> </tr> </tbody> </table>	Description	Health Profile Database	Diabetes	Members with a disease code of Diabetes (DIA) HPD
Description	Health Profile Database				
Diabetes	Members with a disease code of Diabetes (DIA) HPD				
<p><b>Numerator</b></p>	<p>Members in denominator who had a Retinal exam performed any time during the 12 month assessment period.</p>				

Table HI: Codes to Indicate Retinal exam

Description	Procedure Group Number
Retinal exam	75, 175

Or

Table HJ: CPTII Code to identify Retinal exam

CPTII CODE	Description
S0625, 2022F, 2024F, 2026F, 3072F	Retinal exam

Or

Table HK: Codes to Identify Retinal exam

Description	CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure
Retinal exam	67028, 67030, 67031, 67036, 67038-67043, 67101, 67105, 67107, 67108, 67110, 67112, 67113, 67121, 67141, 67145, 67208, 67210, 67218, 67220, 67221, 67227, 67228, 92002, 92004, 92012, 92014, 92018, 92019, 92225, 92226, 92230, 92235, 92240, 92250, 92260, 99203-99205, 99213-99215, 99242-99245	S0620, S0621, S0625**, S3000	V72.0	14.1-14.5, 14.9, 95.02-95.04, 95.11, 95.12, 95.16

### Exclusion

Member that do not have the disease or Diabetes during the assessment period.  
Members that have expired during the assessment period.

### Provider Attribution

Each Cardiology, Obstetrics/Gynecology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

### Case Mix Adjustment

Line of business

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**Diabetes with LDL greater than or equal to 100 – Use of a Lipid Lowering Agent (Measure ID 100316)**

**Measure Endorsed by NQF: Yes**

**Based on Active Health Management Measure**

**Description**

This measure evaluates the percentage of diabetic members who are either 41 - 75 years of age OR 18-40 years of age with Diabetes and Hypertension, with an LDL level greater than or equal to 100 mg/dL and a current fill for a lipid lowering agent. (Both age groups will be The Denominator will be reported as 1)

**Eligible Population**

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be at least 18 at start of the reporting period. Member should be no more than 75 at start of the reporting period.
<b>Continuous Enrollment</b>	12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	12 Months
<b>Benefit</b>	Medical and Pharmacy
<b>Visit</b>	At least one outpatient visit to a provider with one of the specialties listed below and 1 qualifying Numerator event during the 12 month assessment period.
<b>Provider Specialty</b>	Cardiology, Gastroenterology, Obstetrics/Gynecology specialty designation.

## Administrative Specification

<p><b>Denominator</b></p>	<p>All diabetic members, who are 41 - 75 years of age Members 41 – 75 years of age defined by Aetna's Health Profile Database as having Diabetes and who meet continuous enrollment and provider attribution criteria</p> <p>Or</p> <p>18 to 40 years of age with both Diabetes and Hypertension and an LDL level greater than or equal to 100 mg/dL, who meet provider attribution and continuously enrollment criteria.</p> <p>Table: Codes to identify Diabetes and Hypertension</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Diabetes</td> <td>Members with a disease code of Diabetes (DIA) HPD</td> </tr> <tr> <td>Hypertension</td> <td>Members with a disease code of Hypertension (HYP) HPD</td> </tr> </tbody> </table> <p>Table AM: Physician reported LDL level results</p> <table border="1"> <thead> <tr> <th>CPTII CODE</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3049F, 3050F</td> <td>3049F LDL-C 100-129 Mg/Dl, 3050F LDL-C &gt;130</td> </tr> </tbody> </table> <p>Table AN: Lab results for LDL level</p> <table border="1"> <thead> <tr> <th>LOINC Class</th> <th>Lab Result</th> </tr> </thead> <tbody> <tr> <td>LDL</td> <td>LDL&lt;=100</td> </tr> </tbody> </table>	Description	Health Profile Database	Diabetes	Members with a disease code of Diabetes (DIA) HPD	Hypertension	Members with a disease code of Hypertension (HYP) HPD	CPTII CODE	Description	3049F, 3050F	3049F LDL-C 100-129 Mg/Dl, 3050F LDL-C >130	LOINC Class	Lab Result	LDL	LDL<=100
Description	Health Profile Database														
Diabetes	Members with a disease code of Diabetes (DIA) HPD														
Hypertension	Members with a disease code of Hypertension (HYP) HPD														
CPTII CODE	Description														
3049F, 3050F	3049F LDL-C 100-129 Mg/Dl, 3050F LDL-C >130														
LOINC Class	Lab Result														
LDL	LDL<=100														
<p><b>Numerator</b></p>	<p>Members in denominator with a fill for a lipid lowering agent any time in the measurement period. (Tables AO or AP)</p>														

Table AO: CPTII Code to identify members who were prescribed Statin therapy

CPTII CODE	Description
4002F	Statin therapy, prescribed

Table AP: Presence of a current refill for a lipid lowering agent

Description
Antihyperlipidemics

**Exclusion**

- Members who have data that indicates provider made a change to their lipid treatment during the assessment period.
- Members who have been breastfeeding in past six months during assessment period.
- Members with diagnosis of pregnancy, polycystic ovaries or gestational diabetes during the assessment period.
- Members with metastatic disease or active treatment with chemotherapy or radiation therapy in past six months of assessment period.

Table C Codes to Identify Exclusions.

ICD-9 Diagnosis Group Number	Description
83, 84, 86, 87, 89, 90, 92, 93, 94, 96, 97, 102, 104, 107, 108, 109, 110	83 Abortion, 84 Birth Canal Injury, 86 Malpresentation/Complicated Delivery, 87 Uncomplicated Pregnancy, 89 Glucose Intolerance Complicating Pregnancy, 90 Complicated Pregnancy - Other, 92 Hemorrhage Complicating Pregnancy, 93 Hyperemesis Complicating Pregnancy, 94 Infection Complicating Pregnancy, 96 Ectopic Pregnancy, 97 Multiple Gestation Complicating Pregnancy, 102 Antenatal Screening, 104 Fetal Abnormality Complicating Pregnancy, 107 Placental Complications, 108 Premature Labor, 109 Hypertension Complicating Pregnancy, 110 Pre-Eclampsia/Eclampsia

Or

Table D Codes to Identify Exclusions.

Procedure Group Number	Description
58, 59, 61, 63, 64, 65, 67, 69	58 Abortion Procedures, 59 Cesarean Delivery, 61 Amniocentesis/Other Prenatal Screening, 63 Obstetric Stress Testing, 64 Obstetric Ultrasound, 65 Ectopic Pregnancy Procedures, 67 Obstetric Procedures - Other, 69 - Vaginal Deliveries

Or

Table E: Codes to Identify Exclusions

Description	CPT
chemotherapy or radiation therapy	J9355, 79000, 79001, 79020, 4164F, 4200F, 4201F

Or

Table EQ: Physician Reported Reasons for not prescribing lipid lowering drug therapy

CPTII CODE	Description
4002F-1P	Other medical reason(s) documented by the practitioner for not prescribing lipid lowering therapy
4002F-2P	Other patient reason (eg, economic, social, religious) for not prescribing lipid lowering therapy
4002F-3P	Other system reason (eg, resources to perform service not available) for not prescribing lipid lowering therapy

Table ER: Diagnosis codes for allergy or adverse effect of a lipid lowering drug

EXCLUSION DX CODE
995.0, 995.1, 995.27, 995.29, E942.2

### Provider Attribution

Each Cardiology, Gastroenterology, Obstetrics/Gynecology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

### Case Mix Adjustment

Line of business

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## Appropriate Work Up Prior To Endometrial Ablation Procedure (Measure ID 100308)

**Measure Endorsed by NQF: Yes**

**Based on Health Benchmarks Measure**

### Description

This measure evaluates the percentage of members with a Uterine Ablation procedure who had an endometrial biopsy in the prior 12 months.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	All Ages.
<b>Continuous Enrollment</b>	12 months continuous Medical enrollment during the 12 month period prior to the index date. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.  index date= Uterine Ablation
<b>Measurement Period</b>	24 Months
<b>Benefit</b>	Medical
<b>Visit</b>	At least one visit to an Ob/Gyn provider for members who have had a claim for index event (an endometrial ablation) in the current measurement year and a numerator event (endometrial biopsy) during the prior 12 months. The member may or may not have had the numerator service with a qualifying denominator provider. If multiple index events found- retain only first. One qualifying numerator event during the 12 month assessment period. If no numerator qualifying event, then two visits are required.
<b>Provider Specialty</b>	Obstetrics/Gynecology specialty designation.

## Administrative Specification

<p><b>Denominator</b></p>	<p>Members who had endometrial ablation in the 12 month denominator period (12 months as of the end date of the 12 month assessment period) and who meet Provider Attribution criteria and continuous enrollment. If the member had more than one endometrial ablation, include only the first endometrial ablation.</p> <p>Table H: Codes to Identify Endometrial Ablation</p> <table border="1"> <thead> <tr> <th>Description</th> <th>CPT</th> <th>ICD-9</th> </tr> </thead> <tbody> <tr> <td>Endometrial Ablation</td> <td>58353, 58356 • , 58563, 0009T</td> <td>68.23</td> </tr> </tbody> </table>	Description	CPT	ICD-9	Endometrial Ablation	58353, 58356 • , 58563, 0009T	68.23		
Description	CPT	ICD-9							
Endometrial Ablation	58353, 58356 • , 58563, 0009T	68.23							
<p><b>Numerator</b></p>	<p>Members in the denominator who received endometrial sampling or hysteroscopy with biopsy during the 12 month period prior to the index event (endometrial ablation procedure) date.</p> <p>Table HI: HPD Codes to Identify Endometrial Biopsy, Diagnostic Hysteroscopy and Endometrial Pathology Testing</p> <table border="1"> <thead> <tr> <th>Description</th> <th>CPT</th> </tr> </thead> <tbody> <tr> <td>Endometrial Biopsy</td> <td>58100, 58110, 58120, 58558, 56351</td> </tr> <tr> <td>Diagnostic Hysteroscopy</td> <td>58555</td> </tr> <tr> <td>Endometrial Pathology Testing</td> <td>88305</td> </tr> </tbody> </table>	Description	CPT	Endometrial Biopsy	58100, 58110, 58120, 58558, 56351	Diagnostic Hysteroscopy	58555	Endometrial Pathology Testing	88305
Description	CPT								
Endometrial Biopsy	58100, 58110, 58120, 58558, 56351								
Diagnostic Hysteroscopy	58555								
Endometrial Pathology Testing	88305								

## Exclusion

Members who had an endometrial ablation during the year prior to the index date.

Table H: Codes to Identify Exclusion

Description	CPT	ICD-9
Endometrial Ablation	• 58353, 58356, 58563, 0009T	68.23

## Provider Attribution

Each Obstetrics/Gynecology specialty provider for members who have had a claim for index event (an endometrial ablation) in the current measurement year and a numerator event (endometrial biopsy) during the prior 12 months. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Line of business

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## Hypertension Patients with a Serum Creatinine in the last 12 Months (Measure ID 100300)

**Measure Endorsed by NQF: Yes**

**Based on Ingenix Measure**

### Description

This measure evaluates the percentage of members 18 years and older with hypertension (HTN) who had a serum creatinine test anytime during the 12 month assessment period.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid)
<b>Ages</b>	18 years and older
<b>Continuous Enrollment</b>	Twelve months of continuous Medical Enrollment. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap may not be in effect on last day of 12 month assessment period. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage
<b>Measurement Period</b>	12 month
<b>Benefit</b>	Medical.
<b>Visit</b>	At least 1 outpatient visit claim with a specialty provider listed below and one qualifying numerator event during the 12 month assessment period. If no numerator qualifying event then two visits are required.
<b>Provider Specialty</b>	Cardiology, Obstetrics/Gynecology specialty designation.

**Administrative Specification**

<p><b>Denominator</b></p>	<p>Members 18 years and older defined by Aetna's HPD as having Hypertension and who meet continuous enrollment and provider attribution criteria.</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Diabetes</td> <td>Members with a disease code of Hypertension (HYP) HPD</td> </tr> </tbody> </table>	Description	Health Profile Database	Diabetes	Members with a disease code of Hypertension (HYP) HPD
Description	Health Profile Database				
Diabetes	Members with a disease code of Hypertension (HYP) HPD				
<p><b>Numerator</b></p>	<p>Members in the denominator who have evidence through claim/encounter data of a test for serum creatinine anytime during the assessment period.</p>				

Table I: Codes to identify Serum Creatinine, Creatinine Clearance

Description	CPT	LOINC
Serum Creatinine	80047, 80048, 80050, 80053, 80069, 82565	20454-5
<b>Creatinine Clearance</b>	82575	20454-5

**Exclusion**

Members with a history of End Stage Renal Disease including Dialysis  
 Members identified in HPD as not having disease or expired

Table J: Codes to Identify Exclusions

Description	ICD-9-CM Diagnosis	CPT	ICD-9-Procedure
End Stage Renal Disease	403 , 403.0, 403.00, 403.01, 403.1, 403.10, 403.11, 403.9, 403.90, 403.91, 404, 404.0, 404.00, 404.01, 404.02, 404.03, 404.1, 404.10, 404.11, 404.12, 404.13, 404.9, 404.90, 404.91, 404.92, 404.93, 585.4, 585.5, 585.6, V56.0, V56.8		
Dialysis		90935, 90937, 90940, 90951, 90952, 90953, 90954, 90955, 90956, 90957, 90958, 90959, 90960, 90961, 90970, 90989, 90993, 90997, 90999, G0257, G9013, G9014, 90945, 90947, 90966, 90967, 90968, 90969, 90976, 90977, 90978, 90979, 90982, 90983, 90984, 90985, S9339	54.98, 39.95

### Provider Attribution

Each Cardiology, Obstetrics/Gynecology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent. Duplications of the same provider/provider group and member combination are eliminated.

### Case Mix Adjustment

Age, Line of business.

### Lab Data Integrity

Lab data integrity applies.

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**Migraine: Adult(s) with Frequent use of Acute Medications that also Received Prophylactic Medications (Measure ID 100312)**

**Measure Endorsed by NQF: Yes**

**Based on Ingenix Measure**

**Description**

This measure identifies adults with migraines who are frequently taking acute (abortive) medications and are also taking a prophylactic medication for migraine control.

**Eligible Population**

<b>Product lines</b>	All products
<b>Ages</b>	Members who are age 18 or greater at the start of the assessment period.
<b>Continuous Enrollment</b>	Continuous Medical and Pharmacy Enrollment during rolling 210 days assessment period starting with the index date. No gaps in enrollment of medical or pharmacy during the assessment period.  Index date = The 1st dispense date that meets the 90 day criteria for the denominator
<b>Measurement Period</b>	210 days
<b>Benefit</b>	Medical and Pharmacy.
<b>Visit</b>	At least one outpatient visit with the specialty provider listed below and 1 qualifying numerator event during the assessment period. If no numerator event is found then 2 outpatient visits on different dates of service are required with the same provider, with at least 1 of the 2 outpatient visits found during the assessment period.
<b>Provider Specialty</b>	Obstetrics/Gynecology, Neurology specialty designation

**Administrative Specification**

<p><b>Denominator</b></p>	<p>Members 18 years and older at the beginning of the 210 day assessment period and defined by Aetna's HPD as having migraines and taking frequent acute (abortive) medications and who meet continuous enrollment and provider attribution criteria.</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Migraine Headache</td> <td>Members with a disease code of Migraine Headache (MOH) HPD</td> </tr> </tbody> </table>	Description	Health Profile Database	Migraine Headache	Members with a disease code of Migraine Headache (MOH) HPD
Description	Health Profile Database				
Migraine Headache	Members with a disease code of Migraine Headache (MOH) HPD				
<p><b>Numerator</b></p>	<p>Members from the denominator who filled a prescription for an anticonvulsant, Beta-Blocker-containing medication, Calcium Channel Blocker-containing medication, or tricyclic antidepressant during the following time period the 120 days of the denominator period through 90 days after the end of the denominator period</p>				

Table GQ: Drugs to identify acute (abortive) medications for migraine headaches

Drug
Triptan
Butorphanol Tartrate
Dihydroergotamine Mesylate
Butalbital
Midrin

Table GR: Numerator Codes that indicate Beta-Blocker-containing medication, Calcium Channel Blocker-containing medication, or Tricyclic antidepressant

Drug
Beta-Blocker-containing
Calcium Channel Blocker-containing
Tricyclic antidepressant

### Exclusion

There are no exclusions with this measure

### Provider Attribution

Each Obstetrics/Gynecology, Neurology specialty providers for member who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated.

If no numerator event is found in the 12 month assessment period, look back to previous year for provider attribution (previous yr. is not part of the denominator). Two outpatient visits on different dates of service are required with the same provider, with at least 1 of the 2 outpatient visits found during the 12 month denominator assessment period.

The member may have seen more than one qualifying denominator provider. The member may or may not have had the numerator service with a qualifying denominator provider. Each qualifying denominator provider the member has visited will be evaluated.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

### Case Mix Adjustment

Line of business

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## Osteoporosis Management in Members Who Had a Fracture (Measure ID: 100148)

**Measure Endorsed by NQF: Yes**      **Based on AMA Measure**

### Description

This measure evaluates the percentage of all members aged 50 years and older with a fracture of the hip, spine or distal radius that had a central DXA measurement ordered or performed or pharmacologic therapy prescribed.

### Eligible Population

<b>Product lines</b>	All products (commercial, Medicare and Medicaid).		
<b>Ages</b>	50 years and older at the start of the measurement period		
<b>Diagnosis</b>	Fracture of the hip, spine or distal radius		
	<b>Description</b>	<b>ICD-9-CM Diagnosis</b>	<b>ICD-9-CM Procedure</b>
	OMV Fracture Codes	733.12, 733.13, 733.14, 805.05.00, 805.01, 805.02, 805.03, 805.05, 805.06, 805.07, 805.08, 805.2, 805.4, 805.6, 805.8, 813.4, 813.40, 813.41, 813.42, 813.44, 813.45, 813.5, 813.50, 813.51, 813.52, 813.54, 820, 820.0, 820.00, 820.01, 820.02, 820.03, 820.09, 820.2, 820.20, 820.21, 820.22. 820.8	78.53, 78.55, 79.02, 79.05, 79.12, 79.15, 79.22, 79.25, 79.32, 79.35, 79.62, 79.65, 81.65, 81.66, 22305, 22310, 22315, 22318, 22319, 22325, 22326, 22327, 22520, 22521, 22523, 22524, 25600, 25605, 25606, 25607, 25608, 25609, 27230, 27232, 27235, 27236, 27238, 27240, 27244, 27245, 27246, 27248
<b>Continuous Enrollment</b>	The member must be continuously enrolled for 12 months of both Medical and Pharmacy prior to fracture and six months post-fracture. No more than one gap in enrollment of up to 45 days is allowed. Gaps of only one day are administrative and are not counted as a distinct enrollment gap. Gap may not be in effect on last day of 12-month assessment period.		
<b>Measurement Period</b>	18 months		
<b>Benefit</b>	Medical and Pharmacy. The pharmacy benefit must be demonstrated through an Aetna benefit indication during the assessment period. In addition, a pharmacy claim must have been received at any time during the 18-month assessment period.		
<b>Visit</b>	At least one outpatient visit to a specialty provider with a diagnosis of fracture, as defined above, within 30 days post fracture.		

<b>Provider Specialty</b>	Orthopedic Surgery specialty designation.
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**Administrative Specification**

<b>Denominator</b>	Members aged 50 years and older with a fracture of the hip, spine or distal radius.													
<b>Numerator</b>	<p>Members in the denominator who had a central DXA measurement ordered or performed or pharmacologic therapy filled within six months following fracture</p> <p>Table AG: Codes to Identify Central DXA Measurement</p> <table border="1"> <thead> <tr> <th>CPT</th> <th>HCPCS</th> <th>ICD-9-CM Diagnosis</th> <th>ICD-9-CM Procedure</th> </tr> </thead> <tbody> <tr> <td>76070, 76071, 76075-76077, 76078, 76977, 77078-77083, 78350-78351</td> <td>G0130</td> <td>V82.81</td> <td>88.98</td> </tr> </tbody> </table> <p>Table AH: FDA-Approved Osteoporosis Therapies</p> <table border="1"> <thead> <tr> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Biphosphonates</td> </tr> <tr> <td>Estrogens</td> </tr> <tr> <td>Miscellaneous hormones</td> </tr> <tr> <td>Sex hormone combinations</td> </tr> </tbody> </table>	CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure	76070, 76071, 76075-76077, 76078, 76977, 77078-77083, 78350-78351	G0130	V82.81	88.98	Description	Biphosphonates	Estrogens	Miscellaneous hormones	Sex hormone combinations
CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure											
76070, 76071, 76075-76077, 76078, 76977, 77078-77083, 78350-78351	G0130	V82.81	88.98											
Description														
Biphosphonates														
Estrogens														
Miscellaneous hormones														
Sex hormone combinations														

**Exclusion**

Members who had a DXA test or who received any osteoporosis treatment during the 365 days prior to the fracture that made them eligible for the measure.  
 Member must not have evidence of a fracture for a period of 60 days prior to the earliest fracture (qualifying denominator fracture) within the assessment period  
 Members in the HPD with a diagnosis of osteoporosis where the first identify date is prior to the date of fracture as identified in the denominator.  
 Exclude members in the DEN who did NOT have a Numerator event but had a claim with any of the CPT2 codes and modifiers listed during the 180 day period after the denominator event.

Table AI: CPT II codes exclusions

CPT II code	Description
3096F	Central dual energy X-ray absorptiometry (DXA) ordered
3095F	Central dual energy X-ray absorptiometry (DXA) results documented
4005F	Pharmacologic therapy (other than minerals/vitamins) for osteoporosis prescribed

Table AJ: HPD Exclusions

Description	Health Profile Database
Osteoporosis	Members with a disease code of OSP

**Provider Attribution**

Each Orthopedic specialty provider from which the member received fracture care within 30 days post fracture during the assessment period will be evaluated. Credit/No credit will be given to each qualifying provider for members who have had a claim in the measurement period for fracture care defined in the eligible population in the current year. The numerator event must occur any time during the six months following fracture within the assessment period.

If no numerator event members are required to have six months continuous enrollment from the date of the fracture. The member may have seen more than one qualifying denominator provider. The member may or may not have had the numerator service with a qualifying denominator provider.

**Case Mix Adjustment**

Line of business.

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## Prostate Cancer Surveillance (Measure ID 100264)

Measure Endorsed by NQF: Yes

Based on Active Health Management Measure

### Description

Percentage of males with prostate cancer that have had their PSA monitored in the past 12 months

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Ages All
<b>Continuous Enrollment</b>	12 months of Continuous Medical Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	Twelve month measurement time period to identify the numerator.
<b>Benefit</b>	Medical.
<b>Visit</b>	At least one visit to a provider specialty, as listed below, during the measurement time period.
<b>Provider Specialty</b>	Urology specialty designation.

## Administrative Specification

<b>Denominator</b>	All males (no age limitations) defined by Aetna's HPD as having prostate cancer and who meet continuous enrollment and provider attribution criteria	
	<b>Description</b>	<b>Health Profile Database</b>
	Prostate cancer	Members with a disease code of Prostate Cancer (PRC)
<b>Numerator</b>	Males in the denominator who had PSA monitoring anytime during the 12 month assessment period.	

Table G: Codes to identify PSA monitoring

CPT	HCPCS	ICD-9-CM Diagnosis	LOINC
84152, 84153, 84154	G0103	790.93	2857-1, 35741-8

### Exclusion

Member with evidence of a workup for Prostate disease at anytime in the past 12 month assessment period timeframe.

Members with Prostate Cancer treatment at anytime in the past 12 month assessment period timeframe.

Members with Prostate ultrasound at anytime in the 12 month assessment period timeframe.

Members with evidence of metastatic disease or active treatment of malignancy (Chemotherapy or Radiation Therapy) in the last 6 months of the assessment period 12 month timeframe.

Members with PRC as defined in the HPD with a D or E are to be excluded. D = member does not have the disease. E = member expired.

All date frames available on the data warehouse are reviewed (three full years of history plus the current year).

Refer to Table H for Codes to Identify Exclusions

Table H: Codes to Identify Exclusions

Description	CPT	ICD-9-CM Procedure
Prostate Cancer Treatment (including Chemotherapy and Radiation Therapy)	55801, 55810, 55812, 55815, 55821, 55831, 55840, 55842, 55845, 55859, 55860, 55862, 55865, 77750, 77761, 77762, 77776, 77777, 77778, 77781, 77782, 77783, 77784, 77799, 55866 G0256, G0261, 4164F, 4200F, 4201F	60.3, 60.4, 60.5, 60.6, 60.61, 60.62, 60.69

### Provider Attribution

Each Urology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

### Case Mix Adjustment

Line of business

### Lab Data Integrity

Lab data integrity applies.

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**Annual Monitoring for Patients on Persistent ACE Inhibitors/ Angiotensin Receptor Blocker (ACE/ ARB) (Measure ID: 100128)**

**Measure Endorsed by NQF: Yes**

**Based on NCQA Measure**

**Description**

The percentage of members 18 years of age and older who received at least a 180-day supply of ambulatory medication therapy for ACE-I or ARB (Table A) during the measurement period and at least one therapeutic monitoring (Table B) event as described in the numerator during the measurement period.

**Eligible Population**

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).				
<b>Ages</b>	18 years of age and older				
<b>Event</b>	<p>Members who received at least a 180-day supply of ambulatory medication therapy for ACE-I or ARB (Table A)</p> <p>Table A: ACE-I/ARB</p> <table border="1"> <thead> <tr> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Angiotensin converting enzyme inhibitors</td> </tr> <tr> <td>Angiotensin II inhibitors</td> </tr> <tr> <td>Antihypertensive combinations</td> </tr> </tbody> </table> <p><b>Note:</b> Members may switch therapy with any specific medications during the measurement period and have the days supply for those medications count toward the total 180-days supply (i.e., a member who received 90 days of ACE inhibitors and 90 days of an ARB will meet the denominator).</p>	Description	Angiotensin converting enzyme inhibitors	Angiotensin II inhibitors	Antihypertensive combinations
Description					
Angiotensin converting enzyme inhibitors					
Angiotensin II inhibitors					
Antihypertensive combinations					
<b>Continuous Enrollment</b>	12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.				
<b>Measurement Period</b>	Twelve months				
<b>Benefit</b>	Medical and Pharmacy. The pharmacy benefit must be demonstrated through an Aetna benefit indication during the assessment period. In addition, a pharmacy claim must have been received at any time during the 12-month assessment period.				
<b>Visit</b>	At least 1 outpatient visit to a Cardiologist during the measurement time period if there is a numerator qualifying event. If no numerator qualifying event then two visits are required.				

<b>Provider Specialty</b>	Cardiology specialty designation.
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**Administrative Specification**

<b>Denominator</b>	The eligible population.
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<b>Numerator</b>	Members in the denominator with at least one serum potassium and either a serum creatinine or blood urea nitrogen (BUN) (Table B) therapeutic monitoring tests in the measurement period.
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**Note:** The two tests do not need to occur on the same service date, only within the measurement period.

Table B: Codes to Identify Serum Potassium, Serum Creatinine & BUN

Description	CPT	LOINC
Serum potassium (K+)	80047, 80048, 80050, 80051, 80053, 80069, 84132	2824-1, 2823-3, 6298-4, 12812-4, 12813-2, 22760-3, 24320-4, 24321-2, 24322-0, 24323-8, 24326-1, 24362-6, 29349-8, 32713-0, 34548-8, 34554-6, 39789-3, 39790-1, 41656-0, 45064-3, 45065-0, 50261-7, 51618-7
<b>With</b>		
Serum creatinine (SCr)	80048, 80050, 80053, 80069, 82565, 82575	2160-0, 2163-4, 2164-2, 11041-1, 11042-9, 12195-4, 13441-1, 13442-9, 13443-7, 13446-0, 13447-8, 13449-4, 13450-2, 14682-9, 16188-5, 16189-3, 21232-4, 24321-2, 24322-0, 24323-8, 24320-4, 24362-6, 26752-6, 31045-8, 33558-8, 34555-3, 35203-9, 35591-7, 35592-5, 35593-3, 35594-1, 38483-4, 39955-0, 39956-8, 39957-6, 39958-4, 39959-2, 39960-0, 39961-8, 39962-6, 39963-4, 39964-2, 39965-9, 39966-7, 39967-5, 39968-3, 39969-1, 39970-9, 39971-7, 39972-5, 39973-3, 39974-1, 39975-8, 39976-6, 40112-5, 40113-3, 40114-1, 40115-8, 40116-6, 40117-4, 40118-2, 40119-0, 40120-8, 40121-6, 40122-4, 40123-2, 40124-0, 40125-7, 40126-5, 40127-3, 40128-1, 40248-7, 40249-5, 40250-3, 40251-1, 40252-9, 40253-7, 40254-5, 40255-2, 40256-0, 40257-8, 40258-6, 40264-4, 40265-1, 40266-9, 40267-7, 40268-5, 40269-3, 40270-1, 40271-9, 40272-7, 40273-5, 44784-7, 45064-3, 45065-0, 45066-8, 50261-7, 50380-5, 50381-3, 51619-5, 51620-3
<b>Or</b>		
Blood urea nitrogen (BUN)	80048, 80050, 80053, 80069, 84520, 84525	3094-0, 6299-2, 11064-3, 11065-0, 12964-3, 12965-0, 12966-8, 14937-7, 24320-4, 24321-2, 24322-0, 24323-8, 24362-6, 44734-2, 45064-3, 45065-0, 49071-4, 50261-7

## Exclusion

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Members who had any inpatient stay (acute or non acute) during the assessment period.

## Provider Attribution

Each Cardiologist the member has visited will be evaluated. Credit will be given to each provider for members who have had at least one outpatient claim with the provider and one qualifying numerator event during the 12 month numerator assessment period.

If no numerator event is found in the 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of two outpatient visits, on different dates of service, with the same provider and at least one of the two outpatient visits occurring during the 12-month assessment period is required.

The member may have seen more than one qualifying denominator provider. The member may or may not have had the numerator service with a qualifying denominator provider. Each qualifying denominator provider the member visited during the 12-month assessment period will be evaluated.

Only one provider per group per member is attributed. The visit date selected is the most recent. Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Age, Line of business

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## Annual Monitoring for Patients on Persistent Digoxin (Measure ID: 100136)

Measure Endorsed by NQF: Yes

Based on NCQA Measure

### Description

The percentage of members 18 years of age and older who received at least a 180-day supply of Digoxin (Table E) during the measurement period and at least one therapeutic monitoring event for the therapeutic agent (Table B) in the measurement period

### Eligible Population

<b>Product lines</b>	All products (commercial, Medicare and Medicaid).		
<b>Ages</b>	18 years of age and older		
<b>Event</b>	Members who received at least a 180-day supply of Digoxin (Table E)  Table E: Drugs to Identify Members on Digoxin <table border="1"> <thead> <tr> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Inotropic agents</td> </tr> </tbody> </table>	Description	Inotropic agents
Description			
Inotropic agents			
<b>Continuous Enrollment</b>	12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid		
<b>Measurement Period</b>	Twelve months		
<b>Benefit</b>	Medical and Pharmacy. The pharmacy benefit must be demonstrated through an Aetna benefit indication during the assessment period. In addition, a pharmacy claim must have been received at any time during the 12-month assessment period.		
<b>Visit</b>	At least one outpatient visit to a Cardiologist provider during the measurement time period if there is a numerator qualifying event. If no numerator qualifying event then two visits are required.		
<b>Provider Specialty</b>	Cardiology specialty designation.		

**Administrative Specification**

<b>Denominator</b>	The eligible population.																		
<b>Numerator</b>	<p>Members in the denominator with at least one serum potassium and either a serum creatinine or blood urea nitrogen (Table B) therapeutic monitoring tests in the measurement period.</p> <p><b>Note:</b> The two tests do not need to occur on the same service date, only within the measurement period.</p> <p>Table B: Codes to Identify Serum Potassium, Serum Creatinine &amp; Blood Urea Nitrogen</p> <table border="1"> <thead> <tr> <th>Description</th> <th>CPT</th> <th>LOINC</th> </tr> </thead> <tbody> <tr> <td>Serum potassium (K+)</td> <td>80047, 80048, 80050, 80051, 80053, 80069, 84132</td> <td>2824-1, 2823-3, 6298-4, 12812-4, 12813-2, 22760-3, 24320-4, 24321-2, 24322-0, 24323-8, 24326-1, 24362-6, 29349-8, 32713-0, 34548-8, 34554-6, 39789-3, 39790-1, 41656-0, 45064-3, 45065-0, 50261-7, 51618-7</td> </tr> <tr> <td colspan="3" style="text-align: center;"><b>With</b></td> </tr> <tr> <td>Serum creatinine (SCr)</td> <td>80048, 80050, 80053, 80069, 82565, 82575</td> <td>2160-0, 2163-4, 2164-2, 11041-1, 11042-9, 12195-4, 13441-1, 13442-9, 13443-7, 13446-0, 13447-8, 13449-4, 13450-2, 14682-9, 16188-5, 16189-3, 21232-4, 24321-2, 24322-0, 24323-8, 24320-4, 24362-6, 26752-6, 31045-8, 33558-8, 34555-3, 35203-9, 35591-7, 35592-5, 35593-3, 35594-1, 38483-4, 39955-0, 39956-8, 39957-6, 39958-4, 39959-2, 39960-0, 39961-8, 39962-6, 39963-4, 39964-2, 39965-9, 39966-7, 39967-5, 39968-3, 39969-1, 39970-9, 39971-7, 39972-5, 39973-3, 39974-1, 39975-8, 39976-6, 40112-5, 40113-3, 40114-1, 40115-8, 40116-6, 40117-4, 40118-2, 40119-0, 40120-8, 40121-6, 40122-4, 40123-2, 40124-0, 40125-7, 40126-5, 40127-3, 40128-1, 40248-7, 40249-5, 40250-3, 40251-1, 40252-9, 40253-7, 40254-5, 40255-2, 40256-0, 40257-8, 40258-6, 40264-4, 40265-1, 40266-9, 40267-7, 40268-5, 40269-3, 40270-1, 40271-9, 40272-7, 40273-5, 44784-7, 45064-3, 45065-0, 45066-8, 50261-7, 50380-5, 50381-3, 51619-5, 51620-3</td> </tr> <tr> <td colspan="3" style="text-align: center;"><b>Or</b></td> </tr> <tr> <td>Blood urea nitrogen (BUN)</td> <td>80048, 80050, 80053, 80069, 84520, 84525</td> <td>3094-0, 6299-2, 11064-3, 11065-0, 12964-3, 12965-0, 12966-8, 14937-7, 24320-4, 24321-2, 24322-0, 24323-8, 24362-6, 44734-2, 45064-3, 45065-0, 49071-4, 50261-7</td> </tr> </tbody> </table>	Description	CPT	LOINC	Serum potassium (K+)	80047, 80048, 80050, 80051, 80053, 80069, 84132	2824-1, 2823-3, 6298-4, 12812-4, 12813-2, 22760-3, 24320-4, 24321-2, 24322-0, 24323-8, 24326-1, 24362-6, 29349-8, 32713-0, 34548-8, 34554-6, 39789-3, 39790-1, 41656-0, 45064-3, 45065-0, 50261-7, 51618-7	<b>With</b>			Serum creatinine (SCr)	80048, 80050, 80053, 80069, 82565, 82575	2160-0, 2163-4, 2164-2, 11041-1, 11042-9, 12195-4, 13441-1, 13442-9, 13443-7, 13446-0, 13447-8, 13449-4, 13450-2, 14682-9, 16188-5, 16189-3, 21232-4, 24321-2, 24322-0, 24323-8, 24320-4, 24362-6, 26752-6, 31045-8, 33558-8, 34555-3, 35203-9, 35591-7, 35592-5, 35593-3, 35594-1, 38483-4, 39955-0, 39956-8, 39957-6, 39958-4, 39959-2, 39960-0, 39961-8, 39962-6, 39963-4, 39964-2, 39965-9, 39966-7, 39967-5, 39968-3, 39969-1, 39970-9, 39971-7, 39972-5, 39973-3, 39974-1, 39975-8, 39976-6, 40112-5, 40113-3, 40114-1, 40115-8, 40116-6, 40117-4, 40118-2, 40119-0, 40120-8, 40121-6, 40122-4, 40123-2, 40124-0, 40125-7, 40126-5, 40127-3, 40128-1, 40248-7, 40249-5, 40250-3, 40251-1, 40252-9, 40253-7, 40254-5, 40255-2, 40256-0, 40257-8, 40258-6, 40264-4, 40265-1, 40266-9, 40267-7, 40268-5, 40269-3, 40270-1, 40271-9, 40272-7, 40273-5, 44784-7, 45064-3, 45065-0, 45066-8, 50261-7, 50380-5, 50381-3, 51619-5, 51620-3	<b>Or</b>			Blood urea nitrogen (BUN)	80048, 80050, 80053, 80069, 84520, 84525	3094-0, 6299-2, 11064-3, 11065-0, 12964-3, 12965-0, 12966-8, 14937-7, 24320-4, 24321-2, 24322-0, 24323-8, 24362-6, 44734-2, 45064-3, 45065-0, 49071-4, 50261-7
Description	CPT	LOINC																	
Serum potassium (K+)	80047, 80048, 80050, 80051, 80053, 80069, 84132	2824-1, 2823-3, 6298-4, 12812-4, 12813-2, 22760-3, 24320-4, 24321-2, 24322-0, 24323-8, 24326-1, 24362-6, 29349-8, 32713-0, 34548-8, 34554-6, 39789-3, 39790-1, 41656-0, 45064-3, 45065-0, 50261-7, 51618-7																	
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Serum creatinine (SCr)	80048, 80050, 80053, 80069, 82565, 82575	2160-0, 2163-4, 2164-2, 11041-1, 11042-9, 12195-4, 13441-1, 13442-9, 13443-7, 13446-0, 13447-8, 13449-4, 13450-2, 14682-9, 16188-5, 16189-3, 21232-4, 24321-2, 24322-0, 24323-8, 24320-4, 24362-6, 26752-6, 31045-8, 33558-8, 34555-3, 35203-9, 35591-7, 35592-5, 35593-3, 35594-1, 38483-4, 39955-0, 39956-8, 39957-6, 39958-4, 39959-2, 39960-0, 39961-8, 39962-6, 39963-4, 39964-2, 39965-9, 39966-7, 39967-5, 39968-3, 39969-1, 39970-9, 39971-7, 39972-5, 39973-3, 39974-1, 39975-8, 39976-6, 40112-5, 40113-3, 40114-1, 40115-8, 40116-6, 40117-4, 40118-2, 40119-0, 40120-8, 40121-6, 40122-4, 40123-2, 40124-0, 40125-7, 40126-5, 40127-3, 40128-1, 40248-7, 40249-5, 40250-3, 40251-1, 40252-9, 40253-7, 40254-5, 40255-2, 40256-0, 40257-8, 40258-6, 40264-4, 40265-1, 40266-9, 40267-7, 40268-5, 40269-3, 40270-1, 40271-9, 40272-7, 40273-5, 44784-7, 45064-3, 45065-0, 45066-8, 50261-7, 50380-5, 50381-3, 51619-5, 51620-3																	
<b>Or</b>																			
Blood urea nitrogen (BUN)	80048, 80050, 80053, 80069, 84520, 84525	3094-0, 6299-2, 11064-3, 11065-0, 12964-3, 12965-0, 12966-8, 14937-7, 24320-4, 24321-2, 24322-0, 24323-8, 24362-6, 44734-2, 45064-3, 45065-0, 49071-4, 50261-7																	

## Exclusion

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Members who had any inpatient stay (acute or non acute) during the assessment period.

## Provider Attribution

Each Cardiology specialty provider the member has visited will be evaluated. Credit will be given to each provider for members who have had at least one outpatient claim with the provider and one qualifying numerator event during the 12-month numerator assessment period.

If no numerator event is found in the 12 month numerator assessment period, the previous 12-month period is evaluated to attribute a provider. A minimum of two outpatient visits, on different dates of service, with the same provider and at least one of the two outpatient visits occurring during the 12 month assessment period is required.

The member may have seen more than one qualifying denominator provider. The member may or may not have had the numerator service with a qualifying denominator provider. Each qualifying denominator provider the member visited during the 12-month assessment period will be evaluated.

Only one provider per group per member is attributed. The visit date selected is the most recent. Duplications of the same provider and member combination are eliminated.

## Case Mix Adjustment

Age, line of business

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## Annual Monitoring for Patients on Persistent Diuretics (Measure ID: 100132)

Measure Endorsed by NQF: Yes

Based on NCQA Measure

### Description

The percentage of members 18 years of age and older who received at least a 180-day supply of diuretics (Table F) during the measurement period and at least one therapeutic monitoring event for the therapeutic agent (Table B) in the measurement period

### Eligible Population

<b>Product lines</b>	All products (commercial, Medicare and Medicaid).					
<b>Ages</b>	18 years of age and older					
<b>Event</b>	<p>Members who received at least a 180-day supply of a listed diuretic (Table F) during the assessment period</p> <p>Table F: Drugs to Identify Members on Diuretics</p> <table border="1"> <thead> <tr> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Antihypertensive combinations</td> </tr> <tr> <td>Loop diuretics</td> </tr> <tr> <td>Potassium-sparing diuretics</td> </tr> <tr> <td>Thiazide diuretics</td> </tr> </tbody> </table>	Description	Antihypertensive combinations	Loop diuretics	Potassium-sparing diuretics	Thiazide diuretics
Description						
Antihypertensive combinations						
Loop diuretics						
Potassium-sparing diuretics						
Thiazide diuretics						
<b>Continuous Enrollment</b>	12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.					
<b>Measurement Period</b>	Twelve months					
<b>Benefit</b>	Medical and pharmacy. The pharmacy benefit must be demonstrated through an Aetna benefit indication during the assessment period. In addition, a pharmacy claim must have been received at any time during the 12-month assessment period.					
<b>Visit</b>	At least one outpatient visit to a Cardiologist provider during the measurement time period if there is a numerator qualifying event. If no numerator qualifying event then two visits are required.					

<b>Provider Specialty</b>	Cardiology specialty designation.
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**Administrative Specification**

<b>Denominator</b>	The eligible population.
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<b>Numerator</b>	Members in the denominator with at least one serum potassium and either a serum creatinine or blood urea nitrogen (Table B) therapeutic monitoring tests in the measurement period.
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**Note:** The two tests do not need to occur on the same service date, only within the measurement period.

Table B: Codes to Identify Serum Potassium, Serum Creatinine & Blood Urea Nitrogen

Description	CPT	LOINC
Serum potassium (K+)	80047, 80048, 80050, 80051, 80053, 80069, 84132	2824-1, 2823-3, 6298-4, 12812-4, 12813-2, 22760-3, 24320-4, 24321-2, 24322-0, 24323-8, 24326-1, 24362-6, 29349-8, 32713-0, 34548-8, 34554-6, 39789-3, 39790-1, 41656-0, 45064-3, 45065-0, 50261-7, 51618-7
<b>With</b>		
Serum creatinine (SCr)	80048, 80050, 80053, 80069, 82565, 82575	2160-0, 2163-4, 2164-2, 11041-1, 11042-9, 12195-4, 13441-1, 13442-9, 13443-7, 13446-0, 13447-8, 13449-4, 13450-2, 14682-9, 16188-5, 16189-3, 21232-4, 24321-2, 24322-0, 24323-8, 24320-4, 24362-6, 26752-6, 31045-8, 33558-8, 34555-3, 35203-9, 35591-7, 35592-5, 35593-3, 35594-1, 38483-4, 39955-0, 39956-8, 39957-6, 39958-4, 39959-2, 39960-0, 39961-8, 39962-6, 39963-4, 39964-2, 39965-9, 39966-7, 39967-5, 39968-3, 39969-1, 39970-9, 39971-7, 39972-5, 39973-3, 39974-1, 39975-8, 39976-6, 40112-5, 40113-3, 40114-1, 40115-8, 40116-6, 40117-4, 40118-2, 40119-0, 40120-8, 40121-6, 40122-4, 40123-2, 40124-0, 40125-7, 40126-5, 40127-3, 40128-1, 40248-7, 40249-5, 40250-3, 40251-1, 40252-9, 40253-7, 40254-5, 40255-2, 40256-0, 40257-8, 40258-6, 40264-4, 40265-1, 40266-9, 40267-7, 40268-5, 40269-3, 40270-1, 40271-9, 40272-7, 40273-5, 44784-7, 45064-3, 45065-0, 45066-8, 50261-7, 50380-5, 50381-3, 51619-5, 51620-3
<b>Or</b>		
Blood urea nitrogen (BUN)	80048, 80050, 80053, 80069, 84520, 84525	3094-0, 6299-2, 11064-3, 11065-0, 12964-3, 12965-0, 12966-8, 14937-7, 24320-4, 24321-2, 24322-0, 24323-8, 24362-6, 44734-2, 45064-3, 45065-0, 49071-4, 50261-7

## Exclusion

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Members who had any inpatient stay (acute or non acute) during the assessment period.

## Provider Attribution

Each Cardiology specialty provider the member has visited will be evaluated. Credit will be given to each provider for members who have had at least one outpatient claim with the provider and one qualifying numerator event during the 12- month numerator assessment period.

If no numerator event is found in the 12-month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of two outpatient visits, on different dates of service, with the same provider and at least one of the two outpatient visits occurring during the 12-month assessment period is required.

The member may have seen more than one qualifying denominator provider. The member may or may not have had the numerator service with a qualifying denominator provider. Each qualifying denominator provider the member visited during the 12-month assessment period will be evaluated.

Only one provider per group per member is attributed. The visit date selected is the most recent. Duplications of the same provider and member combination are eliminated.

## Case Mix Adjustment

Age, line of business.

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## Annual Monitoring for Patients on Persistent Anticonvulsants (Measure ID: 100140)

Measure Endorsed by NQF: Yes

Based on NCQA Measure

### Description

The percentage of members 18 years of age and older who received at least a 180-day supply of ambulatory medication therapy for a select anticonvulsant agent (Table C) during the measurement period and at least one therapeutic monitoring event for the select anticonvulsant agent (Table D) in the measurement period

### Eligible Population

<b>Product lines</b>	All products (commercial, Medicare and Medicaid).																
<b>Ages</b>	18 years of age and older																
<b>Event</b>	<p>Members who received at least a 180-day supply of ambulatory medication therapy for a select therapeutic agent (Table C) during the assessment period</p> <p>Table C: Drugs to Identify Members on Anticonvulsants</p> <table border="1"> <thead> <tr> <th>Description</th> <th colspan="2">Drugs</th> </tr> </thead> <tbody> <tr> <td>Barbiturate anticonvulsants</td> <td colspan="2">Phenobarbital</td> </tr> <tr> <td>Dibenzazepine anticonvulsants</td> <td colspan="2">carbamazepine</td> </tr> <tr> <td>Hydantoin anticonvulsants</td> <td colspan="2">phenytoin</td> </tr> <tr> <td>Miscellaneous anticonvulsants</td> <td>Divalproex sodium</td> <td>valproic acid</td> </tr> </tbody> </table>		Description	Drugs		Barbiturate anticonvulsants	Phenobarbital		Dibenzazepine anticonvulsants	carbamazepine		Hydantoin anticonvulsants	phenytoin		Miscellaneous anticonvulsants	Divalproex sodium	valproic acid
Description	Drugs																
Barbiturate anticonvulsants	Phenobarbital																
Dibenzazepine anticonvulsants	carbamazepine																
Hydantoin anticonvulsants	phenytoin																
Miscellaneous anticonvulsants	Divalproex sodium	valproic acid															
<b>Continuous Enrollment</b>	<p>12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.</p>																
<b>Measurement Period</b>	Twelve months																
<b>Benefit</b>	<p>Medical and Pharmacy. The pharmacy benefit must be demonstrated through an Aetna benefit indication during the assessment period. In addition, a pharmacy claim must have been received at any time during the 12-month assessment period.</p>																
<b>Visit</b>	<p>At least one outpatient visit to a Neurologist during the measurement time period if there is a numerator qualifying event. If no numerator qualifying event then two visits are required.</p>																

<b>Provider Specialty</b>	Neurosurgery, Neurology specialty designation.
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**Administrative Specification**

<b>Denominator</b>	The eligible population.															
<b>Numerator</b>	<p>Members in the denominator with at least one drug serum concentration level monitoring test for the prescribed drug in the measurement period. (Table D)</p> <p>If a patient received only one type of anticonvulsant, the drug serum concentration level test must be for the specific drug taken as a persistent medication (i.e., a patient on phenytoin received a drug serum test for phenytoin). If a patient persistently received multiple types of anticonvulsants, each anticonvulsant medication and drug monitoring test combination is counted as a unique event (i.e., a patient on both phenytoin and valproic acid with at least a 180-day supply for each drug in the measurement period must separately show evidence of receiving drug serum concentration tests for each drug to be considered numerator-compliant for each drug).</p> <p>Table D: Codes to Identify Drug Serum Concentration Monitoring Tests</p> <table border="1"> <thead> <tr> <th>Description</th> <th>CPT</th> <th>LOINC</th> </tr> </thead> <tbody> <tr> <td>Drug serum concentration for Phenobarbital</td> <td>80184</td> <td>3948-7, 3951-1, 10547-8, 14874-2, 34365-7</td> </tr> <tr> <td>Drug serum concentration for phenytoin</td> <td>80185, 80186</td> <td>3968-5, 3969-3, 14877-5, 32109-1, 34540-5, 40460-8</td> </tr> <tr> <td>Drug serum concentration for valproic acid</td> <td>80164</td> <td>4086-5, 4087-3, 4088-1, 14946-8, 18489-5, 21590-5, 32119-0, 32283-4</td> </tr> <tr> <td>Drug serum concentration for carbamazepine</td> <td>80156, 80157</td> <td>3432-2, 3433-0, 9415-1, 14056-6, 14639-9, 18270-9, 29147-6, 29148-4, 32058-0, 32852-6, 34545-4, 47097-1</td> </tr> </tbody> </table>	Description	CPT	LOINC	Drug serum concentration for Phenobarbital	80184	3948-7, 3951-1, 10547-8, 14874-2, 34365-7	Drug serum concentration for phenytoin	80185, 80186	3968-5, 3969-3, 14877-5, 32109-1, 34540-5, 40460-8	Drug serum concentration for valproic acid	80164	4086-5, 4087-3, 4088-1, 14946-8, 18489-5, 21590-5, 32119-0, 32283-4	Drug serum concentration for carbamazepine	80156, 80157	3432-2, 3433-0, 9415-1, 14056-6, 14639-9, 18270-9, 29147-6, 29148-4, 32058-0, 32852-6, 34545-4, 47097-1
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Drug serum concentration for Phenobarbital	80184	3948-7, 3951-1, 10547-8, 14874-2, 34365-7														
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Drug serum concentration for valproic acid	80164	4086-5, 4087-3, 4088-1, 14946-8, 18489-5, 21590-5, 32119-0, 32283-4														
Drug serum concentration for carbamazepine	80156, 80157	3432-2, 3433-0, 9415-1, 14056-6, 14639-9, 18270-9, 29147-6, 29148-4, 32058-0, 32852-6, 34545-4, 47097-1														

**Exclusion**

Members who had any inpatient stay (acute or non acute) during the assessment period.

**Provider Attribution**

Each Neurosurgery, Neurology specialty provider the member has visited, will be evaluated. Credit will be given to each provider for members who have had at least one outpatient claim with the provider and one qualifying numerator event per anticonvulsant medication and drug monitoring test combination during the 12-month numerator assessment period.

For each anticonvulsant medication and drug monitoring test combination, if no numerator event is found in the 12- month numerator assessment period, the previous 12 month period is evaluated. A minimum of two outpatient visits, on different dates of service, with the same provider and at least one of the two outpatient visits occurring during the 12-month assessment period is required.

The member may have seen more than one qualifying denominator provider. The member may or may not have had the numerator service with a qualifying denominator provider. Each qualifying denominator provider the member visited during the 12-month assessment period will be evaluated.

Only one provider per group per member is attributed per anticonvulsant medication and drug monitoring test combination. The visit date selected is the most recent. Duplications of the same provider/provider group, member and anticonvulsant medication and drug monitoring test combination are eliminated.

## Case Mix Adjustment

Age, line of business

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## Post MI: ACE Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy (Measure ID 100288)

Measure Endorsed by NQF: Yes

Based on Resolution Health Measure

### Description

This measure identifies patients with ST elevation MI (STEMI), or non-ST elevation MI (NSTEMI) plus a history of hypertension, heart failure and/or diabetes prior to the measurement year who was taking an ACEI or an ARB during the measurement year.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be at least 18 years old.
<b>Continuous Enrollment</b>	12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid
<b>Measurement Period</b>	12 Months
<b>Benefit</b>	Medical and Pharmacy
<b>Visit</b>	At least one outpatient visit to a provider with one of the specialties listed below and 1 qualifying Numerator event during the 12 month assessment period. If no numerator qualifying event then two visits are required.
<b>Provider Specialty</b>	Cardiology, Obstetrics/Gynecology, specialty designation.

## Administrative Specification

<p><b>Denominator</b></p>	<p>Members age 18 years and older with ST elevation MI (STEMI), or or non-ST elevation MI (NSTEMI) with either Hypertension, Heart Failure and/or Diabetes, prior to the measurement year</p> <p>Table H: Codes to Identify Myocardial Infarction (STEMI, or NSTEMI) anytime prior to the 1st day of the 12 month reporting period</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Procedure Group</th> </tr> </thead> <tbody> <tr> <td>Myocardial Infarction (STEMI, or NSTEMI)</td> <td>811</td> </tr> </tbody> </table> <p>Table HI: HPD Codes to Identify Hypertension, Heart Failure and/or Diabetes</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Health Profile Database</th> </tr> </thead> <tbody> <tr> <td>Hypertension</td> <td>Members with a disease code of Hypertension (HYP) HPD</td> </tr> <tr> <td>Heart Failure</td> <td>Members with a disease code of Congestive Heart Failure (CHF) HPD</td> </tr> <tr> <td>Diabetes</td> <td>Members with a disease code of Diabetes (DIA) HPD</td> </tr> </tbody> </table>	Description	Procedure Group	Myocardial Infarction (STEMI, or NSTEMI)	811	Description	Health Profile Database	Hypertension	Members with a disease code of Hypertension (HYP) HPD	Heart Failure	Members with a disease code of Congestive Heart Failure (CHF) HPD	Diabetes	Members with a disease code of Diabetes (DIA) HPD
Description	Procedure Group												
Myocardial Infarction (STEMI, or NSTEMI)	811												
Description	Health Profile Database												
Hypertension	Members with a disease code of Hypertension (HYP) HPD												
Heart Failure	Members with a disease code of Congestive Heart Failure (CHF) HPD												
Diabetes	Members with a disease code of Diabetes (DIA) HPD												
<p><b>Numerator</b></p>	<p>Members in the denominator with at least 1 Rx claim for an ACEI or an ARB medication during the measurement year.</p> <p>Table HJ: Codes to Indicate Rx claim for an ACEI or an ARB medication during the measurement year</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Rx claim codes</th> </tr> </thead> <tbody> <tr> <td>ACEI or an ARB</td> <td>3610, 3615, 369915, 369918, 369940</td> </tr> </tbody> </table> <p>Table HK: CPTII Code to identify ACE-I/ARB prescribed</p> <table border="1"> <thead> <tr> <th>CPTII CODE</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>4009F</td> <td>ACE-I/ARB prescribed</td> </tr> </tbody> </table>	Description	Rx claim codes	ACEI or an ARB	3610, 3615, 369915, 369918, 369940	CPTII CODE	Description	4009F	ACE-I/ARB prescribed				
Description	Rx claim codes												
ACEI or an ARB	3610, 3615, 369915, 369918, 369940												
CPTII CODE	Description												
4009F	ACE-I/ARB prescribed												

## Exclusion

Members with OB diagnosis during the assessment period.

Members with diagnosis of Angioneurotic Edema, Hyperpotassemia, Renal Artery Stenosis, ESRD and Dialysis. Members with DIA or HYP or CHF as defined in the HPD with a D or E are to be excluded. D = member does not have the disease. E = member expired.

Table I for codes to identify exclusions.

Description	ICD-9 Diagnosis Group Number
OB	83,84,86,87,89,90,92,93,94,96,97,102,104,107,108,109,110

Or

Table J for codes to identify exclusions.

Description	Procedure Group Number
OB	58,59,61,63,64,65,67,69
Dialysis	51, 170

Or

Table K: codes to identify exclusions

Description	ICD-9-CM Diagnosis
Angioneurotic Edema, Hyperpotassemia, Renal Artery Stenosis ESRD and Dialysis	277.6, 995.1, 276.7, 440.1, 403.01, 403.11, 403.91, 404.02, 404.12, 404.13, 404.92, 404.93, 285.4, 585.5, 585.6, V451, V56.0, V56.1, V56.2, V56.31, V56.32, V56.8

Or

Table L: CPTII codes with modifier to indicate reasons ACE-I or ARB not prescribed

CPTII Codes
4009F-1P
4009F-2P
4009F-3P

## Provider Attribution

Each Cardiology, Obstetrics/Gynecology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Risk, specialty, line of business

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## Tympanostomy Tube Hearing Test (Measure ID 100272)

Measure Endorsed by NQF: Yes

Based on Resolution Health Measure

### Description

This measure identifies the percentage of patients, age 2 through 12 years with Otitis Media with Effusion (OME) who received Tympanostomy Tube(s) insertion during the measurement year and had a hearing test performed within 6 months prior to the initial tube placement.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be at least 2 through 12 years old at start of reporting period.
<b>Continuous Enrollment</b>	Continuous enrollment for medical during the 6 month period prior to or same day as the 'index tube insertion date' No gaps in enrollment.
<b>Measurement Period</b>	Denominator: 18 Months. 12 month denominator assessment period to look for index tube insertion date. Negative procedure history-no claims with a procedure code for 'Tympanostomy Tube Insertion' in the 6 months prior to the 'index tube insertion date' (this may be prior to the actual measurement period)  Numerator: hearing test event should occur 6 months prior to the Denominator event of Tympanostomy Tube(s) insertion during the measurement year.
<b>Benefit</b>	Medical.
<b>Visit</b>	At least one outpatient visit to an Otolaryngology provider with diagnosis of OME or performed Tympanostomy Tube Insertion.
<b>Provider Specialty</b>	Otolaryngology specialty designation.

## Administrative Specification

<b>Denominator</b>	Continuously enrolled members age 2 through 12 years old with OME who received Tympanostomy Tube(s) insertion during the measurement year
<b>Numerator</b>	Members from the denominator who underwent hearing testing within 6 months prior to the initial Tympanostomy Tube(s) insertion

Table G: Codes to identify Hearing Test, Otitis Media with Effusion (Diagnosis), Otitis Visit (Procedure) and Tympanostomy Tube Insertion (Procedure)

Description	HCPCS	CPT	ICD-9-CM Diagnosis	ICD-9-CM Procedure	UB Revenue
Hearing Test		92506, 92551, 92552, 92553, 92555, 92556, 92557, 92561, 92562, 92563, 92564, 92567, 92568, 92569, 92571, 92572, 92575, 92576, 92577, 92579, 92582, 92583, 92585, 92586, 92587		9541, 9542, 9543, 9547	0471
Otitis Media with Effusion (Diagnosis)			38110, 38119, 38120, 38129, 3813, 3814		
Otitis Visit (Procedure)		99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99381, 99382, 99383, 99384, 99385, 99386, 99387, 99391, 99392, 99393, 99394, 99395, 99396, 99397			
Tympanostomy Tube Insertion (Procedure)		69433, 69436		2001	

## Exclusion

---

This measure has no exclusions

## Provider Attribution

Each Otolaryngology specialty designation will be measured for members who have had at least one outpatient visit with diagnosis of OME on or before the Tympanostomy Tube insertion date or the surgical provider based on the date of the "index tube insertion" event during the 12 month numerator assessment period is evaluated. The member may have seen more than one qualifying denominator provider. The member may or may not have had the numerator service with a qualifying denominator provider.

Each qualifying denominator provider the member has visited will be evaluated. Only one provider per group per member is attributed. There may be multiple denominator providers for the same member but there will be only 1 denominator event per each provider/member for the assessment period. Each provider in the denominator will be evaluated in the measure depending upon whether the member received the numerator service.

Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Line of business

[Return to table of contents](#)

## Appropriate Treatment for Children with Upper Respiratory Infection (URI) (Measure ID 100240)

**Measure Endorsed by NQF: Yes**

**Based on NCQA Measure**

### Description

This measure shows the percentage of children 3 months to 18 years of age with a single diagnosis of non specific URI who were NOT dispensed an antibiotic on or 3 days after the visit date. The measure is reported as an inverted rate [ $1 - (\text{numerator}/\text{eligible population})$ ]. A higher rate indicates appropriate treatment of children with URI (i.e., the proportion for whom antibiotics were not prescribed)

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Member should be at least 3 months old and no older than 18 years old.
<b>Continuous Enrollment</b>	The member must have an Aetna Medical and Pharmacy benefit for the month of the visit and the prior month through 3 days after visit. No gaps allowed.
<b>Measurement Period</b>	12 Months
<b>Benefit</b>	Medical and Pharmacy
<b>Visit</b>	At least one outpatient visit to an Otolaryngology provider during the measurement assessment period if there is a numerator qualifying event. If there is no numerator qualifying event, then two visits are required.
<b>Provider Specialty</b>	Otolaryngology specialty designation.

## Administrative Specification

<b>Denominator</b>	<p>Members with a negative antibiotic medication history, up to 30 days, prior to a provider visit with a single diagnosis of URI on the claim/encounter with an outpatient place of service and meeting Provider Attribution criteria.</p> <p>Only the 1st qualifying visit per member/provider is retained</p> <p>Table H: Codes to Identify URI</p> <table border="1"> <thead> <tr> <th>Description</th> <th>ICD-9-CM Diagnosis</th> </tr> </thead> <tbody> <tr> <td>URI</td> <td>465</td> </tr> <tr> <td>Acute Nasopharyngitis (common cold)</td> <td>460</td> </tr> </tbody> </table>	Description	ICD-9-CM Diagnosis	URI	465	Acute Nasopharyngitis (common cold)	460
Description	ICD-9-CM Diagnosis						
URI	465						
Acute Nasopharyngitis (common cold)	460						
<b>Numerator</b>	<p>Of the members defined in the denominator, those who were dispensed an antibiotic (Table HI) on or within 3 days after the member visit date.</p>						

Table HI: Codes to Identify Antibiotic Medications

Description		Prescription
Aminopenicillins	amoxicillin	ampicillin
Beta-lactamase inhibitors	amoxicillin-clavulanate	
First generation cephalosporin	cefadroxil cefazolin	cephalexin cephradine
Folate antagonist	trimethoprim	
Lincomycin derivatives	clindamycin	
Macrolides	azithromycin clarithromycin erythromycin erythromycin ethylsuccinate	erythromycin lactobionate erythromycin estolate erythromycin stearate
Miscellaneous antibiotics	erythromycin-sulfisoxazole	
Natural penicillin	penicillin G potassium penicillin G sodium	penicillin V potassium
Penicillinase-resistant penicillin	dicloxacillin	
Quinolones	ciprofloxacin gatifloxacin levofloxacin lomefloxacin	moxifloxacin ofloxacin sparfloxacin
Second generation cephalosporin	cefaclor cefprozil	cefuroxime loracarbef
Sulfonamides	sulfamethoxazole-trimethoprim	sulfisoxazole
Tetracyclines	doxycycline minocycline	tetracycline
Third generation cephalosporin	cefdinir cefixime cefpodoxime	ceftibuten cefditoren ceftriaxone

## Exclusion

Exclude members who had a dispense for an antibiotic (Table HI) 30 days prior to denominator event

Exclude members who had a competing diagnosis (Table HJ) on or 3 days after the denominator event

Table HJ: Codes to Identify Competing Diagnoses

Description	ICD-9-CM Diagnosis
Intestinal infections	001-009
Pertussis	033
Bacterial infection unspecified	041.9
Lyme disease and other arthropod-borne diseases	088
Otitis media	382
Acute sinusitis	461
Acute pharyngitis	034.0, 462
Acute tonsillitis	463
Chronic sinusitis	473
Infections of the pharynx, larynx, tonsils, adenoids	464.1-464.3, 474, 478.21-478.24, 478.29, 478.71, 478.79 478.9
Prostatitis	601
Cellulitis, mastoiditis, other bone infections	383, 681, 682, 730
Acute lymphadenitis	683
Impetigo	684
Skin staph infections	686
Pneumonia	481- 486
Gonococcal infections and venereal diseases	098, 099, V01.6, V02.7, V02.8
Syphilis	090-097
Chlamydia	078.88, 079.88, 079.98
Inflammatory diseases (female reproductive organs)	131, 614-616
Infections of the kidney	590
Cystitis or UTI	595, 599.0
Acne	706.0

## Provider Attribution

Each Otolaryngology specialty provider for members who have had at least 1 outpatient claim with the provider during the 12 month assessment period is evaluated. The member may have seen more than one qualifying denominator provider. Only one, the 1st eligible qualifying visit, should be counted.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent. Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Line of business

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## Warfarin - INR Monitoring (Measure ID 100284)

Measure Endorsed by NQF: Yes

Based on Active Health Management Measure

### Description

Percentage of patients taking warfarin with PT/INR monitoring (prothrombin time (PT) test/International normalized ratio) anytime in the measurement period.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	All ages
<b>Continuous Enrollment</b>	12 months of Continuous Medical and Pharmacy Enrollment, ending at the end of the 12 month measurement period. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	Twelve month measurement time period to identify the numerator.
<b>Benefit</b>	Medical.
<b>Visit</b>	At least one outpatient visit to a provider with one of the specialties listed below during the measurement time period if there is a numerator qualifying event. If there is no numerator qualifying event, then two visits are required.
<b>Provider Specialty</b>	Neurology, Gastroenterology, General Surgery, Neurosurgery, Obstetrics/Gynecology, Vascular Surgery, Cardiology or Cardiothoracic Surgery specialty designation.

## Administrative Specification

<b>Denominator</b>	Members at anytime during the 12 month assessment period who, meet provider attribution criteria, continuous enrollment and had a current refill for Warfarin. A current refill is defined as a refill in which the day supply of a drug extends into the end of the measurement window plus a grace period of 30 days (60-day total supply in the past 4 months)
<b>Numerator</b>	Members who had PT/INR monitoring

Numerator: Table F: Codes to identify at least 1 INR or PT result or long term anticoagulation diagnosis anytime in the measurement period. Also at least 1 Prothrombin time procedure anytime in the measurement period

Description	CPT	HCPCS	ICD-9-CM Diagnosis	LOINC
INR or PT result or long term anticoagulation diagnosis			790.92, V58.61, V58.63	
Prothrombin Time Procedure	99363, 99364, 3555F, 85210, 85610, 85611	G0248, G0249, G0250		
INR				34714-6, 6301-6, 5895-7, 5902-2, 5901-4, 5894-1

Table G: Drugs to identify members on anticoagulation

Description	Drug
Anticoagulant	Warfarin

## Exclusion

Members with dialysis anytime during the measurement period.

Member that have evidence of metastatic disease or active treatment of malignancy with chemotherapy or radiation therapy anytime within the measurement period

All date frames available on the data warehouse are reviewed (three full years of history plus the current year).

Table H: Codes to Identify Exclusions

Description	CPT
Dialysis (Hemodialysis)	39.95, 90935, 90937, 90940, 90951, 90952, 90953, 90954, 90955, 90956, 90957, 90958, 90959, 90960, 90961, 90970, 90989, 90993, 90997, 90999, G0257, G9013, G9014
Dialysis (Peritoneal Dialysis)	90945, 90947, 90966, 90967, 90968, 90969, 90976, 90977, 90978, 90979, 90982, 90983, 90984, 90985, S9339
Chemo. Or Radiation Therapy	J9355, 79000, 79001, 79020, 4164F, 4200F, 4201F

## Provider Attribution

Each Neurology, Gastroenterology, General Surgery, Neurosurgery, Obstetrics/Gynecology, Vascular Surgery, Cardiology or Cardiothoracic Surgery specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider.

If no numerator event is found in the most recent 12 month numerator assessment period, the previous 12 month period is evaluated to attribute a provider. A minimum of 2 outpatient visits, on different dates of service, with the same provider and at least 1 of the 2 outpatient visits occurring during the most recent 12 month assessment period is required.

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

## Case Mix Adjustment

Age, line of business

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## Use of Appropriate Medications for People with Asthma (Measure ID 100236)

**Measure Endorsed by NQF: Yes**

**Based on NCQA Measure**

### Description

This measure evaluates members 5 to 50 years of age who have been identified as having persistent asthma and who were appropriately prescribed medication during the 24 month assessment period.

### Eligible Population

<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	5-50 years old.
<b>Continuous Enrollment</b>	24 months of continuous Medical and Pharmacy Enrollment, ending at the end of the 24 month assessment period is required. No more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Gap May Not be in effect on last day of 12 Month assessment period. One day gaps are considered administrative and not counted. The table being used for membership consists of monthly records for members, therefore, if there is a gap of 2 month or more, it will exceed the 45 day gap recommended by NCQA and it will be consistent with a recommended 30 day gap recommended for Medicaid.
<b>Measurement Period</b>	24 Months
<b>Benefit</b>	Medical and Pharmacy
<b>Visit</b>	At least one outpatient visit to an Otolaryngology provider and 1 qualifying numerator event during the 24 month assessment period. If there is no numerator qualifying event then two visits are required.
<b>Provider Specialty</b>	Otolaryngology specialty designation.

## Administrative Specification

### Denominator

The denominator is based on events and not members and includes a 24 month period. A member must be identified in the HPD with a diagnosis of Asthma and at least 1 of the following criteria during both the current measurement year and the year prior to the measurement year. Criteria need not be the same across both years.

#### DENOMINATOR EVENT

At least one Emergency Department (ED) visit with asthma as the principal diagnosis

At least one acute inpatient discharge with asthma as the principal diagnosis

At least 4 outpatient asthma visits with asthma as one of the listed diagnoses and at least 2 asthma medication dispensing events.

At least four asthma medication dispensing events

(Denominator period = current year and year prior). Only one denominator event is to be created per assessment period per member/provider).

HPD:

Description	Health Profile Database
Asthma	Members with a disease code of Asthma (AST) HPD

Table H: Codes to Identify Asthma

Description	ICD-9-CM Diagnosis
Asthma	493, 0001, 0175, 0250, 0288

Table I: Codes to Identify Visit Type

Description	CPT	UB Revenue
Outpatient	99201-99205, 99211-99215, 99217-99220, 99241-99245, 99341-99345, 99347-99350, 99382-99386, 99392-99396, 99401-99404, 99411, 99412, 99420, 99429	051x, 0520-0523, 0526-0529, 057x- 059x, 0982, 0983
Acute inpatient	99221-99223, 99231-99233, 99238, 99239, 99251-99255, 99291	010x, 0110-0114, 0119, 0120-0124, 0129, 0130-0134, 0139, 0140-0144, 0149, 0150-0154, 0159, 016x, 020x, 021x, 072x, 0987
ED	99281-99285	045x, 0981

Table J: Codes to Identify Asthma Medications

Description	Prescriptions		
Antiasthmatic combinations	dyphylline-guaifenesin	guaifenesin-theophylline	potassium iodide-theophylline
Antibody inhibitor	omalizumab		
Inhaled steroid combinations	budesonide-formoterol	fluticasone-salmeterol	
Inhaled corticosteroids	beclomethasone budesonide ciclesonide	flunisolide fluticasone CFC free	mometasone triamcinolone
Leukotriene modifiers	montelukast	zafirlukast	zileuton
Long-acting, inhaled beta-2 agonists	aformoterol	formoterol	salmeterol
Mast cell stabilizers	cromolyn	nedocromil	
Methylxanthines	aminophylline dyphylline	oxtriphylline theophylline	
Short-acting, inhaled beta-2 agonists	albuterol levalbuterol	metaproterenol pirbuterol	

**Numerator**

Events from the denominator who were appropriately prescribed medication during the 12 month assessment period.

Description	Prescriptions		
Antiasthmatic combinations	dyphylline-guaifenesin	guaifenesin-theophylline	potassium iodide-theophylline
Antibody inhibitor	omalizumab		
Inhaled steroid combinations	budesonide-formoterol	fluticasone-salmeterol	
Inhaled corticosteroids	beclomethasone budesonide	flunisolide fluticasone CFC free	mometasone triamcinolone
Leukotriene modifiers	montelukast	zafirlukast	zileuton
Mast cell stabilizers	cromolyn	nedocromil	
Methylxanthines	aminophylline dyphylline	oxtriphylline theophylline	

**Exclusion**

- Members with COPD, Emphysema or Cystic Fibrosis.
- Members with Acute Respiratory Failure.
- Members expired.

Table K: Codes to Identify Exclusions

Description	ICD-9-CM Diagnosis	ICD-9-CM Procedure
Emphysema	492, 506.4, 518.1, 518.2	
COPD	491.2, 493.2, 496, 506.4	
Cystic fibrosis	277.0	
Acute respiratory failure	518.81	914, 950

### Provider Attribution

Each Otolaryngology specialty provider for members who have had at least 1 outpatient claim with the provider and 1 qualifying numerator event during the 12 month numerator assessment period is evaluated. The member may or may not have had the numerator service with a qualifying denominator provider. If no numerator event look back to previous year for provider attribution and require at least 2 OP visits on different dates of service, with the same provider and at least 1 of the 2 OP visits must be during the current measurement year. The numerator must occur during the current year to be counted. The member may have seen more than one provider. The numerator provider may or may not have been associated with the qualifying denominator. Any physician who sees a member in the denominator is responsible for ensuring the member receives the appropriate medication.

Only the 1st eligible qualifying denominator event should be attributed to a unique provider. (Denominator = members with a minimum of 1 qualifying event in the current assessment year and 1 qualifying event in the prior assessment year. Numerator = 1 event per member/provider/current measurement year).

Denominator criteria (Denominator = members who have had at least 1 qualifying denominator \*event

Only one provider per group per member is attributed. The visit date selected is the most recent.

Duplications of the same provider/provider group and member combination are eliminated.

### Case Mix Adjustment

Line of business

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## Outpatient Procedure Adverse Event Rate (Measure ID 100xxx)

**Measure Endorsed by NQF: No**

**Based on Aetna Internally Developed Measure**

### Description

This measure evaluates the care received by members for selected outpatient procedures. The measure evaluates care in the 30 days after the procedure by checking for evidence of an adverse event defined as an unexpected or unanticipated outcome of care. A case-mix adjusted rate of unexpected adverse health events experienced by a specialist's patients is calculated. The adverse event data for the Aexcel measure is extracted from the medical case.

### Understanding Adverse Events

An adverse event is a negative, unanticipated consequence of care. Examples include a wound infection or deep vein thrombosis after an outpatient procedure. A sub-set of outpatient procedures have been defined for each specialty are included in the modeling for adverse events.

Medical case logic assigns an adverse event to a case if there evidence of claim after the procedure with a diagnosis that has all of the following characteristics:

- The diagnosis is unlikely to have been present at the time of the initial surgery.
- The diagnosis is unlikely to be a coexisting condition.
- The diagnosis is unlikely to reflect the normal progression of the principal diagnosis.
- The diagnosis is logically consistent with the occurrence of an adverse event.

### Modeling Adverse Events

Medical case obtains its original data from medical, pharmacy, and lab claims on a given day as well as member and provider demographic information. When considering a case, we take into account factors that are not under the control of the provider that may have an impact on the likelihood of having an adverse event. Examples of patient specific factors that impact outcomes include clinical risk score of the member (Symmetry ERG risk score includes evidence of co-morbid conditions) and the type of procedure performed. An indirect standardization methodology is applied to the outpatient procedure data to create normative values to account and adjust for these patient specific factors. With this approach, adjusted expected rates are calculated. Expected rates are compared with observed rates. This comparison of observed to expected provides a valid measure of performance specific to the population of interest. And, since the calculated data has been adjusted for clinical and demographic factors, an equitable comparison can be made across providers or geography.

Cases are selected by procedure group (Upper GI Endoscopy, Lower GI Endoscopy) to align with provider practice specialties such as dermatology, gastroenterology and general surgery. Procedures that indicate treatment for infection or revision of prior surgery have been excluded from measurement since these cases by nature represent complicated care.

There are multiple steps to assure that the adverse event is assigned to the correct procedure event in cases where a member may have multiple procedures, ER visits or and inpatient stays within a 5 week window of time.

The medical claims for a member are reviewed:

- Within the 7 days prior to the surgical procedure for evidence of another procedure, ER visit or inpatient stay that might have caused an adverse event. If there is this kind of clinical activity is evident the outpatient procedure case is excluded from the analysis.

- Within the following 30 days after the case for evidence of a second procedure, ER visit or inpatient stay. If a second event is found we evaluate the second event. If the second event contains a diagnosis code that indicates that the care is for treatment of adverse event this care is identified as adverse event activity. If the second event is not an adverse event we discontinue evaluating the initial event because, based on this additional care, a future adverse event activity could be caused by either the first event or the second event.

Some diagnosis codes that could indicate complications are anticipated related to specific procedures, such as the member that has GI endoscopy but goes on to have a diagnosis of gastrointestinal bleeding. This ICD9 diagnosis code would not be counted as an adverse event. Specific exclusions are applied to each procedure group that is evaluated.

<b>Eligible Population</b>	
<b>Product lines</b>	All products (Commercial, Medicare and Medicaid).
<b>Ages</b>	Age at the time of the procedure greater than or equal to 1 year
<b>Continuous Enrollment</b>	Member must be continuously medically enrolled as of the Medical CASE start date - 7 Days through the Medical CASE stop date + 30 DAYS.
<b>Clinical Subset</b>	The procedure group is an Aetna derived grouping of procedure codes. The procedure group subset is used to identify the most appropriate outpatient cases to be evaluated based on the provider's specialty and procedure codes that the specialist is expected to manage.
<b>Measurement Period</b>	23 Months
<b>Benefit</b>	Medical
<b>Visit</b>	Each managing provider on outpatient medical case for the specified procedures for that specialty during the 23 month assessment period.
<b>Provider Specialty</b>	General Surgery, Dermatology, Otolaryngology, Gastroenterology, Obstetrics/Gynecology, Orthopedics, Plastic Surgery, Urology specialty designation.

## Administrative Specification

<b>Denominator</b>	All selected outpatient and limited ER procedures for each specialty.										
	Limited select ER procedures.										
	<table border="1"><thead><tr><th>Procedure group</th><th>Description</th></tr></thead><tbody><tr><td>231</td><td>Foot/ankle fracture</td></tr><tr><td>235</td><td>Shoulder/elbow fracture</td></tr><tr><td>238</td><td>Leg fracture</td></tr><tr><td>118</td><td>Laceration repair</td></tr></tbody></table>	Procedure group	Description	231	Foot/ankle fracture	235	Shoulder/elbow fracture	238	Leg fracture	118	Laceration repair
	Procedure group	Description									
	231	Foot/ankle fracture									
235	Shoulder/elbow fracture										
238	Leg fracture										
118	Laceration repair										
<b>Numerator</b>	Existence of a claim based adverse event from 0 to 30 days of the procedure depending on the adverse event rules for that procedure.										

## Exclusion

- Exclude medical case denied cases
- Exclude adverse events from procedure groups
- Exclude procedure groups from denominator
- Exclude procedure codes from denominator
- Exclude skin graft (procedure group #15) with burns (diagnosis group #15)

## Provider Attribution

Each General Surgery, Dermatology, Otolaryngology, Gastroenterology, Obstetrics/Gynecology, Orthopedics, Plastic Surgery, Urology specialty provider or specialty group managing members who have an outpatient medical case for the specified procedures for that specialty during the 23 month assessment period.

Duplications of the same facility and member combination are eliminated.

The measure is already at member/provider/IP level. For surgery it is high cost provider, for medical it is high visit count physician specialties.

## Case Mix Adjustment

This measure is Case Mix adjusted by the clinical risk score of the member (Symmetry ERG risk score includes evidence of co-morbid conditions) and procedure group of the case.

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## **General Statements on the Physician Efficiency Measure**

### **Episode of Care (EOC) Methodology**

“Episode of care” is a methodology to assist in understanding medical cost and utilization drivers. An "episode of care" for a member represents treatment and service utilization across time for an identified health condition. The doctor, hospital, pharmacy and ancillary testing, as well as other costs and utilization relating to an episode of illness, are rolled up into a single entity based on a specific condition. An episode of care spans from the onset of symptoms until treatment is complete.

Aetna uses Symmetry Health Data Systems' software and its Episode Treatment Groups<sup>®</sup> (ETGs<sup>®</sup>) version 7.5 illness classification system to build episodes of care data in the Aetna Data Warehouse.

The ETG technology is distributed in the form of "grouper" software. The software accepts health care claims (service line detail) and returns the ETG value, along with other patient information. The grouper software rolls up all doctor, hospital, pharmacy and ancillary testing claims data together to create episodes of illness or surgery that are clinically defined and identified by ETG codes for analysis purposes.

### **Symmetry ETGs as a Measure of Physician Group Efficiency**

Symmetry's ETGs offer the ability to identify, quantify and compare the total medical costs of a clinically based episode of care spanning hospitalizations, ambulatory visits and all ancillary services, including the use of pharmaceuticals. Medical claims and pharmacy claims are fed into the grouper software, and medical episodes are created from these claims.

Symmetry creates ETGs that categorize the episodes into different medical groupings. ETGs are attributed to a physician who is involved in a patient's care as demonstrated by that provider's claims detail within that episode. The physician who is attributed the episode is referred to as the “responsible provider.” Aetna has developed the “responsible provider logic” that is used to attribute an episode of care to a physician.

There are many variables that can affect the use of health care resources for a condition. There can be variation in resource use to treat a condition that is a direct result of the population differences or level of illness. To adjust for the variation in resource use, a case-mix-adjusted “expected allowed amount” is created for each ETG that is attributed to a physician group. That case-mix-adjusted expected allowed amount is then compared to the “actual allowed amount” for that episode of care.

The efficiency measure created for Aexcel provides the ability to evaluate medical cost and utilization patterns among physicians treating similar, severity-adjusted illnesses. Providers are ranked in terms of resource efficiency after adjusting for differences in patient demographics and case mix, and then are compared to their peers. The peer group is defined as physicians of the same specialty in the same Aexcel market or market type if volume is low.

There can be variation in efficiency indexes over time period analysis. Variation has been noted in physician groups whose episode counts over the given time period are low. To evaluate physicians and determine potential for variation, the statistical significance of a provider group's efficiency score is evaluated using a 90 percent significance level.

## **Aetna's Provider Attribution for Symmetry Episodes of Care**

- Aetna attributes one responsible provider for each episode of care.
  - If an episode contains a surgical procedure as defined by Symmetry and it is also a major surgery as defined by Aetna, the episode is attributed to the physician who performed that procedure.
    - If there are 2 major surgeries, then the episode is attributed to the physician with the most allowed amounts
  - If there is not a major surgery in the episode, but a minor surgery is found, the episode is attributed to the physician who performed the minor surgery.
    - If there are 2 minor surgeries, the episode is attributed to the physician with the most allowed amounts.
  - If there is no surgery present but physician office visits are present, the episode is attributed to the physician with the highest number of office visits
    - For physicians tied for highest number of office visits, the episode is attributed to the physician with the most direct treatment provided.
    - If there is still more than one physician with the same amount of visits and treatments, the episode is attributed to the physician with the highest allowed amount.

## **Provider Attribution for Aexcel Specialties**

Aexcel uses the responsible provider of the episode for attribution but limits the ETGs used for evaluation of efficiency in the Aexcel Network selection process. Each specialty has a specific list of ETGs used in the evaluation process and is limited to the ETGs that are most frequently attributed to that particular specialty (see appendix B). Physicians with multiple Aexcel specialties are assigned the appropriate specialty limited ETGs for each of their specialties listed in our provider data system. Upon request, Aetna will either share specific reports or discuss with physicians more detailed information regarding the ETGs that were managed by the physicians.

## **Assigning Specialty to a Responsible Provider with More Than One Specialty**

There are many physicians who have more than one specialty and can manage cases associated with those specialties. Because of this, the assignment of the specialty to an episode should have clinical logic that assigns the most appropriate specialty to the episode of the condition the physician is managing.

Clinical logic is applied such that it picks the most appropriate specialty for that condition where a physician has more than one specialty and that physician is assigned as the responsible provider of the episode of care.

## **Provider Minimum Episode Volume**

We identify those physicians who have managed at least 20 episodes of care within their specialty specific ETGs for Aetna members over the past three years. A reasonable volume of Aetna members is necessary to credibly measure performance.

## **Symmetry Clean Period**

Each ETG has its own clean period. It is defined as the absence of treatment for a specified period of time. For example, ETG 438300 (Acute Bronchitis) has a 30 day clean period which means that any claims related to that diagnosis that fall within a 30 day period will be considered a recurrence of the same condition. Once an episode has begun for this ETG, all clinically consistent claims activity for acute bronchitis group will be attributed to this episode until such time as 30 days passes without any corresponding clinically consistent treatment. If a claim for this condition is received after 30 days, a new episode would be triggered. Only full year or complete episodes are used for Aexcel. Complete episodes are those that met the clean periods before and after the measure or the episode lasted 365 days. Aetna limits episodes to a maximum of 365 days.

## **Claims Lag**

There is a claims lag of three months used in the episodes of care measurement. When episodes of care are used for Aexcel, we also apply a lag to allow for as many episodes to become complete or full-year episodes as possible for the measurement period.

## **Episode Severity**

Episode severity is a term used to describe the severity of a member's condition. ETG methodology takes advantage of the relevant complication and co morbidity factors (indicating a sicker member who may require more extensive treatment for a related condition) when determining an episode's severity. The result is a severity score and severity level for episodes. Typically, the higher the severity score, the more severe that condition is than for other members with a lower severity score for the same condition.

For example, if a member has an episode of diabetes and does not have complications or co morbidities associated with them it would be expected that this member's severity score is relatively low. For a member with an episode of diabetes that has associated complications and co morbidities, it would be expected that this member's severity score is higher. Severity adjusting episodes provides a powerful unit of analysis for comparing provider performance when different providers care for members with the same condition and different severity levels.

## Aetna Case Mix/Risk Adjustment

The case mix/risk adjustment includes the following default variables:

<u>Variable within each ETG</u>	<u>Values</u>
ETG Condition	First 4 digits of the ETG Code
ETG Adjuster	The ETG Adjustor value for a given ETG based on the ETG group (See <a href="#">Appendix D</a> )
Specialty	Specialty assigned to the episode
Age Group	Age group ranges: <ul style="list-style-type: none"><li>• Member age 0 to 20</li><li>• Member age 21 to 49</li><li>• Member age 55 to 64</li></ul> (Episodes with member's age 65 and greater are excluded from the efficiency measurement.)
Gender	Male or Female
Year of Episode	Three rolling years based on episode start date beginning June 1, 2007 through May 31, 2010
Severity Level	As indicated on the episode based on Symmetry. Values are 0 to 4.
Product	All Medical Products
Pharmacy Usage	Whether or not the member has a pharmacy plan and has utilized the benefit: Yes or No
Geography Level	Based on cell size of all the above combinations of variables a norm will be created at one of the following geography levels: Market(M), Market Type(T), National (N)

The above variables are used in indirect standardization to create a grid of averages based on allowed dollars broken out by all of the above variables. If there are fewer than 22 episodes produced for any given combination cell<sup>2</sup> at the local market level then the cell is too small to create a norm and we move from a Market to a Market Type average allowed amount. The Market Type is a grouping of each market/specialty/MPC combination that has similar costs. If there continues to be less than 22 episodes produced in a combination cell at the market type, then a national average is created when there continues to be low volume at the Market Type level. If there are less than 22 episodes at the national level, then the episode is considered an outlier.

For example, the following 7 members would each fall into a separate case mix category and produce a different peer average for the case mix:

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<sup>2</sup> A cell is the unique combination of: Market, Specialty, ETG Condition, ETG Adjuster, Pharmacy Usage, Year, Product, Age Cell, Gender and ETG Severity

ETG	Specialty	Aexcel Market	Age/Age Group	Gender	Pharmacy Usage	Product	Year of Episode	ERG	Average Allowed Amount <sup>3</sup>
268	Cardiology	Atlanta	<i>18(0 to 20)</i>	<b>Male</b>	Yes	<b>PPO</b>	2006	3	\$2,271
268	Cardiology	Atlanta	<i>25(21-50)</i>	<b>Male</b>	Yes	<b>PPO</b>	2006	3	\$2,308
268	Cardiology	Atlanta	<i>60(51-64)</i>	<b>Male</b>	Yes	<b>PPO</b>	2006	3	\$2,700
268	Cardiology	Atlanta	<i>18(0 to 20)</i>	<b>Female</b>	Yes	<b>PPO</b>	2006	3	\$2,100
268	Cardiology	Atlanta	<i>25(21-50)</i>	<b>Female</b>	Yes	<b>PPO</b>	2006	3	\$2,232
268	Cardiology	Atlanta	<i>60(51-64)</i>	<b>Female</b>	Yes	<b>PPO</b>	2006	3	\$2,552
268	Cardiology	Atlanta	<i>18(0 to 20)</i>	<b>Male</b>	Yes	<b>HMO</b>	2006	3	\$1,800
...	...	...	...	...	...	...	...	...	...

In the table above, the difference between the first three case mix categories is age. The fourth case mix category yields a difference in age between case mix categories two and three and a difference in gender from case mix category one. Each of these groups would be considered a different case mix category and would yield a different expected value. That goes for every variable combination that is encountered. Each combination of the case-mix variables produces their own expected value. This allows for a provider to be assessed while adjusting for the case-mix of the members he/she is treating, thus allowing for a more even playing field to be used when comparing one provider to another and to the specialty/market average for each ETG.

### Aetna Outlier Logic

Outlier logic is applied at the case-mix category level as described above. When case-mix categories are created, the highest and lowest five percent of episodes within each case-mix category, based on the total cost, are considered outliers and, therefore, excluded.

<sup>3</sup> Average allowed amounts in this chart are for illustration purposes only. They do not represent actual average allowed amounts.

## Efficiency Measurement Specification

Eligible Population	
<b>Product lines</b>	All medical products
<b>Ages</b>	Members less than 65
<b>Continuous Enrollment</b>	Complete and full year episodes are included, which means the episode began and came to an end according to the rules of clean periods or were 12 month episodes. Episodes longer than 12 months for chronic conditions are not created by Aetna's warehouse to enable comparisons. For example, if a chronic episode for one person is only 12 months long it would not be comparable to an episode for another person with the same condition that is 3 years long.
<b>Measurement Time Frame</b>	Three full years of Episodes where the Episode start begins within the three year timeframe.
<b>Benefit</b>	Medical (pharmacy if available)
<b>Provider Specialty Category</b>	Cardiology, Cardio-Thoracic Surgery, Gastroenterology, Neurology, Neurosurgery, Vascular Surgery, Plastic Surgery, General Surgery, Ob/Gyn, Orthopedic, Urology, Otolaryngology

## Administrative Specification

<b>Denominator</b>	Denominator is the sum of the expected allowed amounts for the episodes being attributed to the group. The expected allowed amount is the case mix adjusted average for each ETG and its combination of variables as described above.
<b>Number of episodes</b>	The volume threshold for a provider/provider group to be considered for Aexcel is a minimum of 20 episodes.
<b>Total Allowed \$</b>	Episodes must be greater than \$0
<b>Numerator</b>	Numerator is the sum of the actual allowed amounts for the same episodes in the denominator being attributed to the group

### Exclusion

(1) All members age 65 and older.

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## Provider Grouping

Provider data is sent to each region in the “Aexcel Designation Model” (see following section) for provider group selection. Provider groups can be either an Individual or a Group based on how individual markets conduct business.

### Provider Scoring

Scoring is done at the Provider group level for volume. A Provider group can include from one to many individual providers. Each Provider group has the potential to be scored for efficiency, but they must meet the measure threshold of 20 or more episodes.

Each group meeting the 20 or more threshold is considered for designation as long as it passes at least one of the clinical performance measures. Each group will receive an observed (actual rate) to expected (case-mix-adjusted) ratio score. The expected value for this score is the case-mix-adjusted average allowed amount for each episode attributed to that group

### Statistical Significance of Efficiency index

Statistical significance is determined by using a weighted students t-test to compare each physician's overall efficiency index to the peer group's efficiency index as determined by indirect standardization of the episode index or each age, gender, chronic disease risk, Pharmacy Insurance coverage and utilization, year of episode, and insurance product type combination as shown above in the Case Mix Adjustment section. Each physician/physician group is compared within specialty and market to the to the peer's mean observed/expected index. The weights for each episodic observation are the expected dollars for the episode. All hypothesis tests are two-tailed and conducted at the 0.10 significance level. Physician/physician groups can be placed into three categories of statistical significance of efficiency:

ESS- Efficient and statistically so

NSS- Efficiency is not statistically significantly different from the peer average

ISS- Did not meet efficiency standards and statistically so  
NA-not enough volume to determine efficiency and statistical significance

Summary and detailed reports will be run for each physician, upon request, so physicians may see how their use of resources compares to their peers.

## **Aexcel Designation Model Process**


**The Aexcel designation process includes four key criteria:**

- Volume
- Clinical performance
- Efficiency
- Network adequacy

For specialists who meet the case volume and clinical performance standards for Aexcel network designation, a measure of the efficiency of their care is developed and compared to their peers.

### **Designation Process (performed by specialty in each market's designation model)**

1. As described above, provider groups are assigned one of the following efficiency/statistical significance type:
  - a. ESS
  - b. NSS
  - c. ISS
  - d. NA
2. Provider groups are non-designated for Aexcel, regardless of efficiency/statistical significance type if:
  - a. They do not pass at least one of the clinical measures, or
  - b. They are under investigation by the Special Investigations Unit.
3. Provider groups are moved from a non-designated to a designated status, regardless of efficiency/statistical significance type if they weren't in a non-designated status in the preceding step, and if:
  - a. they are required to be included for contractual reasons
  - b. they perform unique services within the market
  - c. they are a multi-specialty group that a network team decides to keep whole and the weighted average of all of their specialties as a whole are deemed to meet the efficiency and general access standards
4. After designation/non-designation, the eligible network for each market and specialty category is built by automatically including all ESS; however, additional providers can be added in, by add-in priority order, until the network size is sufficient to meet general access and penetration requirements (see note below regarding network adequacy). The add-in priority order is determined by rank ordering T-Test scores for all provider groups. By using the T-Test score, physicians are added back first whose efficiency index is closest to the mean and with statistical significance at the 0.10 level.

5. A GeoAccess analysis is then conducted to determine if there are gaps in each market's geographic coverage using a threshold of 15 to 75-mile radius as approved by each local market. If gaps are identified, providers are added to the network, in add-in priority order, to address the geographic gaps.
- 

## **Aexcel Network Adequacy**

The Aexcel designation model produces a baseline Aexcel network based on the evaluation of volume, clinical performance, fraud flags and efficiency. Some physicians or physician groups may be included in the Aexcel network based on contractual obligations. Once these selections are complete, we may need to supplement the performance network with additional physicians to maintain sufficient network access to certain specialty care. However, only physicians who have passed the clinical performance evaluation are eligible for consideration to supplement the network.

## Appendices

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### Appendix A: Aexcel Specialties, Sub Categories and Board Certification

Aexcel Medical Specialty	Sub Category Name	ABMS Board Certification/Entity oversees Board cert	AOA Certification/Entity oversees General or Certificate of Special Qualification (CSQ)
Cardiology	Cardiology	N/A	AOA CSQ Cardiology
	Cardiovascular Disease	ABIM - Cardiovascular Disease	N/A
	Interventional Cardiology	ABIM - Interventional Cardiology	N/A
Cardio Thoracic Surgery	Surgery, Thoracic Cardiovascular	American Board of Thoracic Surgery	N/A
	Thoracic Surgery	American Board of Thoracic Surgery	N/A
Gastroenterology	Gastroenterology	ABIM -Gastroenterology	AOA CSQ Gastroenterology
OB/GYN	Gynecology	American Board of Obstetrics and Gynecology	AOA Obstetrics and Gynecology
	Obstetrics & Gynecology	American Board of Obstetrics and Gynecology	AOA Obstetrics and Gynecology
	Surgery, Obstetrics & Gynecology	American Board of Obstetrics and Gynecology	AOA Obstetrics and Gynecology
	Obstetrics & Gynecology - CA PCP	American Board of Obstetrics and Gynecology	AOA Obstetrics and Gynecology
Orthopedic	Surgery, Hand/Orthopedic	American Board of Orthopaedic Surgery - Surgery of the Hand	No CSQ Available
	Surgery, Knee	American Board of Orthopaedic Surgery	AOA Orthopedic Surgery
	Surgery, Orthopedic	American Board of Orthopaedic Surgery	AOA Orthopedic Surgery
	Surgery, Hand	American Board of Surgery - Surgery of the Hand	No CSQ Available
General Surgery	Surgery, Colon & Rectal	American Board of Colon & Rectal Surgery	N/A
	Proctology		No CSQ Available
	Surgery	American Board of Surgery	AOA Surgery
	Surgery, Hand	American Board of Surgery - Surgery of the Hand	No CSQ Available
	Surgery, General Vascular	American Board of Surgery - Vascular Surgery	N/A
Neurology	Neurology	American Board of Psychiatry and Neurology - Neurology	AOA Neurology
Neurosurgery	Surgery, Neurological	American Board of Neurological Surgery	AOA Neurological Surgery
Otolaryngology	Otolaryngology	American Board of Otolaryngology (ABOO)	AOA - Otolaryngology
	Otology	No subspecialty certificate available	No CSQ Available
	Otology/Neurotology	No subspecialty certificate available	No CSQ Available
	Otorhinolaryngology	American Board of Otolaryngology (ABOO)	AOA - Otolaryngology
	Surgery, Head & Neck	ABOO - Plastic Surgery Within the Head and Neck	No CSQ Available
Plastic Surgery	Surgery, Hand/Plastic	American Board of Plastic Surgery - Surgery of the Hand	N/A

<b>Aexcel Medical Specialty</b>	<b>Sub Category Name</b>	<b>ABMS Board Certification/Entity oversees Board cert</b>	<b>AOA Certification/Entity oversees General or Certificate of Special Qualification (CSQ)</b>
	Otorhinolaryngology & Oro-Facial Plastic Surgery	ABOO - Plastic Surgery Within the Head and Neck (ABOO - American Board of Otolaryngology)	No CSQ Available
	Otorhinolaryngology/Plastic Surgery	ABOO - Plastic Surgery Within the Head and Neck	No CSQ Available
	Surgery, Oro-Facial Plastic	American Board of Plastic Surgery	N/A
	Surgery, Plastic	American Board of Plastic Surgery	N/A
	Surgery, Plastic and Reconstructive	American Board of Plastic Surgery	N/A
Urology	Surgery, Urological	American Board of Urology	N/A
	Urology	American Board of Urology	N/A
Vascular Surgery	Surgery, General Vascular	American Board of Surgery - Vascular Surgery	N/A

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## Appendix B: Specialty ETG Groupings

### Cardiology

ETG_CD	ETG_FUL_LONG_DESC
162200000	Hypo-functioning thyroid gland, w/o complication, w/o surgery
163000000	Diabetes, w/o complication, w/o comorbidity, w/o surgery
163000010	Diabetes, w/o complication, with comorbidity, w/o surgery
164700000	Hyperlipidemia, other
164800000	Obesity, w/o complication, w/o surgery
164800100	Obesity, with complication, w/o surgery
316000000	Cerebral vascular accident, w/o complication, w/o comorbidity, w/o surgery
316000010	Cerebral vascular accident, w/o complication, with comorbidity, w/o surgery
316000100	Cerebral vascular accident, with complication, w/o comorbidity, w/o surgery
316000110	Cerebral vascular accident, with complication, with comorbidity, w/o surgery
386500000	Ischemic heart disease, w/o complication, w/o comorbidity, w/o surgery
386500001	Ischemic heart disease, w/o complication, w/o comorbidity, with angioplasty
386500010	Ischemic heart disease, w/o complication, with comorbidity, w/o surgery
386500011	Ischemic heart disease, w/o complication, with comorbidity, with angioplasty
386500100	Ischemic heart disease, with complication, w/o comorbidity, w/o surgery
386500101	Ischemic heart disease, with complication, w/o comorbidity, with angioplasty
386500110	Ischemic heart disease, with complication, with comorbidity, w/o surgery
386500111	Ischemic heart disease, with complication, with comorbidity, with angioplasty
386600000	Pulmonary heart disease, w/o surgery
386800000	Congestive heart failure, w/o complication, w/o comorbidity, w/o surgery
386800010	Congestive heart failure, w/o complication, with comorbidity, w/o surgery
386800100	Congestive heart failure, with complication, w/o comorbidity, w/o surgery
386800110	Congestive heart failure, with complication, with comorbidity, w/o surgery
386900000	Cardiomyopathy, w/o complication, w/o comorbidity, w/o surgery
386900010	Cardiomyopathy, w/o complication, with comorbidity, w/o surgery
386900101	Cardiomyopathy, with complication, w/o comorbidity, with angioplasty
386900111	Cardiomyopathy, with complication, with comorbidity, with angioplasty
387000000	Aortic aneurysm, w/o complication, w/o surgery
387000100	Aortic aneurysm, with complication, w/o surgery
387100000	Heart failure, diastolic, w/o complication, w/o comorbidity, w/o surgery
387100010	Heart failure, diastolic, w/o complication, with comorbidity, w/o surgery
387200000	Cardiac infection, w/o comorbidity, w/o surgery
387200010	Cardiac infection, with comorbidity, w/o surgery
387400000	Valvular dis, w/o complication, w/o comorbidity, w/o surgery
387400010	Valvular dis, w/o complication, with comorbidity, w/o surgery
387400100	Valvular dis, with complication, w/o comorbidity, w/o surgery
387400110	Valvular dis, with complication, with comorbidity, w/o surgery
387500000	Severe ventricular rhythms
387600000	Severe heart block, w/o surgery
387600001	Severe heart block, with surgery
387700000	Other conduction diss, w/o complication, w/o comorbidity
387700010	Other conduction diss, w/o complication, with comorbidity
387700100	Other conduction diss, with complication, w/o comorbidity
387700110	Other conduction diss, with complication, with comorbidity
387800100	Atrial fibrillation & flutter, with complication, w/o comorbidity, w/o surgery
387800101	Atrial fibrillation & flutter, with complication, w/o comorbidity, with surgery
387800110	Atrial fibrillation & flutter, with complication, with comorbidity, w/o surgery
387800111	Atrial fibrillation & flutter, with complication, with comorbidity, with surgery
388100000	Hypertension, w/o complication, w/o comorbidity

ETG_CD	ETG_FUL_LONG_DESC
388100010	Hypertension, w/o complication, with comorbidity
388100100	Hypertension, with complication, w/o comorbidity
388100110	Hypertension, with complication, with comorbidity
388300000	Cardiac congenital dis, w/o comorbidity, w/o surgery
388300010	Cardiac congenital dis, with comorbidity, w/o surgery
388700000	Other cardiac diseases, w/o surgery
389000000	Arterial inflammation, w/o complication, w/o comorbidity, w/o surgery
389000010	Arterial inflammation, w/o complication, with comorbidity, w/o surgery
389500000	Atherosclerosis, w/o complication, w/o comorbidity, w/o surgery
389500010	Atherosclerosis, w/o complication, with comorbidity, w/o surgery
389500100	Atherosclerosis, with complication, w/o comorbidity, w/o surgery
389500110	Atherosclerosis, with complication, with comorbidity, w/o surgery
390300000	Embolism & thrombosis of veins, w/o complication, w/o surgery
390300100	Embolism & thrombosis of veins, with complication, w/o surgery
390500000	Phlebitis & thrombophlebitis of veins, w/o surgery
390600000	Varicose veins of lower extremity, w/o surgery
391000000	Other diseases of veins, w/o surgery
399900000	Cardiovascular diseases signs & symptoms
449900000	Pulmonology diseases signs & symptoms
779400000	Routine exam
779700000	Conditional exam
869900000	Isolated signs, symptoms & non-specific diagnoses or conditions

## Cardiothoracic Surgery

ETG_CD	ETG_FUL_LONG_DESC
386500000	Ischemic heart disease, w/o complication, w/o comorbidity, w/o surgery
386500003	Ischemic heart disease, w/o complication, w/o comorbidity, with CABG
386500004	Ischemic heart disease, w/o complication, w/o comorbidity, with valve surgery
386500005	Ischemic heart disease, w/o complication, w/o comorbidity, with valve surgery & CABG
386500010	Ischemic heart disease, w/o complication, with comorbidity, w/o surgery
386500013	Ischemic heart disease, w/o complication, with comorbidity, with CABG
386500014	Ischemic heart disease, w/o complication, with comorbidity, with valve surgery
386500015	Ischemic heart disease, w/o complication, with comorbidity, with valve surgery & CABG
386500103	Ischemic heart disease, with complication, w/o comorbidity, with CABG
386500104	Ischemic heart disease, with complication, w/o comorbidity, with valve surgery
386500105	Ischemic heart disease, with complication, w/o comorbidity, with valve surgery & CABG
386500113	Ischemic heart disease, with complication, with comorbidity, with CABG
386500114	Ischemic heart disease, with complication, with comorbidity, with valve surgery
386500115	Ischemic heart disease, with complication, with comorbidity, with valve surgery & CABG
387000000	Aortic aneurysm, w/o complication, w/o surgery
387000001	Aortic aneurysm, w/o complication, with surgery
387000100	Aortic aneurysm, with complication, w/o surgery
387000101	Aortic aneurysm, with complication, with surgery
387200001	Cardiac infection, w/o comorbidity, with surgery
387200011	Cardiac infection, with comorbidity, with surgery
389000000	Arterial inflammation, w/o complication, w/o comorbidity, w/o surgery
389000010	Arterial inflammation, w/o complication, with comorbidity, w/o surgery
389000011	Arterial inflammation, w/o complication, with comorbidity, with surgery
389200001	Arterial embolism/thrombosis, with surgery
389500010	Atherosclerosis, w/o complication, with comorbidity, w/o surgery
389500011	Atherosclerosis, w/o complication, with comorbidity, with surgery
389500111	Atherosclerosis, with complication, with comorbidity, with surgery

ETG_CD	ETG_FUL_LONG_DESC
389700001	Arterial aneurysm, except aorta, with surgery
390600001	Varicose veins of lower extremity, with surgery
437400010	Bacterial lung infections, w/o complication, with comorbidity
437400100	Bacterial lung infections, with complication, w/o comorbidity
437400110	Bacterial lung infections, with complication, with comorbidity
439800001	Other inflammatory lung diseases, with surgery
440100001	Malignant neoplasm of pulmonary system, w/o comorbidity, with surgery, w/o active mgmt
440100011	Malignant neoplasm of pulmonary system, with comorbidity, with surgery, w/o active mgmt
440300000	Non-malignant neoplasm of pulmonary system, w/o surgery
440300001	Non-malignant neoplasm of pulmonary system, with surgery
779400000	Routine exam
779700000	Conditional exam

## Gastroenterology

ETG_CD	ETG_FUL_LONG_DESC
208200000	Iron deficiency anemia, w/o complication, w/o comorbidity
208200010	Iron deficiency anemia, w/o complication, with comorbidity
208200100	Iron deficiency anemia, with complication, w/o comorbidity
208200110	Iron deficiency anemia, with complication, with comorbidity
473100000	Infection of stomach & esophagus, w/o comorbidity, w/o surgery
473100001	Infection of stomach & esophagus, w/o comorbidity, with surgery
473100010	Infection of stomach & esophagus, with comorbidity, w/o surgery
473100011	Infection of stomach & esophagus, with comorbidity, with surgery
473300000	Inflammation of esophagus, w/o complication, w/o comorbidity, w/o surgery
473300001	Inflammation of esophagus, w/o complication, w/o comorbidity, with surgery
473300010	Inflammation of esophagus, w/o complication, with comorbidity, w/o surgery
473300011	Inflammation of esophagus, w/o complication, with comorbidity, with surgery
473300100	Inflammation of esophagus, with complication, w/o comorbidity, w/o surgery
473300101	Inflammation of esophagus, with complication, w/o comorbidity, with surgery
473300110	Inflammation of esophagus, with complication, with comorbidity, w/o surgery
473300111	Inflammation of esophagus, with complication, with comorbidity, with surgery
473500000	Gastritis &/or duodenitis, w/o complication, w/o comorbidity, w/o surgery
473500001	Gastritis &/or duodenitis, w/o complication, w/o comorbidity, with surgery
473500010	Gastritis &/or duodenitis, w/o complication, with comorbidity, w/o surgery
473500011	Gastritis &/or duodenitis, w/o complication, with comorbidity, with surgery
473500100	Gastritis &/or duodenitis, with complication, w/o comorbidity, w/o surgery
473500101	Gastritis &/or duodenitis, with complication, w/o comorbidity, with surgery
473500110	Gastritis &/or duodenitis, with complication, with comorbidity, w/o surgery
473500111	Gastritis &/or duodenitis, with complication, with comorbidity, with surgery
473800000	Ulcer, w/o complication, w/o comorbidity, w/o surgery
473800001	Ulcer, w/o complication, w/o comorbidity, with surgery
473800010	Ulcer, w/o complication, with comorbidity, w/o surgery
473800011	Ulcer, w/o complication, with comorbidity, with surgery
473800100	Ulcer, with complication, w/o comorbidity, w/o surgery
473800101	Ulcer, with complication, w/o comorbidity, with surgery
473800110	Ulcer, with complication, with comorbidity, w/o surgery
473800111	Ulcer, with complication, with comorbidity, with surgery
474200000	Non-malignant neoplasm of stomach & esophagus, w/o surgery
474200001	Non-malignant neoplasm of stomach & esophagus, with surgery
474400000	Trauma of stomach or esophagus, w/o surgery
474400001	Trauma of stomach or esophagus, with surgery
474500000	Anomaly of stomach or esophagus, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
474500001	Anomaly of stomach or esophagus, with surgery
474900000	Diverticulitis, w/o complication, w/o comorbidity, w/o surgery
474900001	Diverticulitis, w/o complication, w/o comorbidity, with surgery
474900010	Diverticulitis, w/o complication, with comorbidity, w/o surgery
474900011	Diverticulitis, w/o complication, with comorbidity, with surgery
474900100	Diverticulitis, with complication, w/o comorbidity, w/o surgery
474900101	Diverticulitis, with complication, w/o comorbidity, with surgery
474900110	Diverticulitis, with complication, with comorbidity, w/o surgery
474900111	Diverticulitis, with complication, with comorbidity, with surgery
475000000	Other infectious diseases of intestines & abdomen, w/o surgery
475000001	Other infectious diseases of intestines & abdomen, with surgery
475200000	Other inflammation of intestines & abdomen, w/o complication, w/o comorbidity, w/o surgery
475200001	Other inflammation of intestines & abdomen, w/o complication, w/o comorbidity, with surgery
475200010	Other inflammation of intestines & abdomen, w/o complication, with comorbidity, w/o surgery
475200011	Other inflammation of intestines & abdomen, w/o complication, with comorbidity, with surgery
475200100	Other inflammation of intestines & abdomen, with complication, w/o comorbidity, w/o surgery
475200110	Other inflammation of intestines & abdomen, with complication, with comorbidity, w/o surgery
475300000	Inflammatory bowel disease, w/o complication, w/o comorbidity, w/o surgery
475300010	Inflammatory bowel disease, w/o complication, with comorbidity, w/o surgery
475300100	Inflammatory bowel disease, with complication, w/o comorbidity, w/o surgery
475300101	Inflammatory bowel disease, with complication, w/o comorbidity, with surgery
475300110	Inflammatory bowel disease, with complication, with comorbidity, w/o surgery
475300111	Inflammatory bowel disease, with complication, with comorbidity, with surgery
475600000	Non-malignant neoplasm of intestines & abdomen, w/o surgery
475600001	Non-malignant neoplasm of intestines & abdomen, with surgery
476000000	Congenital anomalies of intestines & abdomen, w/o surgery
476000001	Congenital anomalies of intestines & abdomen, with surgery
476100000	Vascular diseases of intestines & abdomen, w/o surgery
476300000	Bowel obstruction, w/o complication, w/o surgery
476300001	Bowel obstruction, w/o complication, with surgery
476300100	Bowel obstruction, with complication, w/o surgery
476400000	Irritable bowel syndrome
476600000	Hernias, except hiatal, w/o complication, w/o surgery
476800000	Hiatal hernia, w/o surgery
476800001	Hiatal hernia, with surgery
476900000	Other diseases of intestines & abdomen, w/o surgery
476900001	Other diseases of intestines & abdomen, with surgery
477400000	Hemorrhoids, w/o complication, w/o surgery
477400001	Hemorrhoids, w/o complication, with surgery
477400100	Hemorrhoids, with complication, w/o surgery
477400101	Hemorrhoids, with complication, with surgery
477600000	Inflammation of rectum or anus, w/o surgery
477600001	Inflammation of rectum or anus, with surgery
478000000	Non-malignant neoplasm of rectum or anus, w/o surgery
478000001	Non-malignant neoplasm of rectum or anus, with surgery
478500000	Other diseases & disorders of rectum & anus, w/o surgery
478500001	Other diseases & disorders of rectum & anus, with surgery
479900000	Gastroenterology diseases signs & symptoms
521400000	Infectious hepatitis, w/o complication, w/o comorbidity
521400010	Infectious hepatitis, w/o complication, with comorbidity
521400100	Infectious hepatitis, with complication, w/o comorbidity
521400110	Infectious hepatitis, with complication, with comorbidity
521600000	Non-infectious hepatitis, w/o complication

ETG_CD	ETG_FUL_LONG_DESC
521800000	Cirrhosis, w/o complication, w/o comorbidity, w/o surgery
521800001	Cirrhosis, w/o complication, w/o comorbidity, with surgery
521800010	Cirrhosis, w/o complication, with comorbidity, w/o surgery
521800011	Cirrhosis, w/o complication, with comorbidity, with surgery
521800100	Cirrhosis, with complication, w/o comorbidity, w/o surgery
521800101	Cirrhosis, with complication, w/o comorbidity, with surgery
521800110	Cirrhosis, with complication, with comorbidity, w/o surgery
521800111	Cirrhosis, with complication, with comorbidity, with surgery
521900000	Acute pancreatitis, w/o surgery
521900001	Acute pancreatitis, with surgery
522000000	Chronic pancreatitis, w/o surgery
522000001	Chronic pancreatitis, with surgery
522300000	Cholelithiasis, w/o complication, w/o comorbidity, w/o surgery
522300001	Cholelithiasis, w/o complication, w/o comorbidity, with surgery
522300010	Cholelithiasis, w/o complication, with comorbidity, w/o surgery
522300011	Cholelithiasis, w/o complication, with comorbidity, with surgery
522300100	Cholelithiasis, with complication, w/o comorbidity, w/o surgery
522300101	Cholelithiasis, with complication, w/o comorbidity, with surgery
522300110	Cholelithiasis, with complication, with comorbidity, w/o surgery
522300111	Cholelithiasis, with complication, with comorbidity, with surgery
523200000	Other diseases of hepatobiliary system, w/o surgery
523200001	Other diseases of hepatobiliary system, with surgery
529900000	Hepatology diseases signs & symptoms
779400000	Routine exam
869900000	Isolated signs, symptoms & non-specific diagnoses or conditions

## Neurology

ETG_CD	ETG_FUL_LONG_DESC
239000000	Dementia
239100000	Organic drug or metabolic disorders
239200000	Autism & child psychoses
240100000	Attention deficit dis, w/o complication
240100100	Attention deficit dis, with complication
240600000	Other neuropsychological or behavioral disorders
314000000	Viral meningitis, w/o surgery
314300000	Nonviral encephalitis, w/o surgery
315000000	Inflammation of central nervous system, other, w/o surgery
315100000	Multiple sclerosis, w/o surgery
315200000	Epilepsy, w/o surgery
315400000	Malignant neoplasm of central nervous system, w/o surgery, w/o active mgmt
315600000	Non-malignant neoplasm of central nervous system, w/o surgery
316000000	Cerebral vascular accident, w/o complication, w/o comorbidity, w/o surgery
316000010	Cerebral vascular accident, w/o complication, with comorbidity, w/o surgery
316000100	Cerebral vascular accident, with complication, w/o comorbidity, w/o surgery
316000110	Cerebral vascular accident, with complication, with comorbidity, w/o surgery
316300000	Brain trauma, w/o complication, w/o comorbidity, w/o surgery
316300010	Brain trauma, w/o complication, with comorbidity, w/o surgery
316300100	Brain trauma, with complication, w/o comorbidity, w/o surgery
316300110	Brain trauma, with complication, with comorbidity, w/o surgery
316400000	Alzheimer's disease
316500100	Spinal trauma, with complication, w/o comorbidity, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
316500110	Spinal trauma, with complication, with comorbidity, w/o surgery
316600000	Amyotrophic lateral sclerosis, w/o surgery
316700000	Hereditary & degenerative diseases of central nervous system, other, w/o comorbidity, w/o surgery
316700010	Hereditary & degenerative diseases of central nervous system, other, with comorbidity, w/o surgery
316800000	Parkinson's disease, w/o surgery
316900000	Migraine headache, w/o complication, w/o comorbidity
316900010	Migraine headache, w/o complication, with comorbidity
316900100	Migraine headache, with complication, w/o comorbidity
316900110	Migraine headache, with complication, with comorbidity
317100000	Congenital disorders of central nervous system, w/o comorbidity, w/o surgery
317100010	Congenital disorders of central nervous system, with comorbidity, w/o surgery
317300000	Inflammation of cranial nerves, w/o surgery
317500000	Carpal tunnel syndrome, w/o surgery
317700000	Inflammation of non-cranial nerves, except carpal tunnel, w/o complication, w/o surgery
317700100	Inflammation of non-cranial nerves, except carpal tunnel, with complication, w/o surgery
317900000	Peripheral nerve neoplasm, w/o surgery
318300000	Traumatic disorders of non-cranial nerves, w/o surgery
318400000	Congenital diss of peripheral nerves, w/o surgery
318600000	Other neurological diseases, w/o surgery
319900000	Neurological diseases signs & symptoms
350600000	Inflammatory eye disease, w/o surgery
353600000	Visual disturbances, w/o complication, w/o surgery
353600100	Visual disturbances, with complication, w/o surgery
405300000	Other disorders of ear/nose/throat, w/o surgery
712201000	Joint degeneration, localized - foot & ankle, w/o surgery
712202000	Joint degeneration, localized - knee & L leg, w/o complication, w/o comorbidity, w/o surgery
712202010	Joint degeneration, localized - knee & L leg, w/o complication, with comorbidity, w/o surgery
712203000	Joint degeneration, localized - thigh, hip & pelvis, w/o complication, w/o comorbidity, w/o surgery
712203010	Joint degeneration, localized - thigh, hip & pelvis, w/o complication, with comorbidity, w/o surgery
712204000	Joint degeneration, localized - hand, wrist & forearm, w/o surgery
712205000	Joint degeneration, localized - elbow & upper arm, w/o surgery
712206000	Joint degeneration, localized - shoulder, w/o surgery
712208000	Joint degeneration, localized - back, w/o complication, w/o comorbidity, w/o surgery
712208010	Joint degeneration, localized - back, w/o complication, with comorbidity, w/o surgery
712208100	Joint degeneration, localized - back, with complication, w/o comorbidity, w/o surgery
712208110	Joint degeneration, localized - back, with complication, with comorbidity, w/o surgery
712211000	Joint degeneration, localized - neck, w/o complication, w/o comorbidity, w/o surgery
712211010	Joint degeneration, localized - neck, w/o complication, with comorbidity, w/o surgery
712211100	Joint degeneration, localized - neck, with complication, w/o comorbidity, w/o surgery
712211110	Joint degeneration, localized - neck, with complication, with comorbidity, w/o surgery
712212000	Joint degeneration, localized - unspecified, w/o surgery
714601000	Minor orthopedic trauma - foot & ankle
714602000	Minor orthopedic trauma - knee & lower leg
714603000	Minor orthopedic trauma - thigh, hip & pelvis
714604000	Minor orthopedic trauma - hand, wrist & forearm
714605000	Minor orthopedic trauma - elbow & upper arm
714606000	Minor orthopedic trauma - shoulder
714607000	Minor orthopedic trauma - head & face
714608000	Minor orthopedic trauma - back
714609000	Minor orthopedic trauma - trunk
714611000	Minor orthopedic trauma - neck, w/o surgery
714612000	Minor orthopedic trauma - unspecified
714901000	Other minor orthopedic disorders - foot & ankle

ETG_CD	ETG_FUL_LONG_DESC
714902000	Other minor orthopedic disorders - knee & lower leg
714903000	Other minor orthopedic disorders - thigh, hip & pelvis
714904000	Other minor orthopedic disorders - hand, wrist & forearm
714905000	Other minor orthopedic disorders - elbow & upper arm
714906000	Other minor orthopedic disorders - shoulder
714908000	Other minor orthopedic disorders - back
714911000	Other minor orthopedic diss - neck, w/o surgery
714912000	Other minor orthopedic disorders - unspecified
715101000	Orthopedic deformity - foot & ankle, w/o surgery
715102000	Orthopedic deformity - knee & L leg, w/o surgery
715103000	Orthopedic deformity - thigh, hip & pelvis, w/o surgery
715104000	Orthopedic deformity - hand, wrist & forearm, w/o surgery
715107000	Orthopedic deformity - head & face, w/o surgery
715108000	Orthopedic deformity - back, w/o surgery
715109000	Orthopedic deformity - trunk, w/o surgery
715111000	Orthopedic deformity - neck, w/o surgery
715112000	Orthopedic deformity - unspecified, w/o surgery
719901000	Orthopedic signs & symptoms - foot & ankle
719902000	Orthopedic signs & symptoms - knee & lower leg
719903000	Orthopedic signs & symptoms - thigh, hip & pelvis
719904000	Orthopedic signs & symptoms - hand, wrist & forearm
719905000	Orthopedic signs & symptoms - elbow & upper arm
719906000	Orthopedic signs & symptoms - shoulder
719908000	Orthopedic signs & symptoms - back
719911000	Orthopedic signs & symptoms - neck, w/o surgery
719912000	Orthopedic signs & symptoms - unspecified
779400000	Routine exam
779700000	Conditional exam
869900000	Isolated signs, symptoms & non-specific diagnoses or conditions

## Neurosurgery

ETG_CD	ETG_FUL_LONG_DESC
163400000	Non-malignant neoplasm of pituitary gland, w/o complication, w/o surgery
315600000	Non-malignant neoplasm of central nervous system, w/o surgery
315600001	Non-malignant neoplasm of central nervous system, with surgery
316000000	Cerebral vascular accident, w/o complication, w/o comorbidity, w/o surgery
316000010	Cerebral vascular accident, w/o complication, with comorbidity, w/o surgery
316000011	Cerebral vascular accident, w/o complication, with comorbidity, with surgery
316000100	Cerebral vascular accident, with complication, w/o comorbidity, w/o surgery
316000101	Cerebral vascular accident, with complication, w/o comorbidity, with surgery
316000110	Cerebral vascular accident, with complication, with comorbidity, w/o surgery
316000111	Cerebral vascular accident, with complication, with comorbidity, with surgery
316300000	Brain trauma, w/o complication, w/o comorbidity, w/o surgery
316300010	Brain trauma, w/o complication, with comorbidity, w/o surgery
316300100	Brain trauma, with complication, w/o comorbidity, w/o surgery
316300101	Brain trauma, with complication, w/o comorbidity, with surgery
316300110	Brain trauma, with complication, with comorbidity, w/o surgery
316300111	Brain trauma, with complication, with comorbidity, with surgery
316500100	Spinal trauma, with complication, w/o comorbidity, w/o surgery
316500101	Spinal trauma, with complication, w/o comorbidity, with surgery
316500110	Spinal trauma, with complication, with comorbidity, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
316500111	Spinal trauma, with complication, with comorbidity, with surgery
316700000	Hereditary & degenerative diseases of central nervous system, other, w/o comorbidity, w/o surgery
316700001	Hereditary & degenerative diseases of central nervous system, other, w/o comorbidity, with surgery
316700010	Hereditary & degenerative diseases of central nervous system, other, with comorbidity, w/o surgery
316700011	Hereditary & degenerative diseases of central nervous system, other, with comorbidity, with surgery
317100000	Congenital disorders of central nervous system, w/o comorbidity, w/o surgery
317100001	Congenital disorders of central nervous system, w/o comorbidity, with surgery
317100010	Congenital disorders of central nervous system, with comorbidity, w/o surgery
317100011	Congenital disorders of central nervous system, with comorbidity, with surgery
317500000	Carpal tunnel syndrome, w/o surgery
317500001	Carpal tunnel syndrome, with surgery
317700000	Inflammation of non-cranial nerves, except carpal tunnel, w/o complication, w/o surgery
317700001	Inflammation of non-cranial nerves, except carpal tunnel, w/o complication, with surgery
318600000	Other neurological diseases, w/o surgery
318600001	Other neurological diseases, with surgery
319900000	Neurological diseases signs & symptoms
389700000	Arterial aneurysm, except aorta, w/o surgery
389700001	Arterial aneurysm, except aorta, with surgery
712208000	Joint degeneration, localized - back, w/o complication, w/o comorbidity, w/o surgery
712208001	Joint degeneration, localized - back, w/o complication, w/o comorbidity, with surgery
712208010	Joint degeneration, localized - back, w/o complication, with comorbidity, w/o surgery
712208011	Joint degeneration, localized - back, w/o complication, with comorbidity, with surgery
712208100	Joint degeneration, localized - back, with complication, w/o comorbidity, w/o surgery
712208101	Joint degeneration, localized - back, with complication, w/o comorbidity, with surgery
712208110	Joint degeneration, localized - back, with complication, with comorbidity, w/o surgery
712208111	Joint degeneration, localized - back, with complication, with comorbidity, with surgery
712211000	Joint degeneration, localized - neck, w/o complication, w/o comorbidity, w/o surgery
712211001	Joint degeneration, localized - neck, w/o complication, w/o comorbidity, with surgery
712211010	Joint degeneration, localized - neck, w/o complication, with comorbidity, w/o surgery
712211011	Joint degeneration, localized - neck, w/o complication, with comorbidity, with surgery
712211100	Joint degeneration, localized - neck, with complication, w/o comorbidity, w/o surgery
712211101	Joint degeneration, localized - neck, with complication, w/o comorbidity, with surgery
712211110	Joint degeneration, localized - neck, with complication, with comorbidity, w/o surgery
712211111	Joint degeneration, localized - neck, with complication, with comorbidity, with surgery
714608000	Minor orthopedic trauma - back
714611000	Minor orthopedic trauma - neck, w/o surgery
714908000	Other minor orthopedic disorders - back
714911000	Other minor orthopedic diss - neck, w/o surgery
715107000	Orthopedic deformity - head & face, w/o surgery
715107001	Orthopedic deformity - head & face, with surgery
715108000	Orthopedic deformity - back, w/o surgery
715108001	Orthopedic deformity - back, with surgery
715111000	Orthopedic deformity - neck, w/o surgery
719908000	Orthopedic signs & symptoms - back
719911000	Orthopedic signs & symptoms - neck, w/o surgery
779400000	Routine exam
779700000	Conditional exam
821000000	Late effects & late complications
869900000	Isolated signs, symptoms & non-specific diagnoses or conditions

## Obstetrics/Gynecology

ETG_CD	ETG_FUL_LONG_DESC
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ETG_CD	ETG_FUL_LONG_DESC
164300000	Female sex gland disorders, w/o comorbidity, w/o surgery
164300001	Female sex gland disorders, w/o comorbidity, with surgery
164300010	Female sex gland disorders, with comorbidity, w/o surgery
164300011	Female sex gland disorders, with comorbidity, with surgery
587200000	Sexually transmitted diseases, primary
587300000	Sexually transmitted diseases, disseminated
587400000	Infection of lower genitourinary system, not sexually transmitted, w/o complication, w/o comorbidity
587400010	Infection of lower genitourinary system, not sexually transmitted, w/o complication, with comorbidity
587400100	Infection of lower genitourinary system, not sexually transmitted, with complication, w/o comorbidity
587400110	Infection of lower genitourinary system, not sexually transmitted, with complication, with comorbidity
588000000	Inflammation of genitourinary system, except kidney stones, w/o complication, w/o comorbidity, w/o surgery
588000010	Inflammation of genitourinary system, except kidney stones, w/o complication, with comorbidity, w/o surgery
588000100	Inflammation of genitourinary system, except kidney stones, with complication, w/o comorbidity, w/o surgery
588000110	Inflammation of genitourinary system, except kidney stones, with complication, with comorbidity, w/o surgery
588800000	Non-malignant neoplasm of genitourinary system, except prostate, w/o surgery
589200000	Urinary incontinence, w/o comorbidity, w/o surgery
589200001	Urinary incontinence, w/o comorbidity, with surgery
589200010	Urinary incontinence, with comorbidity, w/o surgery
589200011	Urinary incontinence, with comorbidity, with surgery
589500000	Other diseases of genitourinary system, w/o surgery
589900000	Urological diseases signs & symptoms
601100000	Pregnancy, with delivery, w/o complication, w/o comorbidity, w/o caesarean section
601100001	Pregnancy, with delivery, w/o complication, w/o comorbidity, with caesarean section
601100100	Pregnancy, with delivery, with complication, w/o comorbidity, w/o caesarean section
601100101	Pregnancy, with delivery, with complication, w/o comorbidity, with caesarean section
602100000	Ectopic pregnancy, w/o surgery
602100001	Ectopic pregnancy, with surgery
602200000	Spontaneous abortion
602300000	Induced abortion
633200000	Infection of ovary &/or fallopian tubes, w/o comorbidity, w/o surgery
633200001	Infection of ovary &/or fallopian tubes, w/o comorbidity, with surgery
633200010	Infection of ovary &/or fallopian tubes, with comorbidity, w/o surgery
633200011	Infection of ovary &/or fallopian tubes, with comorbidity, with surgery
633500000	Infection of uterus, w/o comorbidity, w/o surgery
633500001	Infection of uterus, w/o comorbidity, with surgery
633500010	Infection of uterus, with comorbidity, w/o surgery
633500011	Infection of uterus, with comorbidity, with surgery
633700000	Infection of cervix
633900000	Monilial infection of vagina (yeast)
634000000	Infection of vagina except monilial
634200000	Endometriosis, w/o surgery
634200001	Endometriosis, with surgery
634300000	Inflammatory condition of female genital tract, except endometriosis, w/o surgery
634300001	Inflammatory condition of female genital tract, except endometriosis, with surgery
634400000	Malignant neoplasm of cervix, w/o surgery, w/o active mgmt
634400001	Malignant neoplasm of cervix, with surgery, w/o active mgmt
634500000	Malignant neoplasm of ovaries, w/o surgery, w/o active mgmt
634500001	Malignant neoplasm of ovaries, with surgery, w/o active mgmt
634600000	Malignant neoplasm of uterus, w/o surgery, w/o active mgmt
634600001	Malignant neoplasm of uterus, with surgery, w/o active mgmt
634700000	Non-malignant neoplasm of female genital tract, w/o complication, w/o comorbidity, w/o surgery
634700001	Non-malignant neoplasm of female genital tract, w/o complication, w/o comorbidity, with surgery
634700010	Non-malignant neoplasm of female genital tract, w/o complication, with comorbidity, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
634700011	Non-malignant neoplasm of female genital tract, w/o complication, with comorbidity, with surgery
634700100	Non-malignant neoplasm of female genital tract, with complication, w/o comorbidity, w/o surgery
634700101	Non-malignant neoplasm of female genital tract, with complication, w/o comorbidity, with surgery
634700110	Non-malignant neoplasm of female genital tract, with complication, with comorbidity, w/o surgery
634700111	Non-malignant neoplasm of female genital tract, with complication, with comorbidity, with surgery
634900000	Conditions associated with menstruation, w/o complication, w/o surgery
634900001	Conditions associated with menstruation, w/o complication, with surgery
634900100	Conditions associated with menstruation, with complication, w/o surgery
634900101	Conditions associated with menstruation, with complication, with surgery
635100000	Conditions associated with infertility, w/o surgery
635100001	Conditions associated with infertility, with surgery
635300000	Other diseases of female genital tract, w/o surgery
635300001	Other diseases of female genital tract, with surgery
635800000	Non-malignant neoplasm of breast, w/o complication, w/o surgery
635800001	Non-malignant neoplasm of breast, w/o complication, with surgery
635800100	Non-malignant neoplasm of breast, with complication, w/o surgery
635800101	Non-malignant neoplasm of breast, with complication, with surgery
639900000	Gynecological signs & symptoms
667300000	Viral skin infection
712000000	Osteoporosis
779000000	Exposure to infectious diseases
779100000	Routine inoculation
779300000	Prophylactic procedures, other than inoculation & exposure to infectious diseases
779400000	Routine exam
779600000	Contraceptive management, w/o surgery
779600001	Contraceptive management, with surgery
779700000	Conditional exam
780100000	Other preventative & administrative services
869900000	Isolated signs, symptoms & non-specific diagnoses or conditions

## Orthopedics

ETG_CD	ETG_FUL_LONG_DESC
317500000	Carpal tunnel syndrome, w/o surgery
317500001	Carpal tunnel syndrome, with surgery
317700000	Inflammation of non-cranial nerves, except carpal tunnel, w/o complication, w/o surgery
317700001	Inflammation of non-cranial nerves, except carpal tunnel, w/o complication, with surgery
669001000	Skin trauma, except burn & Op wound - foot & ankle, w/o complication, w/o comorbidity, w/o surgery
669001010	Skin trauma, except burn & Op wound - foot & ankle, w/o complication, with comorbidity, w/o surgery
669001100	Skin trauma, except burn & Op wound - foot & ankle, with complication, w/o comorbidity, w/o surgery
669001110	Skin trauma, except burn & Op wound - foot & ankle, with complication, with comorbidity, w/o surgery
669002000	Skin trauma, except burn & Op wound - L leg, w/o complication, w/o comorbidity, w/o surgery
669002010	Skin trauma, except burn & Op wound - L leg, w/o complication, with comorbidity, w/o surgery
669003000	Skin trauma, except burn & Op wound - hip & thigh, w/o complication, w/o comorbidity, w/o surgery
669003010	Skin trauma, except burn & Op wound - hip & thigh, w/o complication, with comorbidity, w/o surgery
669004000	Skin trauma, except burn & Op wound - hand & forearm, w/o complication, w/o surgery
669004100	Skin trauma, except burn & Op wound - hand & forearm, with complication, w/o surgery
669005000	Skin trauma, except burn & Op wound - elbow & upper arm, w/o complication, w/o surgery
669005100	Skin trauma, except burn & Op wound - elbow & upper arm, with complication, w/o surgery
669006000	Skin trauma, except burn & Op wound - shoulder, w/o complication, w/o surgery
669009000	Skin trauma, except burn & Op wound - trunk, w/o complication, w/o comorbidity, w/o surgery
669009010	Skin trauma, except burn & Op wound - trunk, w/o complication, with comorbidity, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
669010000	Skin trauma, except burn & Op wound - other, w/o complication, w/o surgery
669012000	Skin trauma, except burn & Op wound - unspecified, w/o complication, w/o surgery
711101000	Infection of bone & joint - foot & ankle, w/o surgery
711101001	Infection of bone & joint - foot & ankle, with surgery
711102000	Infection of bone & joint - knee & lower leg, w/o surgery
711102001	Infection of bone & joint - knee & lower leg, with surgery
711103000	Infection of bone & joint - thigh, hip & pelvis, w/o surgery
711104000	Infection of bone & joint - hand, wrist & forearm, w/o surgery
711104001	Infection of bone & joint - hand, wrist & forearm, with surgery
711105000	Infection of bone & joint - elbow & upper arm, w/o surgery
711105001	Infection of bone & joint - elbow & upper arm, with surgery
711106000	Infection of bone & joint - shoulder, w/o surgery
711106001	Infection of bone & joint - shoulder, with surgery
711112000	Infection of bone & joint - unspecified, w/o surgery
711112001	Infection of bone & joint - unspecified, with surgery
711901000	Major joint inflammation - foot & ankle, w/o surgery
711901001	Major joint inflammation - foot & ankle, with surgery
711902000	Major joint inflammation - knee & lower leg, w/o surgery
711902001	Major joint inflammation - knee & lower leg, with surgery
711903000	Major joint inflammation - thigh, hip & pelvis, w/o surgery
711903001	Major joint inflammation - thigh, hip & pelvis, with surgery
711904000	Major joint inflammation - hand, wrist & forearm, w/o surgery
711904001	Major joint inflammation - hand, wrist & forearm, with surgery
711905000	Major joint inflammation - elbow & upper arm, w/o surgery
711905001	Major joint inflammation - elbow & upper arm, with surgery
711906000	Major joint inflammation - shoulder, w/o surgery
711906001	Major joint inflammation - shoulder, with surgery
711908000	Major joint inflammation - back, w/o surgery
711908001	Major joint inflammation - back, with surgery
711910000	Major joint inflammation - other, w/o surgery
711910001	Major joint inflammation - other, with surgery
711912000	Major joint inflammation - unspecified, w/o surgery
711912001	Major joint inflammation - unspecified, with surgery
712000000	Osteoporosis
712201000	Joint degeneration, localized - foot & ankle, w/o surgery
712201001	Joint degeneration, localized - foot & ankle, with surgery
712202000	Joint degeneration, localized - knee & L leg, w/o complication, w/o comorbidity, w/o surgery
712202001	Joint degeneration, localized - knee & L leg, w/o complication, w/o comorbidity, with surgery
712202010	Joint degeneration, localized - knee & L leg, w/o complication, with comorbidity, w/o surgery
712202011	Joint degeneration, localized - knee & L leg, w/o complication, with comorbidity, with surgery
712202100	Joint degeneration, localized - knee & L leg, with complication, w/o comorbidity, w/o surgery
712202101	Joint degeneration, localized - knee & L leg, with complication, w/o comorbidity, with surgery
712202110	Joint degeneration, localized - knee & L leg, with complication, with comorbidity, w/o surgery
712202111	Joint degeneration, localized - knee & L leg, with complication, with comorbidity, with surgery
712203000	Joint degeneration, localized - thigh, hip & pelvis, w/o complication, w/o comorbidity, w/o surgery
712203001	Joint degeneration, localized - thigh, hip & pelvis, w/o complication, w/o comorbidity, with surgery
712203010	Joint degeneration, localized - thigh, hip & pelvis, w/o complication, with comorbidity, w/o surgery
712203011	Joint degeneration, localized - thigh, hip & pelvis, w/o complication, with comorbidity, with surgery
712203100	Joint degeneration, localized - thigh, hip & pelvis, with complication, w/o comorbidity, w/o surgery
712203110	Joint degeneration, localized - thigh, hip & pelvis, with complication, with comorbidity, w/o surgery
712204000	Joint degeneration, localized - hand, wrist & forearm, w/o surgery
712204001	Joint degeneration, localized - hand, wrist & forearm, with surgery
712205000	Joint degeneration, localized - elbow & upper arm, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
712205001	Joint degeneration, localized - elbow & upper arm, with surgery
712206000	Joint degeneration, localized - shoulder, w/o surgery
712206001	Joint degeneration, localized - shoulder, with surgery
712208000	Joint degeneration, localized - back, w/o complication, w/o comorbidity, w/o surgery
712208001	Joint degeneration, localized - back, w/o complication, w/o comorbidity, with surgery
712208010	Joint degeneration, localized - back, w/o complication, with comorbidity, w/o surgery
712208011	Joint degeneration, localized - back, w/o complication, with comorbidity, with surgery
712208100	Joint degeneration, localized - back, with complication, w/o comorbidity, w/o surgery
712208101	Joint degeneration, localized - back, with complication, w/o comorbidity, with surgery
712208110	Joint degeneration, localized - back, with complication, with comorbidity, w/o surgery
712208111	Joint degeneration, localized - back, with complication, with comorbidity, with surgery
712211000	Joint degeneration, localized - neck, w/o complication, w/o comorbidity, w/o surgery
712211001	Joint degeneration, localized - neck, w/o complication, w/o comorbidity, with surgery
712211010	Joint degeneration, localized - neck, w/o complication, with comorbidity, w/o surgery
712211011	Joint degeneration, localized - neck, w/o complication, with comorbidity, with surgery
712211100	Joint degeneration, localized - neck, with complication, w/o comorbidity, w/o surgery
712211101	Joint degeneration, localized - neck, with complication, w/o comorbidity, with surgery
712211110	Joint degeneration, localized - neck, with complication, with comorbidity, w/o surgery
712211111	Joint degeneration, localized - neck, with complication, with comorbidity, with surgery
712212000	Joint degeneration, localized - unspecified, w/o surgery
712212001	Joint degeneration, localized - unspecified, with surgery
712901000	Open fracture or dislocation of lower extremity - foot & ankle
712902000	Open fracture or dislocation of lower extremity - knee & lower leg
712903000	Open fracture or dislocation - thigh, hip & pelvis
712904000	Open fracture or dislocation of upper extremity - hand, wrist & forearm
712905000	Open fracture or dislocation of upper extremity - elbow & upper arm
712906000	Open fracture or dislocation of upper extremity - shoulder
712909000	Open fracture or dislocation - trunk
713101000	Cl fracture or dislocation of lower extremity - foot & ankle, w/o complication, w/o surgery
713101001	Cl fracture or dislocation of lower extremity - foot & ankle, w/o complication, with surgery
713101100	Cl fracture or dislocation of lower extremity - foot & ankle, with complication, w/o surgery
713101101	Closed fracture or dislocation of lower extremity - foot & ankle, with complication, with surgery
713102000	Cl fracture or dislocation of lower extremity - knee & L leg, w/o surgery
713102001	Closed fracture or dislocation of lower extremity - knee & lower leg, with surgery
713103000	Cl fracture or dislocation - thigh, hip & pelvis, w/o complication, w/o comorbidity, w/o surgery
713103001	Cl fracture or dislocation - thigh, hip & pelvis, w/o complication, w/o comorbidity, with surgery
713103010	Cl fracture or dislocation - thigh, hip & pelvis, w/o complication, with comorbidity, w/o surgery
713103011	Cl fracture or dislocation - thigh, hip & pelvis, w/o complication, with comorbidity, with surgery
713103100	Cl fracture or dislocation - thigh, hip & pelvis, with complication, w/o comorbidity, w/o surgery
713103101	Cl fracture or dislocation - thigh, hip & pelvis, with complication, w/o comorbidity, with surgery
713103110	Cl fracture or dislocation - thigh, hip & pelvis, with complication, with comorbidity, w/o surgery
713103111	Cl fracture or dislocation - thigh, hip & pelvis, with complication, with comorbidity, with surgery
713104100	Cl fracture or dislocation of upper extremity - hand, wrist & forearm, with complication, w/o comorbidity, w/o surgery
713104101	Cl fracture or dislocation of upper extremity - hand, wrist & forearm, with complication, w/o comorbidity, with surgery
713104110	Cl fracture or dislocation of upper extremity - hand, wrist & forearm, with complication, with comorbidity, w/o surgery
713104111	Cl fracture or dislocation of upper extremity - hand, wrist & forearm, with complication, with comorbidity, with surgery
713105000	Cl fracture or dislocation of upper extremity - elbow & upper arm, w/o comorbidity, w/o surgery
713105001	Cl fracture or dislocation of upper extremity - elbow & upper arm, w/o comorbidity, with surgery
713105010	Cl fracture or dislocation of upper extremity - elbow & upper arm, with comorbidity, w/o surgery
713105011	Cl fracture or dislocation of upper extremity - elbow & upper arm, with comorbidity, with surgery

ETG_CD	ETG_FUL_LONG_DESC
713106000	Closed fracture or dislocation of upper extremity - shoulder, w/o surgery
713106001	Closed fracture or dislocation of upper extremity - shoulder, with surgery
713109000	Closed fracture or dislocation of trunk, w/o surgery
713109001	Closed fracture or dislocation of trunk, with surgery
713900000	Malignant neoplasm of bone & connective tissue, other than head & neck, w/o surgery, w/o active mgmt
714100000	Non-malignant neoplasm of bone & connective tissue, other than head & neck, w/o surgery
714100001	Non-malignant neoplasm of bone & connective tissue, other than head & neck, with surgery
714301000	Joint derangement - foot & ankle, w/o surgery
714301001	Joint derangement - foot & ankle, with surgery
714302000	Joint derangement - knee & lower leg, w/o surgery
714302001	Joint derangement - knee & lower leg, with surgery
714303000	Joint derangement - thigh, hip & pelvis, w/o surgery
714303001	Joint derangement - thigh, hip & pelvis, with surgery
714304000	Joint derangement - hand, wrist & forearm, w/o surgery
714304001	Joint derangement - hand, wrist & forearm, with surgery
714305000	Joint derangement - elbow & upper arm, w/o surgery
714305001	Joint derangement - elbow & upper arm, with surgery
714306000	Joint derangement - shoulder, w/o surgery
714306001	Joint derangement - shoulder, with surgery
714312000	Joint derangement - unspecified, w/o surgery
714312001	Joint derangement - unspecified, with surgery
714501000	Major trauma, other than fracture or dislocation - foot & ankle, w/o surgery
714501001	Major trauma, other than fracture or dislocation - foot & ankle, with surgery
714502000	Major trauma, other than fracture or dislocation - knee & L leg, w/o surgery
714502001	Major trauma, other than fracture or dislocation - knee & L leg, with surgery
714503000	Major trauma, other than fracture or dislocation - thigh, hip & pelvis, w/o surgery
714503001	Major trauma, other than fracture or dislocation - thigh, hip & pelvis, with surgery
714504000	Major trauma, other than fracture or dislocation - hand, wrist & forearm, w/o surgery
714504001	Major trauma, other than fracture or dislocation - hand, wrist & forearm, with surgery
714505000	Major trauma, other than fracture or dislocation - elbow & upper arm, w/o surgery
714505001	Major trauma, other than fracture or dislocation - elbow & upper arm, with surgery
714506000	Major trauma, other than fracture or dislocation - shoulder, w/o surgery
714506001	Major trauma, other than fracture or dislocation - shoulder, with surgery
714509000	Major trauma, other than fracture or dislocation - trunk, w/o surgery
714509001	Major trauma, other than fracture or dislocation - trunk, with surgery
714512000	Major trauma, other than fracture or dislocation - unspecified, w/o surgery
714512001	Major trauma, other than fracture or dislocation - unspecified, with surgery
714601000	Minor orthopedic trauma - foot & ankle
714602000	Minor orthopedic trauma - knee & lower leg
714603000	Minor orthopedic trauma - thigh, hip & pelvis
714604000	Minor orthopedic trauma - hand, wrist & forearm
714605000	Minor orthopedic trauma - elbow & upper arm
714606000	Minor orthopedic trauma - shoulder
714608000	Minor orthopedic trauma - back
714609000	Minor orthopedic trauma - trunk
714611000	Minor orthopedic trauma - neck, w/o surgery
714612000	Minor orthopedic trauma - unspecified
714801000	Bursitis & tendinitis - foot & ankle, w/o surgery
714801001	Bursitis & tendinitis - foot & ankle, with surgery
714802000	Bursitis & tendinitis - knee & L leg, w/o surgery
714802001	Bursitis & tendinitis - knee & L leg, with surgery
714803000	Bursitis & tendinitis - thigh, hip & pelvis, w/o surgery
714803001	Bursitis & tendinitis - thigh, hip & pelvis, with surgery

ETG_CD	ETG_FUL_LONG_DESC
714804000	Bursitis & tendinitis - hand, wrist & forearm, w/o surgery
714804001	Bursitis & tendinitis - hand, wrist & forearm, with surgery
714805000	Bursitis & tendinitis - elbow & upper arm, w/o surgery
714805001	Bursitis & tendinitis - elbow & upper arm, with surgery
714806000	Bursitis & tendinitis - shoul, w/o complication, w/o surgery
714806001	Bursitis & tendinitis - shoul, w/o complication, with surgery
714806100	Bursitis & tendinitis - shoul, with complication, w/o surgery
714806101	Bursitis & tendinitis - shoul, with complication, with surgery
714812000	Bursitis & tendinitis - unspecified, w/o surgery
714812001	Bursitis & tendinitis - unspecified, with surgery
714901000	Other minor orthopedic disorders - foot & ankle
714902000	Other minor orthopedic disorders - knee & lower leg
714903000	Other minor orthopedic disorders - thigh, hip & pelvis
714904000	Other minor orthopedic disorders - hand, wrist & forearm
714905000	Other minor orthopedic disorders - elbow & upper arm
714906000	Other minor orthopedic disorders - shoulder
714908000	Other minor orthopedic disorders - back
714911000	Other minor orthopedic diss - neck, w/o surgery
714912000	Other minor orthopedic disorders - unspecified
715101000	Orthopedic deformity - foot & ankle, w/o surgery
715101001	Orthopedic deformity - foot & ankle, with surgery
715102000	Orthopedic deformity - knee & L leg, w/o surgery
715102001	Orthopedic deformity - knee & lower leg, with surgery
715103000	Orthopedic deformity - thigh, hip & pelvis, w/o surgery
715103001	Orthopedic deformity - thigh, hip & pelvis, with surgery
715104000	Orthopedic deformity - hand, wrist & forearm, w/o surgery
715104001	Orthopedic deformity - hand, wrist & forearm, with surgery
715105000	Orthopedic deformity - elbow & upper arm, w/o surgery
715105001	Orthopedic deformity - elbow & upper arm, with surgery
715106000	Orthopedic deformity - shoulder, w/o surgery
715106001	Orthopedic deformity - shoulder, with surgery
715108000	Orthopedic deformity - back, w/o surgery
715108001	Orthopedic deformity - back, with surgery
715109000	Orthopedic deformity - trunk, w/o surgery
715109001	Orthopedic deformity - trunk, with surgery
715111000	Orthopedic deformity - neck, w/o surgery
715111001	Orthopedic deformity - neck, with surgery
715112000	Orthopedic deformity - unspecified, w/o surgery
715112001	Orthopedic deformity - unspecified, with surgery
719901000	Orthopedic signs & symptoms - foot & ankle
719902000	Orthopedic signs & symptoms - knee & lower leg
719903000	Orthopedic signs & symptoms - thigh, hip & pelvis
719904000	Orthopedic signs & symptoms - hand, wrist & forearm
719905000	Orthopedic signs & symptoms - elbow & upper arm
719906000	Orthopedic signs & symptoms - shoulder
719908000	Orthopedic signs & symptoms - back
719911000	Orthopedic signs & symptoms - neck, w/o surgery
719912000	Orthopedic signs & symptoms - unspecified
779700000	Conditional exam

## Otolaryngology

ETG_CD	ETG_FUL_LONG_DESC
319900000	Neurological diseases signs & symptoms
402000000	Infections of oral cavity, w/o surgery
402200000	Inflammation of oral cavity, w/o surgery
402200001	Inflammation of oral cavity, with surgery
402400000	Trauma of oral cavity, w/o surgery
402900000	Otitis media, w/o complication, w/o comorbidity, w/o surgery
402900001	Otitis media, w/o complication, w/o comorbidity, with minor surgery
402900003	Otitis media, w/o complication, w/o comorbidity, with major surgery
402900100	Otitis media, with complication, w/o comorbidity, w/o surgery
402900101	Otitis media, with complication, w/o comorbidity, with minor surgery
402900103	Otitis media, with complication, w/o comorbidity, with major surgery
402900110	Otitis media, with complication, with comorbidity, w/o surgery
402900111	Otitis media, with complication, with comorbidity, with minor surgery
402900113	Otitis media, with complication, with comorbidity, with major surgery
403100000	Tonsillitis, adenoiditis or pharyngitis, w/o complication, w/o comorbidity, w/o surgery
403100001	Tonsillitis, adenoiditis or pharyngitis, w/o complication, w/o comorbidity, with surgery
403100010	Tonsillitis, adenoiditis or pharyngitis, w/o complication, with comorbidity, w/o surgery
403100011	Tonsillitis, adenoiditis or pharyngitis, w/o complication, with comorbidity, with surgery
403100100	Tonsillitis, adenoiditis or pharyngitis, with complication, w/o comorbidity, w/o surgery
403100101	Tonsillitis, adenoiditis or pharyngitis, with complication, w/o comorbidity, with surgery
403100110	Tonsillitis, adenoiditis or pharyngitis, with complication, with comorbidity, w/o surgery
403100111	Tonsillitis, adenoiditis or pharyngitis, with complication, with comorbidity, with surgery
403200000	Allergic rhinitis, w/o surgery
403200001	Allergic rhinitis, with surgery
403300000	Acute sinusitis, w/o surgery
403500000	Chronic sinusitis, w/o comorbidity, w/o surgery
403500001	Chronic sinusitis, w/o comorbidity, with surgery
403500010	Chronic sinusitis, with comorbidity, w/o surgery
403500011	Chronic sinusitis, with comorbidity, with surgery
403700000	Other infections of ear/nose/throat, w/o surgery
403700001	Other infections of ear/nose/throat, with surgery
404100000	Other inflammatory conditions of ear/nose/throat, w/o complication, w/o comorbidity, w/o surgery
404100001	Other inflammatory conditions of ear/nose/throat, w/o complication, w/o comorbidity, with surgery
404100010	Other inflammatory conditions of ear/nose/throat, w/o complication, with comorbidity, w/o surgery
404100011	Other inflammatory conditions of ear/nose/throat, w/o complication, with comorbidity, with surgery
404100100	Other inflammatory conditions of ear/nose/throat, with complication, w/o comorbidity, w/o surgery
404100101	Other inflammatory conditions of ear/nose/throat, with complication, w/o comorbidity, with surgery
404100110	Other inflammatory conditions of ear/nose/throat, with complication, with comorbidity, w/o surgery
404100111	Other inflammatory conditions of ear/nose/throat, with complication, with comorbidity, with surgery
404300000	Malignant neoplasm of ear/nose/throat, w/o surgery, w/o active mgmt
404300001	Malignant neoplasm of ear/nose/throat, with surgery, w/o active mgmt
404500000	Non-malignant neoplasm of ear/nose/throat, w/o surgery
404500001	Non-malignant neoplasm of ear/nose/throat, with surgery
404700000	Congenital & acquired anomalies of ear/nose/throat, w/o surgery
404700001	Congenital & acquired anomalies of ear/nose/throat, with surgery
404900000	Hearing disorders, w/o surgery
404900001	Hearing disorders, with surgery
405100000	Trauma to ear/nose/throat, w/o surgery
405100001	Trauma to ear/nose/throat, with surgery
405300000	Other disorders of ear/nose/throat, w/o surgery
405300001	Other disorders of ear/nose/throat, with surgery
409900000	Otolaryngology diseases signs & symptoms
667200000	Bacterial infection of skin, w/o complication, w/o comorbidity

ETG_CD	ETG_FUL_LONG_DESC
667200010	Bacterial infection of skin, w/o complication, with comorbidity
667200100	Bacterial infection of skin, with complication, w/o comorbidity
667200110	Bacterial infection of skin, with complication, with comorbidity
667500000	Fungal skin infection
667800000	Other inflammation of skin, w/o complication, w/o comorbidity
667800010	Other inflammation of skin, w/o complication, with comorbidity
668000000	Malignant neoplasm of skin, major, w/o comorbidity, w/o surgery, w/o active mgmt
668000001	Malignant neoplasm of skin, major, w/o comorbidity, with surgery, w/o active mgmt
668000010	Malignant neoplasm of skin, major, with comorbidity, w/o surgery, w/o active mgmt
668000011	Malignant neoplasm of skin, major, with comorbidity, with surgery, w/o active mgmt
668200000	Non-malignant neoplasm of skin, w/o complication, w/o surgery
668200001	Non-malignant neoplasm of skin, w/o complication, with surgery
779400000	Routine exam
779700000	Conditional exam
869900000	Isolated signs, symptoms & non-specific diagnoses or conditions

## Plastic Surgery

ETG_CD	ETG_FUL_LONG_DESC
317500000	Carpal tunnel syndrome, w/o surgery
317500001	Carpal tunnel syndrome, with surgery
350900000	Malignant neoplasm of eye, external, w/o surgery
350900001	Malignant neoplasm of eye, external, with surgery
351900000	Trauma of eye, w/o surgery
351900001	Trauma of eye, with surgery
390600000	Varicose veins of lower extremity, w/o surgery
390600001	Varicose veins of lower extremity, with surgery
402400001	Trauma of oral cavity, with surgery
404100100	Other inflammatory conditions of ear/nose/throat, with complication, w/o comorbidity, w/o surgery
404300000	Malignant neoplasm of ear/nose/throat, w/o surgery, w/o active mgmt
404700000	Congenital & acquired anomalies of ear/nose/throat, w/o surgery
404700001	Congenital & acquired anomalies of ear/nose/throat, with surgery
405100000	Trauma to ear/nose/throat, w/o surgery
405100001	Trauma to ear/nose/throat, with surgery
409900000	Otolaryngology diseases signs & symptoms
635600000	Malignant neoplasm of breast, w/o complication, w/o comorbidity, w/o surgery, w/o active mgmt
635600001	Malignant neoplasm of breast, w/o complication, w/o comorbidity, with surgery, w/o active mgmt
635600010	Malignant neoplasm of breast, w/o complication, with comorbidity, w/o surgery, w/o active mgmt
635600011	Malignant neoplasm of breast, w/o complication, with comorbidity, with surgery, w/o active mgmt
635800000	Non-malignant neoplasm of breast, w/o complication, w/o surgery
635800001	Non-malignant neoplasm of breast, w/o complication, with surgery
635800100	Non-malignant neoplasm of breast, with complication, w/o surgery
635800101	Non-malignant neoplasm of breast, with complication, with surgery
636000000	Other disorders of breast, w/o surgery
636000001	Other disorders of breast, with surgery
667200000	Bacterial infection of skin, w/o complication, w/o comorbidity
667200010	Bacterial infection of skin, w/o complication, with comorbidity
667200100	Bacterial infection of skin, with complication, w/o comorbidity
667200110	Bacterial infection of skin, with complication, with comorbidity
667800000	Other inflammation of skin, w/o complication, w/o comorbidity
667800010	Other inflammation of skin, w/o complication, with comorbidity
667800100	Other inflammation of skin, with complication, w/o comorbidity

ETG_CD	ETG_FUL_LONG_DESC
667800110	Other inflammation of skin, with complication, with comorbidity
668000000	Malignant neoplasm of skin, major, w/o comorbidity, w/o surgery, w/o active mgmt
668000001	Malignant neoplasm of skin, major, w/o comorbidity, with surgery, w/o active mgmt
668000010	Malignant neoplasm of skin, major, with comorbidity, w/o surgery, w/o active mgmt
668000011	Malignant neoplasm of skin, major, with comorbidity, with surgery, w/o active mgmt
668200000	Non-malignant neoplasm of skin, w/o complication, w/o surgery
668200001	Non-malignant neoplasm of skin, w/o complication, with surgery
668200100	Non-malignant neoplasm of skin, with complication, w/o surgery
668200101	Non-malignant neoplasm of skin, with complication, with surgery
668901000	Op wound - foot & ankle, w/o complication, w/o surgery
668901001	Op wound - foot & ankle, w/o complication, with surgery
668901100	Op wound - foot & ankle, with complication, w/o surgery
668901101	Open wound - foot & ankle, with complication, with surgery
668902000	Op wound - lower leg, w/o complication, w/o surgery
668902001	Open wound - lower leg, w/o complication, with surgery
668902100	Open wound - lower leg, with complication, w/o surgery
668902101	Open wound - lower leg, with complication, with surgery
668903000	Op wound - hip & thigh, w/o complication, w/o surgery
668903001	Open wound - hip & thigh, w/o complication, with surgery
668903100	Open wound - hip & thigh, with complication, w/o surgery
668903101	Open wound - hip & thigh, with complication, with surgery
668904000	Op wound - hand & forearm, w/o complication, w/o surgery
668904001	Open wound - hand & forearm, w/o complication, with surgery
668904100	Open wound - hand & forearm, with complication, w/o surgery
668904101	Open wound - hand & forearm, with complication, with surgery
668905000	Op wound - elbow & upper arm, w/o complication, w/o surgery
668905001	Op wound - elbow & upper arm, w/o complication, with surgery
668905100	Op wound - elbow & upper arm, with complication, w/o surgery
668905101	Op wound - elbow & upper arm, with complication, with surgery
668906000	Open wound - shoulder, w/o complication, w/o surgery
668906001	Open wound - shoulder, w/o complication, with surgery
668907000	Op wound - head & face, w/o complication, w/o surgery
668907001	Open wound - head & face, w/o complication, with surgery
668907100	Open wound - head & face, with complication, w/o surgery
668907101	Open wound - head & face, with complication, with surgery
668909000	Open wound - trunk, w/o complication, w/o surgery
668909001	Open wound - trunk, w/o complication, with surgery
668909100	Open wound - trunk, with complication, w/o surgery
668909101	Open wound - trunk, with complication, with surgery
668912000	Op wound - unspecified, w/o complication, w/o surgery
668912001	Op wound - unspecified, w/o complication, with surgery
669001000	Skin trauma, except burn & Op wound - foot & ankle, w/o complication, w/o comorbidity, w/o surgery
669001010	Skin trauma, except burn & Op wound - foot & ankle, w/o complication, with comorbidity, w/o surgery
669002000	Skin trauma, except burn & Op wound - L leg, w/o complication, w/o comorbidity, w/o surgery
669002010	Skin trauma, except burn & Op wound - L leg, w/o complication, with comorbidity, w/o surgery
669003000	Skin trauma, except burn & Op wound - hip & thigh, w/o complication, w/o comorbidity, w/o surgery
669003010	Skin trauma, except burn & Op wound - hip & thigh, w/o complication, with comorbidity, w/o surgery
669004000	Skin trauma, except burn & Op wound - hand & forearm, w/o complication, w/o surgery
669005000	Skin trauma, except burn & Op wound - elbow & upper arm, w/o complication, w/o surgery
669006000	Skin trauma, except burn & Op wound - shoulder, w/o complication, w/o surgery
669007000	Skin trauma, except burn & Op wound - head & face, w/o complication, w/o comorbidity, w/o surgery
669007010	Skin trauma, except burn & Op wound - head & face, w/o complication, with comorbidity, w/o surgery
669009000	Skin trauma, except burn & Op wound - trunk, w/o complication, w/o comorbidity, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
669009010	Skin trauma, except burn & Op wound - trunk, w/o complication, with comorbidity, w/o surgery
669010000	Skin trauma, except burn & Op wound - other, w/o complication, w/o surgery
669012000	Skin trauma, except burn & Op wound - unspecified, w/o complication, w/o surgery
669100000	Other skin disorders, w/o surgery
669100001	Other skin disorders, with surgery
712201000	Joint degeneration, localized - foot & ankle, w/o surgery
712201001	Joint degeneration, localized - foot & ankle, with surgery
712202000	Joint degeneration, localized - knee & L leg, w/o complication, w/o comorbidity, w/o surgery
712202010	Joint degeneration, localized - knee & L leg, w/o complication, with comorbidity, w/o surgery
712202011	Joint degeneration, localized - knee & L leg, w/o complication, with comorbidity, with surgery
712203000	Joint degeneration, localized - thigh, hip & pelvis, w/o complication, w/o comorbidity, w/o surgery
712203010	Joint degeneration, localized - thigh, hip & pelvis, w/o complication, with comorbidity, w/o surgery
712204000	Joint degeneration, localized - hand, wrist & forearm, w/o surgery
712204001	Joint degeneration, localized - hand, wrist & forearm, with surgery
712205000	Joint degeneration, localized - elbow & upper arm, w/o surgery
712206000	Joint degeneration, localized - shoulder, w/o surgery
712208000	Joint degeneration, localized - back, w/o complication, w/o comorbidity, w/o surgery
712208001	Joint degeneration, localized - back, w/o complication, w/o comorbidity, with surgery
712208010	Joint degeneration, localized - back, w/o complication, with comorbidity, w/o surgery
712208011	Joint degeneration, localized - back, w/o complication, with comorbidity, with surgery
712208100	Joint degeneration, localized - back, with complication, w/o comorbidity, w/o surgery
712208101	Joint degeneration, localized - back, with complication, w/o comorbidity, with surgery
712208110	Joint degeneration, localized - back, with complication, with comorbidity, w/o surgery
712208111	Joint degeneration, localized - back, with complication, with comorbidity, with surgery
712211000	Joint degeneration, localized - neck, w/o complication, w/o comorbidity, w/o surgery
712211001	Joint degeneration, localized - neck, w/o complication, w/o comorbidity, with surgery
712211010	Joint degeneration, localized - neck, w/o complication, with comorbidity, w/o surgery
712211011	Joint degeneration, localized - neck, w/o complication, with comorbidity, with surgery
712211110	Joint degeneration, localized - neck, with complication, with comorbidity, w/o surgery
712212000	Joint degeneration, localized - unspecified, w/o surgery
712904000	Open fracture or dislocation of upper extremity - hand, wrist & forearm
712905000	Open fracture or dislocation of upper extremity - elbow & upper arm
712907000	Open fracture or dislocation - head & face
713104100	Cl fracture or dislocation of upper extremity - hand, wrist & forearm, with complication, w/o comorbidity, w/o surgery
713104101	Cl fracture or dislocation of upper extremity - hand, wrist & forearm, with complication, w/o comorbidity, with surgery
713104110	Cl fracture or dislocation of upper extremity - hand, wrist & forearm, with complication, with comorbidity, w/o surgery
713104111	Cl fracture or dislocation of upper extremity - hand, wrist & forearm, with complication, with comorbidity, with surgery
713107000	Closed fracture or dislocation - head & face, w/o surgery
713107001	Closed fracture or dislocation - head & face, with surgery
714000000	Non-malignant neoplasm of bone & connective tissue, head & neck, w/o surgery
714000001	Non-malignant neoplasm of bone & connective tissue, head & neck, with surgery
714100000	Non-malignant neoplasm of bone & connective tissue, other than head & neck, w/o surgery
714100001	Non-malignant neoplasm of bone & connective tissue, other than head & neck, with surgery
714301000	Joint derangement - foot & ankle, w/o surgery
714301001	Joint derangement - foot & ankle, with surgery
714302000	Joint derangement - knee & lower leg, w/o surgery
714303000	Joint derangement - thigh, hip & pelvis, w/o surgery
714304000	Joint derangement - hand, wrist & forearm, w/o surgery
714304001	Joint derangement - hand, wrist & forearm, with surgery
714305000	Joint derangement - elbow & upper arm, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
714312000	Joint derangement - unspecified, w/o surgery
714312001	Joint derangement - unspecified, with surgery
714504001	Major trauma, other than fracture or dislocation - hand, wrist & forearm, with surgery
714601000	Minor orthopedic trauma - foot & ankle
714602000	Minor orthopedic trauma - knee & lower leg
714603000	Minor orthopedic trauma - thigh, hip & pelvis
714604000	Minor orthopedic trauma - hand, wrist & forearm
714605000	Minor orthopedic trauma - elbow & upper arm
714606000	Minor orthopedic trauma - shoulder
714607000	Minor orthopedic trauma - head & face
714608000	Minor orthopedic trauma - back
714609000	Minor orthopedic trauma - trunk
714611000	Minor orthopedic trauma - neck, w/o surgery
714612000	Minor orthopedic trauma - unspecified
714901000	Other minor orthopedic disorders - foot & ankle
714902000	Other minor orthopedic disorders - knee & lower leg
714903000	Other minor orthopedic disorders - thigh, hip & pelvis
714904000	Other minor orthopedic disorders - hand, wrist & forearm
714906000	Other minor orthopedic disorders - shoulder
714908000	Other minor orthopedic disorders - back
714911000	Other minor orthopedic diss - neck, w/o surgery
714912000	Other minor orthopedic disorders - unspecified
715101000	Orthopedic deformity - foot & ankle, w/o surgery
715101001	Orthopedic deformity - foot & ankle, with surgery
715102000	Orthopedic deformity - knee & L leg, w/o surgery
715103000	Orthopedic deformity - thigh, hip & pelvis, w/o surgery
715103001	Orthopedic deformity - thigh, hip & pelvis, with surgery
715104000	Orthopedic deformity - hand, wrist & forearm, w/o surgery
715104001	Orthopedic deformity - hand, wrist & forearm, with surgery
715105000	Orthopedic deformity - elbow & upper arm, w/o surgery
715107000	Orthopedic deformity - head & face, w/o surgery
715107001	Orthopedic deformity - head & face, with surgery
715108000	Orthopedic deformity - back, w/o surgery
715108001	Orthopedic deformity - back, with surgery
715109000	Orthopedic deformity - trunk, w/o surgery
715109001	Orthopedic deformity - trunk, with surgery
715111000	Orthopedic deformity - neck, w/o surgery
715111001	Orthopedic deformity - neck, with surgery
715112000	Orthopedic deformity - unspecified, w/o surgery
715112001	Orthopedic deformity - unspecified, with surgery
779400000	Routine exam
779700000	Conditional exam
779800000	Major specific procedures not classified elsewhere
821000000	Late effects & late complications
869900000	Isolated signs, symptoms & non-specific diagnoses or conditions

## Surgery

ETG_CD	ETG_FUL_LONG_DESC
162100001	Hyper-functioning thyroid gland, with surgery
162200001	Hypo-functioning thyroid gland, w/o complication, with surgery
162400001	Malignant neoplasm of thyroid gland, with surgery, w/o active mgmt

ETG_CD	ETG_FUL_LONG_DESC
163900001	Hyper-functioning parathyroid gland, with surgery
164800000	Obesity, w/o complication, w/o surgery
164800001	Obesity, w/o complication, with surgery
164800100	Obesity, with complication, w/o surgery
164800101	Obesity, with complication, with surgery
316000001	Cerebral vascular accident, w/o complication, w/o comorbidity, with surgery
316000011	Cerebral vascular accident, w/o complication, with comorbidity, with surgery
387000000	Aortic aneurysm, w/o complication, w/o surgery
387000001	Aortic aneurysm, w/o complication, with surgery
387000100	Aortic aneurysm, with complication, w/o surgery
387000101	Aortic aneurysm, with complication, with surgery
389000000	Arterial inflammation, w/o complication, w/o comorbidity, w/o surgery
389000001	Arterial inflammation, w/o complication, w/o comorbidity, with surgery
389000010	Arterial inflammation, w/o complication, with comorbidity, w/o surgery
389000011	Arterial inflammation, w/o complication, with comorbidity, with surgery
389200000	Arterial embolism/thrombosis, w/o surgery
389200001	Arterial embolism/thrombosis, with surgery
389500000	Atherosclerosis, w/o complication, w/o comorbidity, w/o surgery
389500001	Atherosclerosis, w/o complication, w/o comorbidity, with surgery
389500010	Atherosclerosis, w/o complication, with comorbidity, w/o surgery
389500011	Atherosclerosis, w/o complication, with comorbidity, with surgery
389500100	Atherosclerosis, with complication, w/o comorbidity, w/o surgery
389500101	Atherosclerosis, with complication, w/o comorbidity, with surgery
389500110	Atherosclerosis, with complication, with comorbidity, w/o surgery
389500111	Atherosclerosis, with complication, with comorbidity, with surgery
389700000	Arterial aneurysm, except aorta, w/o surgery
389700001	Arterial aneurysm, except aorta, with surgery
390300000	Embolism & thrombosis of veins, w/o complication, w/o surgery
390300001	Embolism & thrombosis of veins, w/o complication, with surgery
390300101	Embolism & thrombosis of veins, with complication, with surgery
390500000	Phlebitis & thrombophlebitis of veins, w/o surgery
390500001	Phlebitis & thrombophlebitis of veins, with surgery
390600000	Varicose veins of lower extremity, w/o surgery
390600001	Varicose veins of lower extremity, with surgery
390700000	Other minor inflammatory diseases of veins, w/o surgery
390700001	Other minor inflammatory diseases of veins, with surgery
391000000	Other diseases of veins, w/o surgery
391000001	Other diseases of veins, with surgery
473300000	Inflammation of esophagus, w/o complication, w/o comorbidity, w/o surgery
473300001	Inflammation of esophagus, w/o complication, w/o comorbidity, with surgery
473300010	Inflammation of esophagus, w/o complication, with comorbidity, w/o surgery
473300011	Inflammation of esophagus, w/o complication, with comorbidity, with surgery
473300100	Inflammation of esophagus, with complication, w/o comorbidity, w/o surgery
473300110	Inflammation of esophagus, with complication, with comorbidity, w/o surgery
474700000	Appendicitis, w/o complication
474700100	Appendicitis, with complication
474900000	Diverticulitis, w/o complication, w/o comorbidity, w/o surgery
474900001	Diverticulitis, w/o complication, w/o comorbidity, with surgery
474900010	Diverticulitis, w/o complication, with comorbidity, w/o surgery
474900011	Diverticulitis, w/o complication, with comorbidity, with surgery
474900100	Diverticulitis, with complication, w/o comorbidity, w/o surgery
474900101	Diverticulitis, with complication, w/o comorbidity, with surgery
474900110	Diverticulitis, with complication, with comorbidity, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
474900111	Diverticulitis, with complication, with comorbidity, with surgery
475200000	Other inflammation of intestines & abdomen, w/o complication, w/o comorbidity, w/o surgery
475200001	Other inflammation of intestines & abdomen, w/o complication, w/o comorbidity, with surgery
475200010	Other inflammation of intestines & abdomen, w/o complication, with comorbidity, w/o surgery
475200011	Other inflammation of intestines & abdomen, w/o complication, with comorbidity, with surgery
475200100	Other inflammation of intestines & abdomen, with complication, w/o comorbidity, w/o surgery
475200101	Other inflammation of intestines & abdomen, with complication, w/o comorbidity, with surgery
475200110	Other inflammation of intestines & abdomen, with complication, with comorbidity, w/o surgery
475200111	Other inflammation of intestines & abdomen, with complication, with comorbidity, with surgery
475300100	Inflammatory bowel disease, with complication, w/o comorbidity, w/o surgery
475300101	Inflammatory bowel disease, with complication, w/o comorbidity, with surgery
475300110	Inflammatory bowel disease, with complication, with comorbidity, w/o surgery
475300111	Inflammatory bowel disease, with complication, with comorbidity, with surgery
475400000	Malignant neoplasm of large intestine, w/o comorbidity, w/o surgery, w/o active mgmt
475400001	Malignant neoplasm of large intestine, w/o comorbidity, with surgery, w/o active mgmt
475400010	Malignant neoplasm of large intestine, with comorbidity, w/o surgery, w/o active mgmt
475400011	Malignant neoplasm of large intestine, with comorbidity, with surgery, w/o active mgmt
475500001	Malignant neoplasm of small intestine & abdomen, with surgery, w/o active mgmt
475600000	Non-malignant neoplasm of intestines & abdomen, w/o surgery
475600001	Non-malignant neoplasm of intestines & abdomen, with surgery
476100000	Vascular diseases of intestines & abdomen, w/o surgery
476100001	Vascular diseases of intestines & abdomen, with surgery
476300000	Bowel obstruction, w/o complication, w/o surgery
476300001	Bowel obstruction, w/o complication, with surgery
476300100	Bowel obstruction, with complication, w/o surgery
476300101	Bowel obstruction, with complication, with surgery
476600000	Hernias, except hiatal, w/o complication, w/o surgery
476600001	Hernias, except hiatal, w/o complication, with surgery
476600100	Hernias, except hiatal, with complication, w/o surgery
476600101	Hernias, except hiatal, with complication, with surgery
476800000	Hiatal hernia, w/o surgery
476800001	Hiatal hernia, with surgery
476900000	Other diseases of intestines & abdomen, w/o surgery
476900001	Other diseases of intestines & abdomen, with surgery
477100000	Infection of rectum or anus, w/o surgery
477100001	Infection of rectum or anus, with surgery
477400000	Hemorrhoids, w/o complication, w/o surgery
477400001	Hemorrhoids, w/o complication, with surgery
477400100	Hemorrhoids, with complication, w/o surgery
477400101	Hemorrhoids, with complication, with surgery
477600000	Inflammation of rectum or anus, w/o surgery
477600001	Inflammation of rectum or anus, with surgery
477800000	Malignant neoplasm of rectum or anus, w/o comorbidity, w/o surgery, w/o active mgmt
477800001	Malignant neoplasm of rectum or anus, w/o comorbidity, with surgery, w/o active mgmt
477800010	Malignant neoplasm of rectum or anus, with comorbidity, w/o surgery, w/o active mgmt
477800011	Malignant neoplasm of rectum or anus, with comorbidity, with surgery, w/o active mgmt
478000000	Non-malignant neoplasm of rectum or anus, w/o surgery
478000001	Non-malignant neoplasm of rectum or anus, with surgery
478500000	Other diseases & disorders of rectum & anus, w/o surgery
478500001	Other diseases & disorders of rectum & anus, with surgery
479900000	Gastroenterology diseases signs & symptoms
521900001	Acute pancreatitis, with surgery
522000001	Chronic pancreatitis, with surgery

ETG_CD	ETG_FUL_LONG_DESC
522300000	Cholelithiasis, w/o complication, w/o comorbidity, w/o surgery
522300001	Cholelithiasis, w/o complication, w/o comorbidity, with surgery
522300010	Cholelithiasis, w/o complication, with comorbidity, w/o surgery
522300011	Cholelithiasis, w/o complication, with comorbidity, with surgery
522300100	Cholelithiasis, with complication, w/o comorbidity, w/o surgery
522300101	Cholelithiasis, with complication, w/o comorbidity, with surgery
522300110	Cholelithiasis, with complication, with comorbidity, w/o surgery
522300111	Cholelithiasis, with complication, with comorbidity, with surgery
522500001	Malignant neoplasm of hepatobiliary system, with surgery, w/o active mgmt
522700001	Non-malignant neoplasm of hepatobiliary system, with surgery
523200001	Other diseases of hepatobiliary system, with surgery
635600000	Malignant neoplasm of breast, w/o complication, w/o comorbidity, w/o surgery, w/o active mgmt
635600001	Malignant neoplasm of breast, w/o complication, w/o comorbidity, with surgery, w/o active mgmt
635600010	Malignant neoplasm of breast, w/o complication, with comorbidity, w/o surgery, w/o active mgmt
635600011	Malignant neoplasm of breast, w/o complication, with comorbidity, with surgery, w/o active mgmt
635800000	Non-malignant neoplasm of breast, w/o complication, w/o surgery
635800001	Non-malignant neoplasm of breast, w/o complication, with surgery
635800100	Non-malignant neoplasm of breast, with complication, w/o surgery
635800101	Non-malignant neoplasm of breast, with complication, with surgery
636000000	Other disorders of breast, w/o surgery
636000001	Other disorders of breast, with surgery
639900000	Gynecological signs & symptoms
667200000	Bacterial infection of skin, w/o complication, w/o comorbidity
667200010	Bacterial infection of skin, w/o complication, with comorbidity
667200100	Bacterial infection of skin, with complication, w/o comorbidity
667200110	Bacterial infection of skin, with complication, with comorbidity
667800000	Other inflammation of skin, w/o complication, w/o comorbidity
667800010	Other inflammation of skin, w/o complication, with comorbidity
667800100	Other inflammation of skin, with complication, w/o comorbidity
667800110	Other inflammation of skin, with complication, with comorbidity
668000000	Malignant neoplasm of skin, major, w/o complication, w/o surgery, w/o active mgmt
668000001	Malignant neoplasm of skin, major, w/o complication, with surgery, w/o active mgmt
668000010	Malignant neoplasm of skin, major, with comorbidity, w/o surgery, w/o active mgmt
668000011	Malignant neoplasm of skin, major, with comorbidity, with surgery, w/o active mgmt
668200000	Non-malignant neoplasm of skin, w/o complication, w/o surgery
668200001	Non-malignant neoplasm of skin, w/o complication, with surgery
668200100	Non-malignant neoplasm of skin, with complication, w/o surgery
668200101	Non-malignant neoplasm of skin, with complication, with surgery
668901000	Op wound - foot & ankle, w/o complication, w/o surgery
668901001	Op wound - foot & ankle, w/o complication, with surgery
668901100	Op wound - foot & ankle, with complication, w/o surgery
668901101	Open wound - foot & ankle, with complication, with surgery
668902000	Op wound - lower leg, w/o complication, w/o surgery
668902001	Open wound - lower leg, w/o complication, with surgery
668902100	Open wound - lower leg, with complication, w/o surgery
668902101	Open wound - lower leg, with complication, with surgery
668903000	Op wound - hip & thigh, w/o complication, w/o surgery
668903001	Open wound - hip & thigh, w/o complication, with surgery
668903100	Open wound - hip & thigh, with complication, w/o surgery
668903101	Open wound - hip & thigh, with complication, with surgery
668904000	Op wound - hand & forearm, w/o complication, w/o surgery
668904001	Open wound - hand & forearm, w/o complication, with surgery
668904100	Open wound - hand & forearm, with complication, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
668904101	Open wound - hand & forearm, with complication, with surgery
668905000	Op wound - elbow & upper arm, w/o complication, w/o surgery
668905001	Op wound - elbow & upper arm, w/o complication, with surgery
668905100	Op wound - elbow & upper arm, with complication, w/o surgery
668905101	Op wound - elbow & upper arm, with complication, with surgery
668906000	Open wound - shoulder, w/o complication, w/o surgery
668906001	Open wound - shoulder, w/o complication, with surgery
668907000	Op wound - head & face, w/o complication, w/o surgery
668907001	Open wound - head & face, w/o complication, with surgery
668907100	Open wound - head & face, with complication, w/o surgery
668907101	Open wound - head & face, with complication, with surgery
668909000	Open wound - trunk, w/o complication, w/o surgery
668909001	Open wound - trunk, w/o complication, with surgery
668909100	Open wound - trunk, with complication, w/o surgery
668909101	Open wound - trunk, with complication, with surgery
668912000	Op wound - unspecified, w/o complication, w/o surgery
668912001	Op wound - unspecified, w/o complication, with surgery
669001000	Skin trauma, except burn & Op wound - foot & ankle, w/o complication, w/o comorbidity, w/o surgery
669001010	Skin trauma, except burn & Op wound - foot & ankle, w/o complication, with comorbidity, w/o surgery
669002000	Skin trauma, except burn & Op wound - L leg, w/o complication, w/o comorbidity, w/o surgery
669002010	Skin trauma, except burn & Op wound - L leg, w/o complication, with comorbidity, w/o surgery
669003000	Skin trauma, except burn & Op wound - hip & thigh, w/o complication, w/o comorbidity, w/o surgery
669003010	Skin trauma, except burn & Op wound - hip & thigh, w/o complication, with comorbidity, w/o surgery
669004000	Skin trauma, except burn & Op wound - hand & forearm, w/o complication, w/o surgery
669005000	Skin trauma, except burn & Op wound - elbow & upper arm, w/o complication, w/o surgery
669006000	Skin trauma, except burn & Op wound - shoulder, w/o complication, w/o surgery
669007000	Skin trauma, except burn & Op wound - head & face, w/o complication, w/o comorbidity, w/o surgery
669007010	Skin trauma, except burn & Op wound - head & face, w/o complication, with comorbidity, w/o surgery
669009000	Skin trauma, except burn & Op wound - trunk, w/o complication, w/o comorbidity, w/o surgery
669009010	Skin trauma, except burn & Op wound - trunk, w/o complication, with comorbidity, w/o surgery
669010000	Skin trauma, except burn & Op wound - other, w/o complication, w/o surgery
669012000	Skin trauma, except burn & Op wound - unspecified, w/o complication, w/o surgery
779400000	Routine exam
779700000	Conditional exam
821000000	Late effects & late complications
869900000	Isolated signs, symptoms & non-specific diagnoses or conditions

## Urology

ETG_CD	ETG_FUL_LONG_DESC
164400000	Male sex gland disorders, w/o surgery
164400001	Male sex gland disorders, with surgery
390700000	Other minor inflammatory diseases of veins, w/o surgery
390700001	Other minor inflammatory diseases of veins, with surgery
587100000	Infection of upper genitourinary system, w/o surgery
587400000	Infection of lower genitourinary system, not sexually transmitted, w/o complication, w/o comorbidity
587400010	Infection of lower genitourinary system, not sexually transmitted, w/o complication, with comorbidity
587400100	Infection of lower genitourinary system, not sexually transmitted, with complication, w/o comorbidity
587400110	Infection of lower genitourinary system, not sexually transmitted, with complication, with comorbidity
587800000	Kidney stones, w/o complication, w/o comorbidity, w/o surgery
587800010	Kidney stones, w/o complication, with comorbidity, w/o surgery
587800100	Kidney stones, with complication, w/o comorbidity, w/o surgery

ETG_CD	ETG_FUL_LONG_DESC
587800101	Kidney stones, with complication, w/o comorbidity, with surgery
587800110	Kidney stones, with complication, with comorbidity, w/o surgery
587800111	Kidney stones, with complication, with comorbidity, with surgery
588000000	Inflammation of genitourinary system, except kidney stones, w/o complication, w/o comorbidity, w/o surgery
588000001	Inflammation of genitourinary system, except kidney stones, w/o complication, w/o comorbidity, with surgery
588000010	Inflammation of genitourinary system, except kidney stones, w/o complication, with comorbidity, w/o surgery
588000011	Inflammation of genitourinary system, except kidney stones, w/o complication, with comorbidity, with surgery
588000100	Inflammation of genitourinary system, except kidney stones, with complication, w/o comorbidity, w/o surgery
588000101	Inflammation of genitourinary system, except kidney stones, with complication, w/o comorbidity, with surgery
588000110	Inflammation of genitourinary system, except kidney stones, with complication, with comorbidity, w/o surgery
588000111	Inflammation of genitourinary system, except kidney stones, with complication, with comorbidity, with surgery
588200000	Malignant neoplasm of prostate, w/o comorbidity, w/o surgery, w/o active mgmt
588200001	Malignant neoplasm of prostate, w/o comorbidity, with surgery, w/o active mgmt
588200010	Malignant neoplasm of prostate, with comorbidity, w/o surgery, w/o active mgmt
588200011	Malignant neoplasm of prostate, with comorbidity, with surgery, w/o active mgmt
588400000	Non-malignant neoplasm of prostate, w/o surgery
588400001	Non-malignant neoplasm of prostate, with surgery
588600000	Malignant neoplasm of genitourinary system, except prostate, w/o surgery, w/o active mgmt
588600001	Malignant neoplasm of genitourinary system, except prostate, with surgery, w/o active mgmt
588800000	Non-malignant neoplasm of genitourinary system, except prostate, w/o surgery
588800001	Non-malignant neoplasm of genitourinary system, except prostate, with surgery
589000000	Trauma to genitourinary system, w/o surgery
589000001	Trauma to genitourinary system, with surgery
589200000	Urinary incontinence, w/o comorbidity, w/o surgery
589200001	Urinary incontinence, w/o comorbidity, with surgery
589200010	Urinary incontinence, with comorbidity, w/o surgery
589200011	Urinary incontinence, with comorbidity, with surgery
589300000	Male infertility, w/o surgery
589300001	Male infertility, with surgery
589500000	Other diseases of genitourinary system, w/o surgery
589500001	Other diseases of genitourinary system, with surgery
589900000	Urological diseases signs & symptoms
635300000	Other diseases of female genital tract, w/o surgery
635300001	Other diseases of female genital tract, with surgery
667300000	Viral skin infection
779400000	Routine exam
779600001	Contraceptive management, with surgery
779700000	Conditional exam

## Vascular Surgery

ETG_CD	ETG_FUL_LONG_DESC
163000000	Diabetes, w/o complication, w/o comorbidity, w/o surgery
163000001	Diabetes, w/o complication, w/o comorbidity, with surgery
163000010	Diabetes, w/o complication, with comorbidity, w/o surgery
163000011	Diabetes, w/o complication, with comorbidity, with surgery

ETG_CD	ETG_FUL_LONG_DESC
164800000	Obesity, w/o complication, w/o surgery
164800100	Obesity, with complication, w/o surgery
164800101	Obesity, with complication, with surgery
316000000	Cerebral vascular accident, w/o complication, w/o comorbidity, w/o surgery
316000001	Cerebral vascular accident, w/o complication, w/o comorbidity, with surgery
316000010	Cerebral vascular accident, w/o complication, with comorbidity, w/o surgery
316000011	Cerebral vascular accident, w/o complication, with comorbidity, with surgery
317700000	Inflammation of non-cranial nerves, except carpal tunnel, w/o complication, w/o surgery
317700001	Inflammation of non-cranial nerves, except carpal tunnel, w/o complication, with surgery
387000000	Aortic aneurysm, w/o complication, w/o surgery
387000001	Aortic aneurysm, w/o complication, with surgery
387000100	Aortic aneurysm, with complication, w/o surgery
387000101	Aortic aneurysm, with complication, with surgery
389000000	Arterial inflammation, w/o complication, w/o comorbidity, w/o surgery
389000001	Arterial inflammation, w/o complication, w/o comorbidity, with surgery
389000010	Arterial inflammation, w/o complication, with comorbidity, w/o surgery
389000011	Arterial inflammation, w/o complication, with comorbidity, with surgery
389000100	Arterial inflammation, with complication, w/o comorbidity, w/o surgery
389000110	Arterial inflammation, with complication, with comorbidity, w/o surgery
389200000	Arterial embolism/thrombosis, w/o surgery
389200001	Arterial embolism/thrombosis, with surgery
389500000	Atherosclerosis, w/o complication, w/o comorbidity, w/o surgery
389500010	Atherosclerosis, w/o complication, with comorbidity, w/o surgery
389500011	Atherosclerosis, w/o complication, with comorbidity, with surgery
389500110	Atherosclerosis, with complication, with comorbidity, w/o surgery
389500111	Atherosclerosis, with complication, with comorbidity, with surgery
389700000	Arterial aneurysm, except aorta, w/o surgery
389700001	Arterial aneurysm, except aorta, with surgery
389800000	Other non-inflammatory arterial diseases, w/o complication, w/o comorbidity, w/o surgery
389800010	Other non-inflammatory arterial diseases, w/o complication, with comorbidity, w/o surgery
390300000	Embolism & thrombosis of veins, w/o complication, w/o surgery
390300001	Embolism & thrombosis of veins, w/o complication, with surgery
390300101	Embolism & thrombosis of veins, with complication, with surgery
390400000	Disorders of lymphatic channels, w/o surgery
390500000	Phlebitis & thrombophlebitis of veins, w/o surgery
390500001	Phlebitis & thrombophlebitis of veins, with surgery
390600000	Varicose veins of lower extremity, w/o surgery
390600001	Varicose veins of lower extremity, with surgery
391000000	Other diseases of veins, w/o surgery
476600000	Hernias, except hiatal, w/o complication, w/o surgery
476600001	Hernias, except hiatal, w/o complication, with surgery
479900000	Gastroenterology diseases signs & symptoms
522300000	Cholelithiasis, w/o complication, w/o comorbidity, w/o surgery
522300101	Cholelithiasis, with complication, w/o comorbidity, with surgery
522300111	Cholelithiasis, with complication, with comorbidity, with surgery
635800000	Non-malignant neoplasm of breast, w/o complication, w/o surgery
635800001	Non-malignant neoplasm of breast, w/o complication, with surgery
635800100	Non-malignant neoplasm of breast, with complication, w/o surgery
635800101	Non-malignant neoplasm of breast, with complication, with surgery
667200000	Bacterial infection of skin, w/o complication, w/o comorbidity
667200010	Bacterial infection of skin, w/o complication, with comorbidity
667200100	Bacterial infection of skin, with complication, w/o comorbidity
667200110	Bacterial infection of skin, with complication, with comorbidity

ETG_CD	ETG_FUL_LONG_DESC
667800000	Other inflammation of skin, w/o complication, w/o comorbidity
667800010	Other inflammation of skin, w/o complication, with comorbidity
667800100	Other inflammation of skin, with complication, w/o comorbidity
667800110	Other inflammation of skin, with complication, with comorbidity
668200000	Non-malignant neoplasm of skin, w/o complication, w/o surgery
668200001	Non-malignant neoplasm of skin, w/o complication, with surgery
668200101	Non-malignant neoplasm of skin, with complication, with surgery
668901000	Op wound - foot & ankle, w/o complication, w/o surgery
668901001	Op wound - foot & ankle, w/o complication, with surgery
668901100	Op wound - foot & ankle, with complication, w/o surgery
668901101	Open wound - foot & ankle, with complication, with surgery
668902000	Op wound - lower leg, w/o complication, w/o surgery
668902001	Open wound - lower leg, w/o complication, with surgery
668902100	Open wound - lower leg, with complication, w/o surgery
668902101	Open wound - lower leg, with complication, with surgery
668903000	Op wound - hip & thigh, w/o complication, w/o surgery
668903001	Open wound - hip & thigh, w/o complication, with surgery
668903100	Open wound - hip & thigh, with complication, w/o surgery
668903101	Open wound - hip & thigh, with complication, with surgery
668904000	Op wound - hand & forearm, w/o complication, w/o surgery
668904001	Open wound - hand & forearm, w/o complication, with surgery
668904100	Open wound - hand & forearm, with complication, w/o surgery
668904101	Open wound - hand & forearm, with complication, with surgery
668905000	Op wound - elbow & upper arm, w/o complication, w/o surgery
668905100	Op wound - elbow & upper arm, with complication, w/o surgery
668905101	Op wound - elbow & upper arm, with complication, with surgery
668907000	Op wound - head & face, w/o complication, w/o surgery
668907001	Open wound - head & face, w/o complication, with surgery
668907100	Open wound - head & face, with complication, w/o surgery
668907101	Open wound - head & face, with complication, with surgery
668909000	Open wound - trunk, w/o complication, w/o surgery
668909001	Open wound - trunk, w/o complication, with surgery
668909100	Open wound - trunk, with complication, w/o surgery
668909101	Open wound - trunk, with complication, with surgery
668912000	Op wound - unspecified, w/o complication, w/o surgery
779400000	Routine exam
779700000	Conditional exam
821000000	Late effects & late complications
869900000	Isolated signs, symptoms & non-specific diagnoses or conditions

## **Appendix C – 2012 Aexcel Markets**

Arizona  
Atlanta, GA  
Austin, TX  
Central Valley, CA  
Chicago, IL  
Cincinnati, OH  
Cleveland, OH  
Colorado  
Columbus, OH  
Connecticut  
Dallas/Fort Worth, TX  
Delaware  
Detroit, MI  
El Paso, TX  
Houston, TX  
Indianapolis, IN  
Kansas City (KS and MO)  
Las Vegas, NV  
Los Angeles, CA  
Louisville, KY  
Maine  
Massachusetts  
Metropolitan DC (including MD, DC and N. VA)  
Metropolitan New York  
North Florida  
Northern CA  
Northern New Jersey  
Oklahoma City, OK  
Orlando, FL  
Pittsburgh, PA  
Richmond, VA  
San Antonio, TX  
San Diego, CA  
Seattle/W. Washington  
Southern New Jersey  
South FL (Dade and Broward Counties)  
Tampa, FL  
Tulsa, OK

## Appendix D - ETG Adjuster

The ETG adjuster represents a roll-up of ETGs within a base ETG condition to allow for a greater chance of creating a comparative cell of at least 22 episodes. We found that when only using the base ETG condition, there was not a homogeneous group of members for providers to be compared against.

We reviewed different scenarios of bundling various ETGs together and determined that we should keep non-surgical and surgical ETGs separate and grouped together by similar body system/part, treatments that would be expected within the condition, progression of disease within a condition and the dollars associated with that group of ETGs. So as not to penalize a provider with more intense services, we also separated ETGs “with complication” from ETGs “without complication”. After a review of the ETG descriptions and the “complication” flag that is written out by the Symmetry software, we determined that complications were not necessarily the result of a physician, but rather the type of presenting symptoms or level of treatment necessary. For example for ETGs that describe a burn, the complication flag is set based on whether the burn itself presented as 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> degree. We did not adjust the ETG grouping based on comorbidity because we are already using the severity indicator on the episode based on Symmetry as its own adjuster for all ETG combinations.

For application to the physician’s review, if a physician is assigned a particular ETG, he/she will be compared to the normative value created based on their ETG within that grouping. For example, ETG 38650010 is within a group with an adjuster grouping code of 10, so all the ETGs within that base of 3865 and an adjustment code of 10 will create a norm for which the physician’s average dollar for ETG 38650010 is compared.

ETG	ETG DESCRIPTION	ETG ADJ CODE
386500100	Isch hrt dis, w comp, wo comorb, wo surg	10
386500110	Isch hrt dis, w comp, w comorb, wo surg	10

# episode treatment groups®

## A CONDITION CLASSIFICATION AND EPISODE BUILDING SYSTEM

### Introduction

A condition classification system which identifies discretely occurring episodes of care has long been at the center of analytical demand for those health care professionals responsible for the funding, analysis and direct provision of health care services. In simple terms, unless one can consistently and meaningfully quantify those services offered by health care providers, attempts to manage supply and demand or otherwise to effect change is elusive at best. This desire, then, for a meaningful unit of analysis lies at the heart of Symmetry's efforts with respect to its Episode Treatment Groups® (ETGs).

Previously, work in this area relied solely on the identification of discrete patient groups in an inpatient setting (1) or the simple "bucketing" of diagnosis codes (2). Diagnosis Related Groups (DRGs) provided an easily understood classification system which organized inpatient stays into one of approximately 500 groups. The DRG methodology was developed in the late 1970's at Yale University and subsequently adopted by Medicare as a prospective payment methodology. In short, this classification scheme provided a means to identify and measure inpatient confinements, and further, formed the basis from which to *identify and compare resource consumption in terms of dollars*.

DRGs as a unit of analysis have been widely used in the private sector by both purchasers and providers of health care services to quantify both demand and relative financial performance. Its wide acceptance as a tool to define an inpatient population is due principally to the methodology underlying DRGs. This classification scheme proved a reliable case mix adjustment method because it controlled for patient severity by establishing a manageable number of clinically homogeneous groups. This characteristic coupled with the statistical stability of its groups has made DRGs the most widely used patient classification methodology. Unfortunately, DRGs do not address ambulatory data, nor do they create a unit of analysis based on a complete episode of care spanning both inpatient and outpatient settings.

Diagnosis Clusters, originally developed by Schneeweiss and his colleagues at the University of Washington for use in the ambulatory setting, essentially groups diagnosis codes together into similar "clusters". Diagnosis Clusters were not developed as a methodology to adjust for case mix, to account for resource use or to establish a treatment episode. Other classification methods have been developed as a basis for reimbursement (3), financing (4), or as a means to control for case mix but without benefit of creating a clinically homogenous unit or an episode of care (5).

### ETGs

The ETG methodology is similar to that of the DRGs but with several important differences. Perhaps the most obvious is that ETGs identify and classify an entire episode of care regardless of whether the patient has received medical treatment as an outpatient, inpatient, or both. Specifically, the characteristics of the ETG methodology are:

**Case mix adjustment** ETGs have been developed to account for differences in patient severity. Differences in patient age, complicating conditions, comorbidities and major surgeries have been factored into the definition of the ETGs.

**Clinical Homogeneity** Each ETG is clinically homogeneous with respect to the underlying condition, and hence treatment requirements.

**Episode Building** ETGs build a complete treatment episode which incorporates both inpatient and ambulatory care, including pharmaceutical services. Once treatment for an episode has begun, the ETG software continues to collect all clinically relevant information until an absence of treatment or 'clean-period' is detected. This insures that all appropriate procedural and cost information has been collected and correctly assigned to one complete treatment episode.

**Concurrent and Recurrent Episodes** Using the service unit of an individual claim or encounter form as input, ETGs identify and track the treatment of different conditions which can occur even during the same patient encounter. As a result, ETGs separate and identify concurrently occurring conditions and assigns each health care service to the clinically appropriate episode. In addition, should a patient be successfully treated but suffer a recurrence of the same condition, the ETG software identifies recurrent episodes.

**Shifting Episodes** ETGs account for changes in a patient's condition during the course of treatment. Once a change in condition has been identified, the patient's entire episode shifts from the initially defined ETG to the ETG which includes the change in condition. In this way, the progression of a condition is identified.

**Manageable Number of Groups** The ETG episode-building condition classification system is comprised of 574 clinically homogeneous and statistically stable groups. [A complete list of the ETGs, their English descriptions and corresponding Major Practice Categories \(MPCs\) can be found here.](#)

### **General Philosophy**

ETGs are designed to provide a consistent and reliable measurement tool to measure the provision and financing of health care services. Specifically, the ETGs can serve as:

- An analytical unit in which to measure and compare the utilization and financial performance of health care providers (provider profiling)
- A clinically useful unit from which to measure health care demand
- A basis to establish disease management strategies, especially with the inclusion of pharmaceutical claims

As a point of reference, ETGs *were not* primarily designed to:

- Detect inappropriate diagnosis/procedure code combinations for the purposes of clinical or payment review or denial
- Identify potentially inappropriate health care services
- Provide the basis for a population rating mechanism
- Be used as an encounter-based reimbursement methodology

### **Case Mix Adjustment and Clinical Homogeneity**

At the core of the ETG methodology are two concepts which are interrelated: case mix adjustment and clinical homogeneity. In short, **case mix adjustment** is a term used to describe the goal of a classification scheme which endeavors to explain, among other things, resource consumption. Although other terms like "resource intensity" or "severity" are used, both are proxy measures for the type and amount of resources which classification methods hope to explain. This is usually accomplished by identifying discrete units of patients or conditions which differ from one another with respect to resource consumption. Once these discrete groups of patients are identified, any subsequent analysis based upon these discrete units can be said to be "case mix adjusted". Of course the ability to use these discrete units varies widely with the method used to define them. In general, the wider the definition of each group, the greater the variability of resource consumption among the members of the group. And the greater the variability, the weaker the method's ability to distinguish real differences between and among populations. Towards the other end of the spectrum, as the definition of each group narrows, the explanation of resource consumption increases. At its most extreme, each patient or each patient's condition becomes its own group. The result is a perfect explanation of resource consumption but since each unit is absolutely unique with respect to the others, comparisons become impossible.

A balance exists between a manageable number of uniquely defined groups and the explanation of resource consumption.

**Clinical homogeneity** is a term used to describe the extent to which those patients or patient's conditions are similar from a clinical perspective. Patients or conditions which are clinically similar provide a natural basis (especially among clinicians) from which to identify differences among populations. A clinically homogeneous group of asthma cases, for example, provides a more intuitive unit of analysis than a group of patients with dis-similar diagnostic characteristics.

Additionally, while there is a natural tendency to simply place all patients with the same diagnosis in a single group, there are often other characteristics which may further differentiate those patients with respect to their severity. Asthma patients, for example, generally differ in their level of illness depending upon their age and whether there exists a specific comorbid condition. Hence, adjusting for the patient's age and comorbidity improves clinical homogeneity.

ETGs adjust for case mix, initially, by grouping together clinically similar conditions; for example, the several diagnosis codes which together are referred to as chronic bronchitis. Further differentiation of patient episodes may occur based on clinical complications, the existence of complicating *comorbidities*, patient *age*, the chronicity or severity of the condition, the *significant use of surgery* as treatment, and the level of management. Each is described below.

### **Complications**

Complications which develop during the evolution of an episode can influence the amount of resources used to treat the condition. In chronic bronchitis for example, a patient who develops pneumonia will incur higher cost than a patient without pneumonia. Therefore, the ETG grouper software makes a distinction between these two types of chronic bronchitis, i.e., chronic bronchitis *with* complication and Chronic Bronchitis *without* complication. Complications are ETG specific: a complication of pneumonia for chronic bronchitis does not automatically affect another concurrent ETG episode with a complication distinction.

### **Comorbidities**

In some cases, a patient's prior medical history may impact the type and volume of resources required to treat a condition episode. Again for chronic bronchitis, a patient with a history of asthma will generally require additional resources than a patient without asthma. Hence, the ETG methodology specifically identifies chronic bronchitis with complication *with* comorbidity from chronic bronchitis with complication *without* comorbidity.

### **Rare and Chronic Conditions**

Rare conditions generally are included in a broader illness category to avoid the problem of having too few members in a group. However certain conditions such as blood clotting disorders require such intensive and expensive management that they occupy their own unique group.

Chronic conditions such as insulin dependent diabetes must be considered differently from conditions that are expected to have an onset and a completion of care. These conditions occupy unique groups, and can be managed in yearly units as opposed to using an episode as the unit of analysis.

### **Age**

In other cases, the age of a patient can affect the extent of resource utilization for the treatment of a particular condition. Therefore, some ETGs are differentiated based on the age of an individual at the onset of an episode, hence: Acute bronchitis with comorbidity *age less than 5*.

### **Defining Surgeries**

In those instances in which a particular surgery is indicative of a 'sicker' patient, ETGs account for the distinct differences in resource consumption between those patients *with* the surgical procedure from those *without*. The classification of a patient's condition into the *with surgery* ETG does not occur unless a specific surgical procedure(s), called a **defining surgery**, has been provided. As a general rule, defining surgeries have the following characteristic:

- Defining surgeries do not include purely diagnostic procedures or biopsies since they do not necessarily identify a 'sicker' patient. For example, Diagnostic Esophagoscopy (CPT-4: 43200) is not a defining surgery for Inflammation of the esophagus, with surgery. However, Esophagoscopy with the removal of tumor(s), polyp(s) or other lesion(s) (CPT-4: 43216) is a defining surgery.

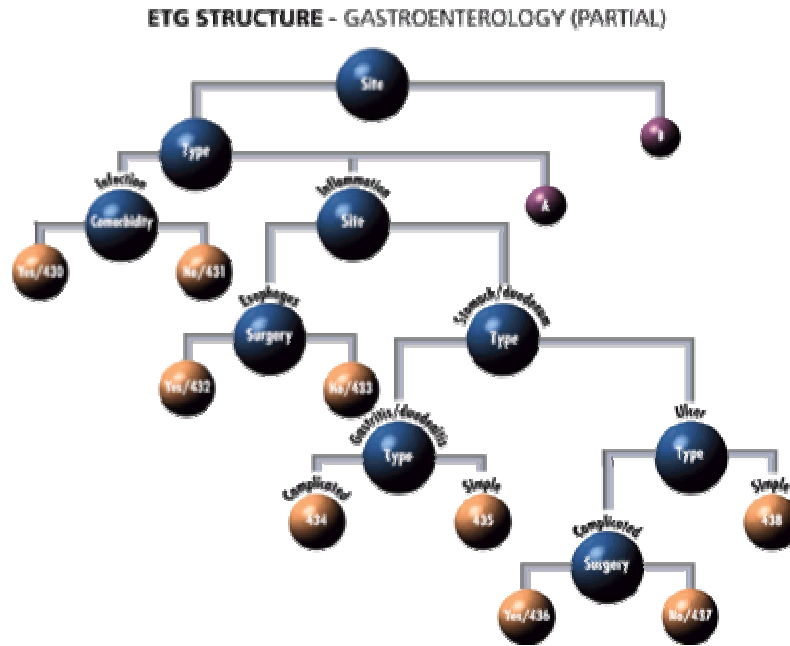
- These defining surgeries are specific to an ETG: While a hip replacement procedure is a defining surgery for the treatment of a patient's Hip Fracture, the surgery has no effect on any other currently occurring episodes for the patient, e.g., Acute Bronchitis.

### **Non-Active Management vs. Active Management**

Cancer is a condition where treatment decisions are based upon myriad clinical and patient choice issues. Treatments vary from watchful waiting to aggressive management to post-treatment observation. A decision to manage a cancer aggressively results in a significant increase in expected resource consumption. Therefore cancers are divided into those episodes which are being actively managed by radiation and/or chemotherapy, and those which are not.

## Structure of Episode Treatment Groups

Similar to the structure of DRGs, whereby each DRG belongs to one Major Diagnostic Category defined by body system, each ETG belongs to a specific Major Practice Category (MPC). Each MPC represents a body system and/or a particular physician specialty. In the flowchart example in Figure 1, a small portion of the Gastroenterology MPC is displayed. Note that ETGs 430 and 431 correspond to gastroesophageal infection, with and without comorbidity, respectively. Inflammation of the gastroesophageal tract is further identified by site; esophagus and stomach/duodenum. Inflammation of the esophagus is further sub-defined by defining surgery. Each of the 22 MPCs are similarly arranged.



**Figure 1**  
**Gastroesophageal Section of MPC 11: Gastroenterology**

### Clinical Logic and ETG *Shifting*

The basis of the clinical logic for the ETG methodology are a series of Diagnosis and Procedure code "eligibility" tables. **Each and every ICD-9 (diagnosis), CPT-4 (procedure), NDC (drug) and HCPCS (procedure) code** has been laboriously mapped to each of the ETGs. As each claim record is considered by the ETG grouper, the procedure and diagnosis codes are evaluated with respect to each other and in turn to each of the eligibility tables. Those "matches" are then considered with respect to the ETGs.

#### Diagnosis Codes

Every diagnosis code is accounted for by the ETG methodology, with the exception of the 'E' codes. With respect to the diagnosis code eligibility table, each ICD-9 code is principally assigned to one and only one ETG. This mapping forms the basis for *initial* ETG assignment; *Initial*, since subsequent diagnosis codes may affect final ETG assignment in a process called *shifting*. The way in which a diagnosis code *shifts* the assignment of an episode depends on the *class* of ICD-9 code with respect to the ETGs. A brief description of each class of diagnosis code follows.

**Primary diagnosis** codes are the principal means of establishing initial ETG assignment. Each diagnosis code is mapped as primary to one and only one ETG.

**Incidental diagnoses** are those codes which represent an illness or condition that is present during the treatment of another related, but usually more serious illness or condition. Incidental diagnoses do not shift an ETG assignment.

For example, if during the course of treatment for acute bronchitis a patient is treated for "throat pain", the throat pain diagnosis is considered incidental to acute bronchitis. Rather than begin a new episode with throat pain, this claim record and the information it contains will be considered part of the acute bronchitis episode. From a chronological perspective, if a throat pain claim was considered first, it would still group to the acute bronchitis episode.

**Comorbid diagnoses** represent an on-going chronic condition which affects a patient's treatment for a given condition episode. Diagnosis codes in this class will shift an ETG assignment regardless of its chronological relationship to the episode. Only certain comorbid diagnoses will cause the ETG to shift if it is identified prior to, concurrent with, or subsequent to the treatment of the episode.

For example, a patient receiving care for arthritis would be considered to be more difficult and expensive to treat if the patient also had osteoporosis, a comorbid condition. Although the patient may not be concurrently receiving treatment for osteoporosis per se, the patient would generally require a more intensive treatment regimen for the arthritis than if this comorbid condition did not exist. Hence, the patient *shifts* into a more complicated episode of arthritis *with* comorbidity. In addition, the ETG software keeps track of each patient's comorbid conditions in a reference table. Therefore, a patient identified with certain comorbid conditions need not display a recent claim for, in this case, osteoporosis to shift into a more complicated ETG. Comorbidities are ETG specific. For example, osteoporosis would not be considered a comorbid diagnosis for an otolaryngology ETG.

**Complicating diagnoses** indicate that the patient treated for a current condition episode has developed a complication requiring a more intensive treatment protocol. Diagnosis codes in this class will shift an ETG assignment only when the complication is identified subsequent to the start of the episode.

For example, should a patient receiving treatment for bronchitis develop pneumonia, a known complication of bronchitis and more severe condition, the entire condition episode is defined as an episode of bronchitis with complication. As with comorbidities, complications are ETG specific.

### **Procedure Codes**

The procedure code eligibility table helps to identify the ETGs in which a particular claim record can be assigned. Only those CPT-4 defined services which, from a clinical perspective, could conceivably group to a particular ETG will do so. For example, if both a chest x-ray and blood glucose test were provided to a patient during the same encounter and further, if the patient had active episodes of both chronic bronchitis and diabetes; the chest x-ray will be assigned to the chronic bronchitis episode while the blood glucose test is assigned to the diabetes episode. In other words, the blood glucose test is not eligible for assignment to the chronic bronchitis ETG.

### **Defining Surgeries**

Similar to those comorbid and complicating diagnoses codes which affect the final assignment (*shift*) of an episode, there are specific surgeries which also affect an episode's final ETG assignment. These are referred to as *defining surgeries*. As with the comorbid and complicating diagnoses, defining surgeries are ETG specific and whose use is indicative of conditions with higher severity.

For example, a patient receiving care for eye trauma requiring surgery to repair a detached retina is considered more severe and requires more intensive (and expensive) treatment than a patient who did not require detached retina repair.

### **Pharmaceutical Claims**

As pharmaceutical claims typically do not contain diagnosis codes, the ETG methodology includes the ability to identify the disease state for which a particular drug has been prescribed and assign pharmaceutical claims data to the most clinically appropriate episode.

## National Drug Code

National Drug Code (NDC) is an eleven digit code usually available on pharmaceutical claims, particularly when a Pharmacy Benefit Manager (PBM) plays some role in the management or adjudication of prescription drug claims. The NDC code contains highly specific information regarding each drug, its manufacturer and dosage. Using a sophisticated hierarchical approach, the ETG methodology evaluates each prescription drug claim against each of the concurrently occurring episodes for which the patient is treated. A clinical logic base identifies for which of the concurrently occurring episodes a particular drug can be prescribed and then assigns the drug claim to the most clinically appropriate episode.

## Episode Creation

Along with the clinical aspects, the method of episode creation is a crucial feature of the ETG methodology. The approach taken for the identification of a complete episode relies on a *flexible*, rather than a fixed length of time. In other words, there are no *presumed* definitions of an episode's chronological length. ***The ETG methodology will continue to identify and track all clinical activity for an episode for as long as a condition is actively treated.***

ETGs accomplish this by the identification of discrete '***clean periods***'. A clean period is defined as *the absence of treatment for a specified period of time*. Each ETG has its own clean period.

For example, the clean period for Acute bronchitis with comorbidity, age less than 5 is 60 days. Once an episode has begun for this ETG, all clinically consistent claims activity for acute bronchitis will group to this episode until such time as 60 days passes ***without*** any corresponding clinically consistent treatment. For Chronic Bronchitis, with comorbidity on the other hand, the clean period is 180 days, consistent with an illness of greater and more chronic severity. In some obvious instances, e.g. benign hypertension, there is no clean period. The condition is basically lifelong and all clinically consistent treatment will group to an episode of benign hypertension for as long as data are available. This presents the analyst with some interesting challenges which will be discussed later in the section titled **Complete and Incomplete Episodes**.

## ETG Assignment

Thus far, the clinical and episode building characteristics of Episode Treatment Groups have been explained. The discussion which follows explains actual ETG assignment and the methods employed by the methodology to build an episode.

## Expense Line Grouping

A medical claim coming from a provider typically has two parts: a claim 'header', which contains patient and provider information as well as ICD-9 diagnoses; and the billing detail which contains service date information as well as billing procedure codes (usually CPT) and billing amounts. Upon data entry into a typical claims/encounter system, each claim will spawn as many 'expense line' records as there are billable procedures. Each expense line will contain all of the information from the 'header' and therefore, all diagnoses (maximum of four) appear on each expense line record. An example follows:

**Table 1  
HEADER FILE**

Patient	ICD-9	ICD-9	ICD-9	ICD-9
John Doe	490 Bronchitis	250.1 Diabetes	Blank	Blank

**Table 2  
BILLING DETAIL**

Service Date From	Service Date To	CPT-4	AMOUNT	DESCRIPTION
07/17/96	07/17/96	99201	\$X	Office Visit
07/17/96	07/17/96	71010	\$Y	Chest x-ray
07/17/96	07/17/96	82948	\$Z	Blood Glucose

**Table 3  
EXPENSE LINES**

Patient	ICD-9	ICD-9	ICD-9	ICD-9	Service Date From	Service Date To	CPT-4	AMOUNT	DESCRIPTION
John Doe	490 Bronchitis	250.1 Diabetes	Blank	Blank	07/17/96	07/17/96	99201	\$X	Office Visit
John Doe	490 Bronchitis	250.1 Diabetes	Blank	Blank	07/17/96	07/17/96	71010	\$Y	Chest x-ray
John Doe	490 Bronchitis	250.1 Diabetes	Blank	Blank	07/17/96	07/17/96	82948	\$Z	Blood Glucose

The ETG grouping software evaluates each expense line record independently and determines which procedure code 'links' to which diagnosis code. Each diagnosis code on every expense line is evaluated with respect to the billed procedure code to determine ETG eligibility. During this evaluation, one assumption is made: the first diagnosis code is considered primary. In the example above, both the bronchitis and diabetes diagnosis codes are evaluated with respect to each of the three procedure codes to determine 'matches' with respect to the ETGs. When a match occurs, the expense line becomes a part of an episode corresponding to a particular ETG.

As with our example, the first expense line considered shows the two diagnoses (bronchitis and diabetes) and the billing procedure (office visit). While the office visit is considered valid for every ETG, bronchitis is in the first diagnosis position and therefore this record will group to one of the four acute bronchitis ETGs. (The specific bronchitis ETG will be determined by a combination of the patient's age and the whether or not the patient has a comorbidity, i.e., asthma).

The second expense line again shows the two diagnoses but the billing procedure is for a chest x-ray. In this case, the chest x-ray matches a diagnosis of bronchitis but does not match with the diagnosis of diabetes and therefore links to the bronchitis episode.

The third expense line, of course, has both diagnoses but the blood glucose exam as the billing procedure. Since the blood glucose exam is inconsistent with a diagnosis of bronchitis but is consistent with diagnosis of diabetes, this expense line will link itself to a diabetes episode.

Shown below is our three expense line example, following the clinical matching of each CPT procedure code to the appropriate diagnosis code.

**Table 4  
EXPENSE LINES FOLLOWING CLINICAL MATCHING**

Patient	ICD-9	ICD-9	ICD-9	ICD-9	CPT-4	AMOUNT	DESCRIPTION	EPISODE
John Doe	490 Bronchitis	250.1 Diabetes	Blank	Blank	99201	\$X	Office Visit	Bronchitis
John Doe	490 Bronchitis	250.1 Diabetes	Blank	Blank	71010	\$Y	Chest x-ray	Bronchitis
John Doe	490 Bronchitis	250.1 Diabetes	Blank	Blank	82948	\$Z	Blood Glucose	Diabetes

Reviewing this example, this one health care encounter has 'spawned' three separate billable expense lines which have been evaluated individually by the ETG grouper software. Following its clinical matching algorithms, ***two concurrently occurring episodes have been identified***. The next step in the building of an episode requires the 'clustering' of expense lines with identical ETG assignment. *Clusters* are the essential building blocks of an episode. This will be discussed in the next section.

## Building the ETG-Based Episode

Building an episode requires more than clinical information alone. It requires an understanding of how, by whom, and in what venue health care services are provided. Towards that end, each expense line is evaluated, in addition to the clinical information, with respect to the type of health care provider responsible for the service. This information is crucial in developing *clusters* - the building blocks of an episode.

### Identifying *Clusters*: Anchor and Ancillary Records

Other than the individual expense lines, the cluster is the smallest unit of analysis in the ETG methodology. Each cluster is comprised of one anchor record and zero, one or more ancillary records. Further, each treatment episode consists of one or more clusters.

- *Anchor records* represent a service by a clinician engaging in the direct evaluation, management or treatment of a patient, such as office visits, surgery or certain therapies.

The identification of an anchor record is a significant event because it represents that a clinician has evaluated a patient, and has decided on the types of services required to further identify and treat the patient's condition. Anchor records are identified by a combination of the billing provider and the procedure code billed. There are two types of anchor records. Management records for the most part consist of the evaluation and management CPT-4 codes; surgery records are the procedural CPT-4 codes. (These surgery records should not be confused with defining surgeries. Only a special subset of the surgery records are considered defining surgeries and can therefore **shift** an episode.) From a methodological perspective, *only anchor records can identify the beginning of an episode, or for that matter, continue an episode with respect to the clean periods. Only a clinician can generate an anchor record.* There is one notable exception to this rule: in certain instances a facility record can behave as an anchor record and begin an episode.

- *Ancillary records* represent services that are incidental to the direct evaluation, management and treatment of a patient. Examples of ancillary records are x-rays, pharmaceuticals and laboratory tests.

Ancillary records are only identified by the procedure code billed. Therefore, ancillary records can be produced by both clinicians and non-clinicians. There are three types of ancillary records: facility records, which include the facility component of ambulatory surgery centers, and inpatient room and board services, pharmaceutical records, and ancillary records, which consist primarily of laboratory tests and x-rays. Each ancillary record links to one and only one anchor record, which by inference assigns the responsibility of that ancillary service to the clinician on the anchor record.

The identification of anchor [management and surgery] and ancillary [facility, pharmaceutical and ancillary (x-ray and lab tests)] are added to the expense lines, designated by **M, S, F, P, or A**. This is shown in our example in Table 5 in the column labeled **RECORD Type**.

Note that our example has been slightly modified to display the provider type, record type and cluster number. In addition, the episode column has been modified to show episode number. The office visit (an evaluation and management CPT-4 code) has been designated "M", a type of anchor record, while the x-ray and laboratory services have been designated "A" for ancillary records.

**Table 5**  
**EXPENSE LINES SHOWING RECORD TYPE AND CLUSTER**

Provider	ICD-9	ICD-9	ICD-9	ICD-9	CPT-4	AMT	DESC	EPISODE	ETG	REC	CLUS
MD	490 Bronchitis	250.1 Diabetes	Blank	Blank	99201	\$X	Office Visit	000000001	Bronchitis	M	001
MD	490 Bronchitis	250.1 Diabetes	Blank	Blank	71010	\$Y	Chest x- ray	000000001	Bronchitis	A	001
MD	490 Bronchitis	250.1 Diabetes	Blank	Blank	82948	\$Z	Blood Glucose			A	

The first two records share the same cluster designation, 001, and belong to the same episode, 000000001. Subsequent records which belong to this episode will have sequential cluster numbers, i.e., 002, 003 etc., but still share the same episode number 000000001. The third expense line with the Blood Glucose billed procedure will group to a different episode.

## Ungroupable Expense Lines

### Orphan Records

Despite all efforts to assign every expense line to an ETG-based episode, there will be instances in which grouping of an ancillary record is not possible. The first instance involves ancillary records which do not have associated anchor records. These "ungroupable" ancillary records are known as *Orphan records*. Orphan records for ancillary services such as lab and x-ray are assigned to ETG 999, orphan ancillary record. Orphan pharmaceutical records are assigned to ETG 991, orphan drug record.

### Mismatched Records

A second instance of an ungroupable ancillary record is where the billed procedure is inconsistent with any of the diagnoses. An example would be a billing procedure for the setting of a broken bone with a single diagnosis of acute respiratory infection. Mis-matched records are assigned to ETG 998, Inappropriate Dx-CPT4 matched record.

## Complete and Incomplete Episodes

Identifying discretely occurring, clinically homogeneous episodes of care is one challenge that the ETG methodology has successfully addressed. The identification for subsequent analysis of complete episodes is the other. The notion of a complete episode, while intuitively simple to envision, is a bit more complex in the reality of claims data. For example, available claims data for ETG grouping will have a chronological beginning date, say incurred claims as of January 1, 1993. Does an episode for acute bronchitis with its first anchor record on January 3rd begin with this claim or have we 'joined the episode in progress'? In other words, the episode of acute bronchitis might have begun sometime earlier (prior to January 1, 1993) and the data to identify the exact beginning date are not available.

Of course, the opposite is also true. With data available from January 1, 1993 through December 31, 1994, how can we know if a claim record incurred on December 21st for an existing episode of acute bronchitis is the end of the episode? The answer to both questions is that under certain circumstances we cannot know whether a claim record is actually the 'true' beginning or the 'true' end of an episode. A distinction must be made then, between episodes which are to be considered complete from those whose completeness cannot be determined.

### Clean and Unknown Episode Starts

A *clean start* is defined as a situation where the "true" beginning date for an episode is known. The ETG methodology identifies a clean start by comparing the incurred date of the first anchor record of an episode with beginning date of the database (or a member's beginning eligibility date, if known), with the episode's ETG clean period. Consider the following example in Figure 2 for ETG 381 (Acute Bronchitis, with comorbidity, Age less than 5) which has a clean period of 60 days.

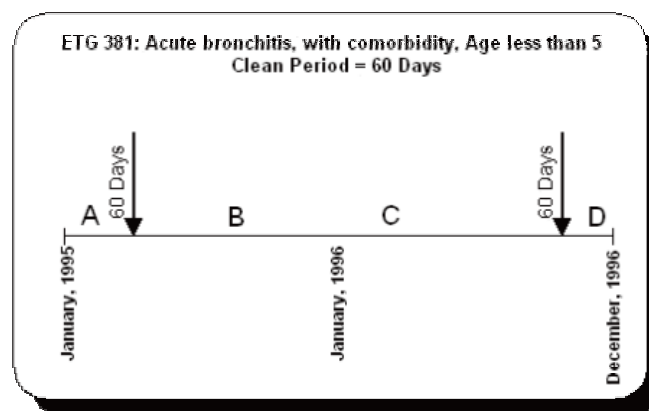


Figure 2  
Clean and Unknown Episode Starts and Finishes

If the first anchor record for an episode in this ETG is determined to be at date A which is less than 60 days beyond the database start date of January 1, 1993, we cannot discern whether we have a clean start or whether we have joined the episode in progress, hence an **unknown start**. However, if the service date of the first anchor record is anywhere beyond 60 days after the database start date (dates B, C or D), the episode is considered to have a **clean start**.

### Clean and Unknown Episode Finishes

A *clean finish* is defined as situation where the true finish date for an episode is known. Analogous to the clean start which uses each ETG's clean period to determine a known beginning, a clean finish uses the same clean period to determine a known finish. Consider the previous example in Figure 2. If the service date of the last anchor record is at least 60 days before the database end date, (dates A, B, or C) then we consider the episode to have a **clean finish**. On the other hand, if the service date of the last anchor record is somewhere between the database end date and 60 days before it, (date D) then we determined the episode to be an **unknown finish**. The finish is considered unknown because we cannot say with certainty whether the episode is truly finished or whether additional services will be provided and the data has yet to be submitted.

### Full Year Episodes and Analysis

It is fairly easy to identify and analyze acute condition episodes. Acute bronchitis, for example, can be diagnosed and treated within a fairly short period of time and subsequent analysis is straightforward. But how do we analyze more chronic illnesses when, by their very nature, a treatment episode can last a very long time, sometimes for the patient's entire lifetime? Here, the concept of clean and unknown episode starts and finishes is key to the understanding of what is referred to as *full year* episodes and how to analyze them. Consider the example in the figure below of an episode in ETG 390 (Chronic bronchitis, with complication, with comorbidity) which has a clean period of 180 days. In this example, anchor records for this episode occur at dates A, B, C, D and E. Note that the treatment for this episode spans well over one year.

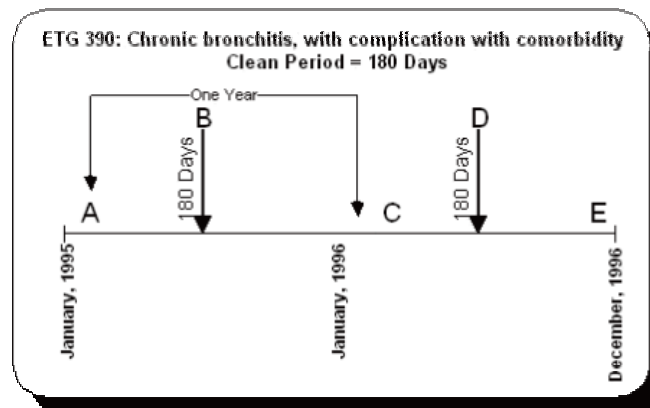


Figure 3  
Full Year Episodes

Assume that the timeframe from each anchor record to the next is less than 180 days. So,

- The anchor record at date A is an unknown start;
- The anchor records at dates B and C (if either were the first anchor records in this episode) represent a clean start;
- The anchor records at dates D and E (if either were the last anchor records in this episode) represent an unknown finish.

To restate the question: How do we analyze this episode which spans over a year and which has both an unknown start and an unknown finish? We can also expand on this question since it becomes clear that for many conditions, especially chronic ones, it may become difficult to rely solely on episodes with both clean starts and finishes for subsequent analysis. In fact, in the case of lifelong illnesses such as diabetes or hypertension, one could argue that both clean starts and finishes should rarely be observed in the data. The question then becomes: For what duration of time should we limit our analysis of those episodes which can essentially last 'forever'?

*From the perspective of certain clinically defined analyses, one might not want to prescribe a limited length for an episode. Yet from the perspective of comparing one episode to another, such as for provider profiling for example, it is important to do so since exogenous factors often exist that may lead to erroneous conclusions.*

Consider the case of two cardiologists treating hypertensive patients: Dr. Smith with 80 percent of her patients 'in-plan' for two years and Dr. Jones with 80 percent of his patients 'in-plan' for only one year. From an episode perspective, Dr. Smith, on average, will probably have episodes of longer duration and greater expense than Dr. Jones, despite the fact that she may be treating her patients more efficiently. Having already adjusted for case mix by ETGs, we further allow proper episode by episode comparison by limiting the length of each episode to one year. Such episodes which extend beyond one year and are subsequently limited to one year for analytical purposes are referred to as *full year episodes*. Using our previous example, consider the following types of episodes which could be used in a provider profile (or other) analysis:

- *Complete episode* with both a clean start and a clean finish, where the service date of the first anchor record is at date B and the last anchor record is at date C;
- *A full year episode* with a clean start but unknown finish. This situation occurs when the service date of the first anchor record is at date B and the last anchor record is at date E. The full year episode is then comprised of all claim information from date B to 365 days after date B;
- *A full year episode* with an unknown start but a clean finish. This situation occurs when the service date of the first anchor record is at date A and the last anchor record is found at date C. The full year episode is then comprised of all claim information from date A to 365 days after date A.
- *A full year episode* with both an unknown start and unknown finish. This situation occurs when the service date of the first anchor record is at date A and the last anchor record is at date E. The full year episode is then comprised of all claim information from date A to 365 days after date A.

## **Outlier Status**

The determination of outlier status is another important feature of the ETG methodology. An episode is considered a low outlier if it is below its ETG-specific low outlier charge trim point. Similarly, there exists a high outlier cost trim point for each ETG beyond which an episode is flagged as a high outlier. An episode could be an outlier due to one of several reasons:

- Inaccurate processing of, or coding on, the claim records. The coding problem could exist in the cost field, diagnoses, CPT codes, dates of service, etc.
- Inappropriate treatment which includes under- or overutilization.
- The episode is treated appropriately but is truly dissimilar from other episodes in the ETG. Presumably if there were more variables available to define the ETGs, such as lab test results, and there were enough such episodes, a separate ETG would be defined.
- If the member's plan enrollment date is not available, the patient is presumed to be enrolled in the plan from the database start date. However, the patient may have enrolled in the plan after the database start date and a treatment episode may have started prior to the patient's enrollment. Thus, the episode may become a low outlier due to incomplete claims availability when it really should be an episode with an unknown start date.

## **NON-EPI SODIC ETG CATEGORIES**

The smallest unit of an episode of care is a cluster, and a cluster requires an anchor record. However there are many cases where drug and ancillary data are present for a member but no physician claims exist to create the anchors.

Sometimes a matching physician claim doesn't exist because of a call-in prescription where the provider chooses not to submit a claim. Sometimes the number of refills of a prescription are so large that a given prescription claim may fall well beyond a reasonable period to match it to the ordering physician in the claims data. In addition, managed care is now replete with prevention activities which do not fall neatly into the concept of an episode of care. Such services however are extremely

important for the overall health of the member and cost containment for the health plan. The ETG methodology is able to classify most of these data into clinically homogenous, non-episodic ETGs.

One set of non-episodic ETGs are the screenings and immunizations which are incidental to other services. There are 9 such ETGs, and they exist in their own major practice category. They range from glaucoma screenings to cholesterol tests.

The other non-episodic ETG category is the many groupings of pharmacy data with no provider intervention data. For those drugs (such as insulin) where the clinical category is obvious, they are bucketed into clinically homogenous groups. Most major practice categories have at least one such grouping of pharmacy data. Endocrinology has the most unique categories at 10.

These non-episodic ETGs are not assigned a unique episode number. The user can analyze these data separately from the episodic data. They serve both to illustrate the way medicine is practiced today as well as provide an opportunity to question if more physician monitoring and intervention may be appropriate.

### EXAMPLE APPLICATION: PROFILING REPORT CARD

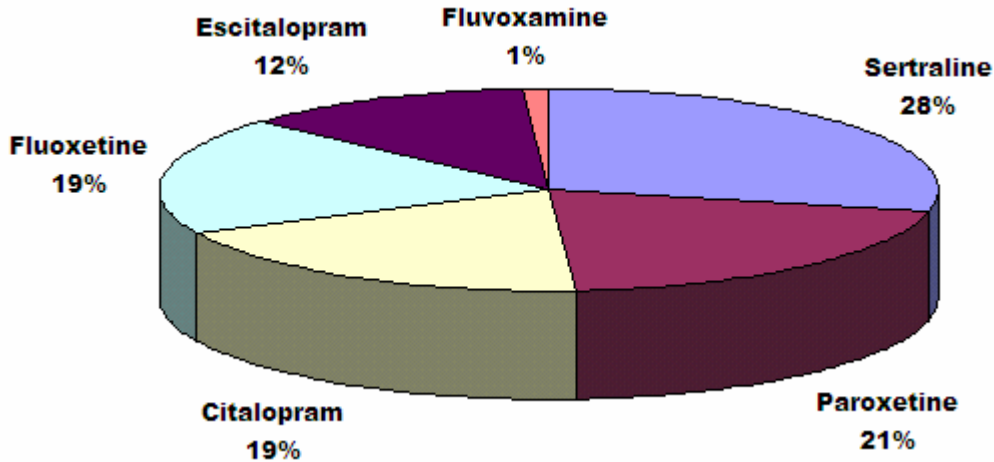
PROVIDER PROFILING						
Provider ID: 638143 Michael Ashton, M.D. 24000 West University Blvd., Suite 8b Ann Arbor, MN 48107			Casemix Index: 0.82 Performance Index: 1.17			
ETG	Number Episodes	Average Cost	Expected Cost	Difference	Total Difference	English Description
794	280	64	67	(3)	(840)	Routine Exam
337	245	31	39	(8)	1,960	Other ENT Infection, w/o surgery
328	221	898	713	185	49,855	Otitis media, with minor surgery
384	82	29	47	(17)	(1,394)	Acute bronchitis, w/o comorbidity, age 5+
678	54	37	49	(11)	(594)	Minor inflammation of skin & subcutaneous tissue
388	52	66	60	7	364	Asthma w/o comorbidity, age < 18
329	50	33	45	(12)	(600)	Otitis media, w/o surgery
.	.	.	.	.	.	.
.	.	.	.	.	.	.
.	.	.	.	.	.	.
Total	1,525	131	113	18	\$27,450	

This provider "report card" displays an overview of a Dr. Ashton's case mix adjusted performance, and in addition, offers specific ETG feedback regarding his actual case mix. The Case mix Index is a measure of the morbidity underlying his case mix while the Performance Index measures overall financial performance (after adjusting for case mix). The higher the Case mix Index, the greater the patient severity; the higher the Performance Index, the greater the cost inefficiency.

In this example, after adjusting for his relatively easy case mix (0.82), Dr. Ashton costs 17% more to treat his patients than other providers treating an identical case mix. This relative inefficiency is due primarily to one ETG: Otitis Media, with minor surgery. Subsequent drill-down analysis can uncover the source of this cost inefficiency.

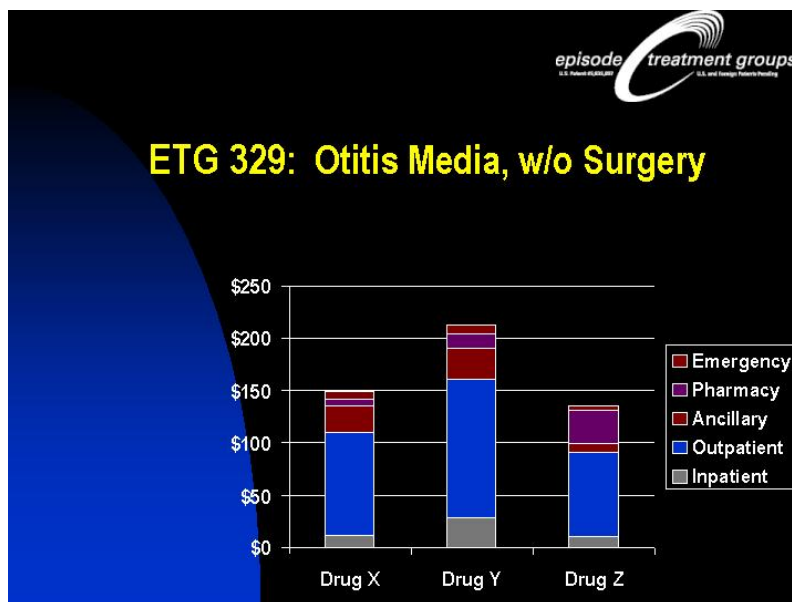
**EXAMPLE APPLICATION:  
PHARMACEUTICAL-BASED DISEASE MANAGEMENT**

Analyzing an ETG-defined episode for component prescription drug costs can be illuminating. A good example is the study of prescribing patterns in the treatment of depression episodes (ETG 88, subETG 2; Mood disorder, depressed, without psychosis). An analysis of completed episodes using the Symmetry multi-tiered drug classification system yields the expected results. Virtually all prescriptions within these episodes (99.85%) were for Central Nervous System Agents (classification at the TCC level). About half of those (49.17%) were SSRI Antidepressants (classification at the PCC level). Figure 4 illustrates the breakdown of these SSRI medications (classification at the DCC level).



**Figure 4  
Distribution of SSRI Drug Costs for Depression Episodes**

The cost effectiveness of pharmaceutical interventions can be easily determined by stratifying episode cost by drug. In the example below, note that the pharmaceutical cost for Drug Z is the most costly but results in the most inexpensive episode. Why? Because other costs associated with the episode are reduced. What does this mean? Perhaps Drug Z should make its way to your plan's drug formulary. Result: work smarter instead of harder.



**Figure 5  
Relative Difference in Episode Cost, by Type, for ETG 329: Otitis Media, w/o Surgery**

There are innumerable other reporting possibilities with the ETG methodology including, but not limited to: Demand Analysis, Disease Management/Outcome Studies (by comparing the length and cost of episodes after controlling for drug or other interventions), Best Practice Guideline Management and Predictive Modeling.

## Summary

The ETG methodology represents a case mix adjustment and episode building system which uses individual claim expense lines as input. The resulting 574 defined episodes are clinically homogenous groups which adjust for the presence of complicating conditions, comorbidities and other characteristics of a patient's condition which effect resource utilization. ETGs identify both complete and incomplete episodes in addition to those episodes which, from a cost perspective, are both low and high outliers. Finally, since the user controls the amount and format of the claims data as input, subsequent analysis is essentially unlimited.

## Footnotes

1. Fetter R., Youngsoo, S., Freeman J. et.al., Case mix definition by diagnosis-related groups. *Medical Care*, 1980;18:2 (suppl)
2. Schneeweiss, R., Cherkin, D., Hart, L., et.al., Diagnosis Clusters adapted for ICD-9-CM and ICHPPC-2, *Journal of Family Practice*, 1986;22(1): 69-72
3. Fetter R., Averill, et.al., Ambulatory Visit Groups: A framework for measuring productivity in ambulatory care. *Health Services Research*, 1984 19:415-437
4. Weiner, J.P., Starfield, B.H., et.al., Development and application of a population-oriented measure of ambulatory care case-mix, *Medical Care*, 1991 29(5): 452-472
5. Boyer, N., Software solutions for health care challenges, *Journal of Health Care Benefits*, May/June 1993, 33-37