



RESOURCE AND PATIENT MANAGEMENT SYSTEM

IHS Clinical Reporting System

(BGP)

Other National Measures Report Performance Measure List and Definitions

Version 17.1
March 2017

Office of Information Technology
Division of Information Technology

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1.0 Introduction

The Other National Measures (ONM) Report contains clinical quality measures for which national data is desired. The majority of these measures were historically reported in the National Government Performance and Results Act (GPRA) Report as non-GPRA measures. The ONM Report provides valuable information on the quality of care that is being provided to patients and can be used to address other national reporting requirements. Data for these measures will be collected and reported at least once annually.

1.1 CRS Denominator Definitions

1.1.1 For All Denominators

- All patients with name “DEMO, PATIENT” or who are included in the Resource and Patient Management System Demo/Test Patient Search Template (DPST) option located in the Patient Care Component (PCC) Management Reports, Other section) will be excluded automatically for all denominators.
- For all measures except as noted, patient age is calculated as of the beginning of the Report Period.

1.1.2 Active Clinical Population

1.1.2.1 National GPRA/GPRAMA Reporting

- The patient must have two visits to medical clinics in the past 3 years prior to the end of the Report Period. Chart reviews and telephone calls from these clinics do not count; the visits must be face-to-face. At least one visit must be to a core medical clinic. Refer to the *Clinical Reporting System for FY2017 Clinical Measures User Manual* for listing of these clinics.
- The patient must be alive on the last day of the Report Period.
- The patient must be American Indian/Alaska Native (AI/AN); defined as Beneficiary 01.
- The patient must reside in a community specified in the site’s GPRA community taxonomy, defined as all communities of residence in the defined Purchased and Referred Care (PRC) catchment area.

1.1.2.2 Local Reports

- The patient must have two visits to medical clinics in the past 3 years prior to the end of the Report Period. Chart reviews and telephone calls from these clinics do not count; the visits must be face-to-face. At least one visit must be to a core medical clinic. Refer to the *Clinical Reporting System for FY2017 Clinical Measures User Manual* for listing of these clinics.
- The patient must be alive on the last day of the Report Period.
- The user defines the population type as one of the following:
 - AI/AN patients only
 - Non-AI/AN
 - Both
- The user defines the general population: single community, group of multiple communities (community taxonomy), user-defined list of patients (patient panel), or all patients regardless of community of residence.

1.1.3 User Population

1.1.3.1 National GPRA/GPRAMA Reporting

- The patient must have been seen at least once in the 3 years prior to the end of the Report Period, regardless of the clinic type, and the visit must be either ambulatory (including day surgery or observation) or a hospitalization; the rest of the service categories are excluded.
- The patient must be alive on the last day of the Report Period.
- The patient must be AI/AN; defined as Beneficiary 01.
- The patient must reside in a community specified in the site's GPRA community taxonomy, defined as all communities of residence in the defined PRC catchment area.

1.1.3.2 Local Reports

- The patient must have been seen at least once in the 3 years prior to the end of the Report Period, regardless of the clinic type, and the visit must be either ambulatory (including day surgery or observation) or a hospitalization; the rest of the service categories are excluded.
- The patient must be alive on the last day of the Report Period.
- The user defines the population type as one of the following:
 - AI/AN patients only

- Non-AI/AN
- Both
- The user defines the general population: single community, group of multiple communities (community taxonomy), user-defined list of patients (patient panel), or all patients regardless of community of residence.

1.1.4 Active Clinical Plus Behavioral Health Population

1.1.4.1 National GPRA/GPRAMA Reporting

- The patient must have two visits to medical or behavioral health clinics in the past 3 years prior to the end of the Report Period. Chart reviews and telephone calls from these clinics do not count; the visits must be face-to-face. At least one visit must be to a core medical clinic. Refer to the *Clinical Reporting System (CRS) for FY2017 Clinical Measures User Manual* for listing of these clinics.
- The patient must be alive on the last day of the Report Period.
- The patient must be AI/AN; defined as Beneficiary 01.
- The patient must reside in a community specified in the site's GPRA community taxonomy, defined as all communities of residence in the defined PRC catchment area.

1.1.4.2 Local Reports

- The patient must have two visits to medical or behavioral health clinics in the past 3 years prior to the end of the Report Period. Chart reviews and telephone calls from these clinics do not count; the visits must be face-to-face. At least one visit must be to a core medical clinic. Refer to the *Clinical Reporting System (CRS) for FY2017 Clinical Measures User Manual* for listing of these clinics.
- The patient must be alive on the last day of the Report Period.
- The user defines the population type as one of the following:
 - AI/AN patients only
 - Non-AI/AN
 - Both
- The user defines the general population: single community, group of multiple communities (community taxonomy), user-defined list of patients (patient panel), or all patients regardless of community of residence.

2.0 Topics and Definitions

The following sections define the performance measure topics and their definitions included in the CRS 2017 Version 17.1 ONM Report.

Note: In this section, the asterisk (*) often appears in codes (Current Procedural Terminology (CPT), Purpose of Visit (POV), Edu., etc.) as a 'wildcard' character indicating that the code given has one or more additional characters at this location.

2.1 Diabetes Group

2.1.1 Diabetes Comprehensive Care

2.1.1.1 Owner: Contact

Diabetes Program: Dr. Ann Bullock

2.1.1.2 Denominators

1. Active Diabetic patients, defined as Active Clinical patients diagnosed with diabetes prior to the Report Period, *and* at least two visits in the past year, *and* two Diabetes Mellitus (DM)-related visits ever.
2. Active Diabetic patients, defined as Active Clinical patients diagnosed with diabetes prior to the Report Period, *and* at least two visits during the Report Period, *and* two DM-related visits ever, without a documented history of bilateral blindness.
3. Active Diabetic patients, defined as Active Clinical patients diagnosed with diabetes prior to the Report Period, *and* at least two visits during the Report Period, *and* two DM-related visits ever, without a documented history of bilateral foot amputation or two separate unilateral foot amputations.

2.1.1.3 Numerators

1. Patients with A1c and blood pressure and nephropathy assessment and retinal exam and diabetic foot exam.

Note: This numerator does not include controlled blood pressure, only blood pressure assessment.

2. Patients with hemoglobin A1c documented during the Report Period, regardless of result.
3. Patients with blood pressure documented during the Report Period.
4. Patients with controlled blood pressure during the Report Period, defined as below 140/90.

Note: This measure is *not* included in the comprehensive measure (the last numerator).

5. Patients with nephropathy assessment, defined as an estimated Glomerular Filtration Rate (GFR) with result *and* a Urine Albumin-to-Creatinine Ratio (UACR) during the Report Period *or* with evidence of diagnosis or treatment of end-stage renal disease (ESRD) at any time before the end of the Report Period.
6. Patients receiving a qualified retinal evaluation during the Report Period. (With Denominator 2)

Note: This numerator does *not* include refusals.

7. Patients with diabetic foot exam during the Report Period. (With Denominator 3)

Note: This numerator does *not* include refusals.

2.1.1.4 Definitions

Diabetes

First POV International Classification of Diseases (ICD)-9: 250.00 through 250.93 or ICD-10: E10.* through E13.* recorded in the V POV file prior to the Report Period.

A1c

Searches for most recent A1c test with a result during the Report Period. If none found, CRS searches for the most recent A1c test without a result. A1c defined as:

- CPT 83036, 83037, 3044F through 3046F, 3047F (old code)
- Logical Observations Identifiers Names Codes (LOINC) taxonomy
- Site-populated taxonomy DM AUDIT HGB A1C TAX

BP Documented

Exclusions: When calculating all BPs (using vital measurements or CPT codes), the following visits will be excluded:

- Service Category H (Hospitalization), I (In Hospital), S (Day Surgery), or O (Observation)

- Clinic code 23 (Surgical), 30 (Emergency Room or ER), 44 (Day Surgery), 79 (Triage), C1 (Neurosurgery), or D4 (Anesthesiology)

CRS uses the mean of the last 3 BPs documented during the Report Period. If 3 BPs are not available, uses mean of last 2 BPs, or one BP if there is only 1 documented. If a visit contains more than 1 BP, the lowest BP will be used, defined as having the lowest systolic value. The mean Systolic value is calculated by adding the last 3 (or 2) systolic values and dividing by 3 (or 2). The mean Diastolic value is calculated by adding the diastolic values from the last 3 (or 2) blood pressures and dividing by 3 (or 2).

If CRS is not able to calculate a mean BP, it will search for CPT 0001F, 2000F, 3074F through 3080F, G9273, G9274 or POV ICD-9: V81.1 documented during the Report Period.

Controlled BP

CRS uses a mean, as described above. If the mean systolic and diastolic values do not *both* meet the criteria for controlled, then the value is considered not controlled.

BP Documented and Controlled BP

If CRS is not able to calculate a mean BP from blood pressure measurements, it will search for the most recent of any of the following codes documented during the Report Period:

- BP Documented: CPT 0001F, 2000F, G9273, G9274 or POV ICD-9: V81.1; OR
- Systolic: CPT 3074F, 3075F, or 3077F with Diastolic: CPT 3078F, 3079F, or 3080F. The systolic and diastolic values do not have to be recorded on the same day. If there are multiple values on the same day, the CPT indicating the lowest value will be used.
- The following combinations represent BP below 140/90 and will be included in the Controlled BP numerator: CPT 3074F or 3075F *and* 3078F or 3079F, OR G9273. All other combinations will not be included in the Controlled BP numerator.

Nephropathy Assessment

Defined as any of the following:

- Estimated GFR with result during the Report Period, defined as any of the following:
 - Site-populated taxonomy BGP GPRA ESTIMATED GFR TAX
 - LOINC taxonomy

- Urine Albumin-to-Creatinine Ratio during the Report Period, defined as any of the following:
 - CPT 82043 WITH 82570
 - LOINC taxonomy
 - Site-populated taxonomy BGP QUANT UACR TESTS

Note: Be sure to check with your laboratory supervisor that the names added to your taxonomy reflect quantitative test values.

- End Stage Renal Disease diagnosis or treatment defined as any of the following ever:
 - CPT 36145 (old code), 36147, 36800, 36810, 36815, 36818, 36819, 36820, 36821, 36831 through 36833, 50300, 50320, 50340, 50360, 50365, 50370, 50380, 90951 through 90970 or old codes 90918 through 90925, 90935, 90937, 90939 (old code), 90940, 90945, 90947, 90989, 90993, 90997, 90999, 99512, 3066F, G0257, G0308 through G0327 (old codes), G0392 (old code), G0393 (old code), G9231, S2065, S9339
 - Diagnosis (POV or Problem List entry where the status is not Deleted):
 - ICD-9: 585.6, V42.0, V45.1 (old code), V45.11, V45.12, V56.*; ICD-10: I12.0, I13.11, I13.2, N18.5, N18.6, N19., Z48.22, Z49.*, Z91.15, Z94.0, Z99.2
 - SNOMED data set PXRME END STAGE RENAL DISEASE (Problem List only)
 - Procedure ICD-9: 38.95, 39.27, 39.42, 39.43, 39.53, 39.93 through 39.95, 54.98, 55.6*

Qualified Retinal Evaluation

- Diabetic retinal exam or
- Other eye exam

The following methods are qualifying for this measure:

- Dilated retinal evaluation by an optometrist or ophthalmologist.
- Seven standard fields stereoscopic photos (Early Treatment Diabetic Retinopathy Study [ETDRS]) evaluated by an optometrist or ophthalmologist.

- Any photographic method formally validated¹ to seven standard fields (ETDRS).

Diabetic Retinal Exam

Any of the following during the Report Period:

- Exam code 03 Diabetic Eye Exam (dilated retinal examination or formally validated² ETDRS photographic equivalent).
- CPT 2022F Dilated retinal eye exam, 2024F Seven standard field stereoscopic photos with interpretation by an ophthalmologist or optometrist, 2026F Eye imaging formally validated³ to match the diagnosis from seven standard field stereoscopic photos, S0620 Routine ophthalmological examination including refraction; new patient, S0621 Routine ophthalmological examination including refraction; established patient, S3000 Diabetic indicator; retinal eye exam, dilated, bilateral.

Other Eye Exam

- Non-DNKA (did not keep appointment) visits to ophthalmology or optometry clinics with an optometrist or ophthalmologist, or visits to formally validated⁴ tele-ophthalmology retinal evaluation clinics. Searches for the following codes in the following order:
 - CPT 67028, 67038 (old code), 67039, 67040, 92002, 92004, 92012, 92014
 - Clinic code A2 (Diabetic Retinopathy)⁵
 - Clinic codes 17⁶ or 18⁷ with Provider code 08, 24, or 79 where the Service Category is not C (Chart Review) or T (Telecommunications)

Bilateral Blindness

- Diagnosis (POV or Problem List entry where the status is not Deleted):
 - ICD-9: 369.01, 369.03, 369.04; ICD-10: H54.0
 - SNOMED data set PXRMBGPBILATBLINDNESS (Problem List only)
 - SNOMED data set PXRMBGPBLINDNESSUNSPECIFIED with Laterality equal to Bilateral (Problem List only)

¹ Validation study properly powered and controlled against the ETDRS gold standard (American Telemedicine Association validation category 3).

² Ibid.

³ Ibid.

⁴ Ibid.

⁵ Validated photographic (teleretinal) retinal surveillance (American Telemedicine Association validation category 3).

⁶ Ophthalmology or Optometry clinic codes (17, 18) cannot be used for non-qualifying photographic DR examination methods¹ unless a dilated retinal examination by an ophthalmologist or optometrist is also accomplished during the same encounter.

⁷ Ibid.

- One code from (SNOMED data set PXRMBGP LEFT EYE BLIND (Problem List only) OR SNOMED data set PXRMBGP BLINDNESS UNSPECIFIED with Laterality equal to Left (Problem List only)) AND one code from (SNOMED data set PXRMBGP RIGHT EYE BLIND (Problem List only) OR SNOMED data set PXRMBGP BLINDNESS UNSPECIFIED with Laterality equal to Right (Problem List only))

Diabetic Foot Exam

- Exam code 28 Diabetic Foot Exam, Complete
- Non-DNKA visit with a podiatrist (Provider codes 33, 84, 25)
- Non-DNKA visit to Podiatry Clinic or Diabetic Foot Clinic (Clinic codes 65 and B7), or
- CPT 2028F, G9226

Bilateral foot amputation

- CPT: 27290.50 through 27295.50, 27590.50 through 27592.50, 27598.50, 27880.50 through 27882.50 (50 modifier indicates bilateral), G9224
- Procedure ICD-10: 0Y640ZZ

Unilateral foot amputation

- The patient must have two separate occurrences on two different dates of service:
 - CPT: 27290 through 27295, 27590 through 27592, 27598, 27880 through 27882
 - Procedure ICD-9: 84.10, 84.13 through 84.19; ICD-10: 0Y6*0ZZ, 0Y6C0Z*, 0Y6D0Z*, 0Y6H0Z*, 0Y6J0Z*, 0Y6M0Z0, 0Y6N0Z0
 - POV ICD-9: V49.7*

2.1.1.5 Patient Lists

- List of diabetic patients who did have their A1c assessed.
- List of diabetic patients who did not have their A1c assessed.
- List of diabetic patients who did have their blood pressure assessed.
- List of diabetic patients who did not have their blood pressure assessed.
- List of diabetic patients with controlled blood pressure, defined as below 140/90.
- List of diabetic patients with uncontrolled blood pressure, defined as above 140/90.
- List of diabetic patients with nephropathy assessment.

- List of diabetic patients without nephropathy assessment.
- List of diabetic patients with retinal evaluation.
- List of diabetic patients without retinal evaluation.
- List of diabetic patients with a diabetic foot exam.
- List of diabetic patients without a diabetic foot exam.
- List of diabetic patients with comprehensive diabetes care.
- List of diabetic patients without comprehensive diabetes care.

2.2 Dental Group

2.2.1 Topical Fluoride

2.2.1.1 Owner: Contact

Dental Program: Timothy L. Lozon, D.D.S., Tim Ricks, DMD

2.2.1.2 Denominators

No denominator. This measure is a total count, not a percentage.

2.2.1.3 Numerators

1. Count only (no percentage comparison to denominator). For patients meeting the User Population definition, the total number of appropriate topical fluoride applications based on a maximum of four per patient per year.

2.2.1.4 Definitions

Topical Fluoride Application

Defined as any of the following:

- Dental ADA codes 1201 (old code), 1203 (old code), 1204 (old code), 1205 (old code), 1206, 1208, 5986
- CPT D1201 (old code), D1203 (old code), D1204 (old code), D1206, D1208, D5986, 99188
- POV ICD-9: V07.31; ICD-10: Z29.3

A maximum of one application per patient per visit is allowed. A maximum of four topical fluoride applications are allowed per patient per year for the applications measure.

2.2.1.5 Patient Lists

List of patients who received at least one topical fluoride application during Report Period.

2.3 Immunization Group

2.3.1 Influenza

2.3.1.1 Owner: Contact

Epidemiology Program: Amy Groom, MPH

2.3.1.2 Denominators

1. Active Clinical patients broken down by age groups: 6 months through 17 years, 18 through 49 years, 50 through 64 years, 65 years and older.
2. Active Clinical patients ages 18 through 49 years and considered high risk for influenza.
3. Active Diabetic patients, defined as Active Clinical patients diagnosed with diabetes prior to the Report Period, and at least two visits in the past year, AND two DM-related visits ever.

2.3.1.3 Numerators

1. Patients with influenza vaccine documented during the Report Period or with a contraindication documented at any time before the end of the Report Period.

Note: The only refusals included in this numerator are (NMI) refusals.

- A. Patients with a contraindication or a documented NMI refusal.

2.3.1.4 Definitions

Diabetes

First DM POV ICD-9: 250.00 through 250.93 or ICD-10: E10.* through E13.* recorded in the V POV file prior to the Report Period.

Influenza Vaccine

Any of the following during the Report Period:

- Immunization (CVX) codes 15, 16, 88, 111, 135, 140, 141, 144, 149, 150, 151, 153, 155, 158, 161, 166, 171
- POV ICD-9: V04.8 (old code), V04.81 not documented with 90663, 90664, 90666 through 90668, 90470, G9141 or G9142, or V06.6 not documented with 90663, 90664, 90666 through 90668, 90470, G9141 or G9142
- CPT 90630, 90654 through 90662, 90672 through 90674, 90685 through 90688, 90724 (old code), G0008, G8108 (old code)

Contraindication to Influenza Vaccine

Any of the following documented at any time before the end of the Report Period:

- Contraindication in the Immunization Package of “Egg Allergy” or “Anaphylaxis”
- PCC NMI Refusal

Persons Considered High Risk for Influenza:

Those who have two or more visits in the past 3 years with a POV or Problem diagnosis of any of the following:

- Human Immunodeficiency Virus (HIV) Infection: ICD-9: 042, 042.0 through 044.9 (old codes), 079.53, V08; ICD-10: B20, B52.0, B97.35, Z21
- Diabetes: ICD-9: 250.00 through 250.93; ICD-10: E08.2*, E09.2*, E10.* through E13.*
- Rheumatic Heart Disease: ICD-9: 393. through 398.99; ICD-10: I05.* through I09.*
- Hypertensive Heart Disease: ICD-9: 402.00 through 402.91; ICD-10: I11.*
- Hypertensive Heart or Renal Disease: ICD-9: 404.00 through 404.93; ICD-10: I13.*
- Ischemic Heart Disease: ICD-9: 410.00 through 414.9; ICD:10: I20.0 through I22.8, I24.0 through I25.83, I25.89, I25.9
- Pulmonary Heart Disease: ICD-9: 415.0 through 416.9; ICD-10: I26.* through I27.*
- Other Endocardial Heart Disease: ICD-9: 424.0 through 424.9; ICD-10: I34.* through I39
- Cardiomyopathy: ICD-9: 425.0 through 425.9; ICD-10: I42.*, I43

- Congestive Heart Failure: ICD-9: 428.0 through 428.9, 429.2; ICD-10: I50.1, I50.20, I50.22 through I50.30, I50.32 through I50.40, I50.42 through I50.9
- Chronic Bronchitis: ICD-9: 491.0 through 491.9; ICD-10: J41.*, J42
- Emphysema: ICD-9: 492.0 through 492.8; ICD-10: J43.*
- Asthma: ICD-9: 493.00 through 493.91; ICD-10: J45.21 through J45.902
- Bronchiectasis, Chronic Lung Disease (CLD), Chronic Obstructive Pulmonary Disease (COPD): ICD-9: 494.0 through 496.; ICD-10: J44.*, J47.*
- Pneumoconiosis: ICD-9: 500 through 505; ICD-10: J60 through J64, J66.8 through J67.6, J67.8 through J67.9
- Chronic Liver Disease: ICD-9: 571.0 through 571.9; ICD-10: K70.11 through K70.41, K73.0 through K74.5, K74.69, K75.81
- Nephrotic Syndrome: ICD-9: 581.0 through 581.9; ICD-10: N02.*, N04.*, N08
- Renal Failure: ICD-9: 585.6, 585.9; ICD-10: N18.6 through N19
- Transplant: ICD-9: 996.80 through 996.89; ICD-10: T86.00 through T86.819, T86.83*, T86.850 through T86.899, Z48.21 through Z48.280, Z48.290, Z94.0 through Z94.4, Z94.6, Z94.81 through Z94.84, Z95.3, Z95.4
- Kidney Transplant: ICD-9: V42.0 through V42.89
- Chemotherapy: ICD-9: V58.1; ICD-10: Z51.11, Z51.12
- Chemotherapy follow-up: ICD-9: V67.2; ICD-10: Z08

2.3.1.5 Patient Lists

- List of patients with influenza vaccination, contraindication, or NMI refusal.
- List of patients without influenza vaccination, contraindication, or NMI refusal.
- List of diabetic patients with influenza vaccination, contraindication, or NMI refusal.
- List of diabetic patients without influenza vaccination, contraindication, or NMI refusal.

2.3.2 Adult Immunizations

2.3.2.1 Owner: Contact

Epidemiology Program: Amy Groom, MPH

2.3.2.2 Denominators

1. Active Clinical patients ages 18 through 64 years and considered high risk for pneumococcal.
2. Active Diabetic patients, defined as Active Clinical patients diagnosed with diabetes prior to the Report Period, and at least two visits in the past year, and two DM-related visits ever.
3. Active Clinical patients ages 18 and older. Broken down by age groups 18 through 64 and 65 and older.

2.3.2.3 Numerators

1. Patients with Pneumococcal vaccine or contraindication documented ever and, if patient is older than 65 years, either a dose of pneumococcal vaccine after the age of 65 or a dose of pneumococcal vaccine in the past 5 years. (With Denominators 1 and 2)

Note: The only refusals included in this numerator are NMI refusals.

- A. Patients with contraindication or a documented NMI refusal.
2. Patients who have received 1 dose of Tdap ever, including contraindications and evidence of disease. (With Denominator 3)

Note: The only refusals included in this numerator are NMI refusals.

3. Patients who have received 1 dose of Tdap or Td in the past 10 years, including contraindications and evidence of disease. (With Denominator 3)

Note: The only refusals included in this numerator are NMI refusals.

2.3.2.4 Definitions

Diabetes

First DM POV ICD-9: 250.00 through 250.93 or ICD-10: E10.* through E13.* recorded in the V POV file prior to the Report Period.

Pneumococcal Immunization

Any of the following documented any time before the end of Report Period:

- Immunization (CVX) codes 33, 100, 109, 133, 152

- POV ICD-9: V06.6, V03.82
- CPT 90669, 90670, 90732, G0009, G8115 (old code), G9279.

Pneumococcal Contraindication

Any of the following documented any time before the end of the Report Period:

- Contraindication in the Immunization Package of “Anaphylaxis”
- PCC NMI Refusal

Persons Considered High Risk for Pneumococcal

Those who have two or more visits in the past 3 years with a POV or Problem diagnosis of any of the following:

- HIV Infection: ICD-9: 042, 042.0 through 043.9 (old codes), 044.9 (old code), 079.53, V08; ICD-10: B20, B52, B97.35, Z21
- Diabetes: ICD-9: 250.00 through 250.93; ICD-10: E08.2*, E09.2*, E10.* through E13.*
- Chronic alcoholism: ICD-9: 303.90, 303.91; ICD-10: F10.20, F10.220 through F10.29
- Congestive Heart Failure: ICD-9: 428.0 through 428.9, 429.2; ICD-10: I50.1, I50.20, I50.22 through I50.30, I50.32 through I50.40, I50.42 through I50.9
- Emphysema: ICD-9: 492.0 through 492.8; ICD-10: J43.*
- Asthma: ICD-9: 493.00 through 493.91; ICD-10: J45.21 through J45.902
- Bronchiectasis, CLD, COPD: ICD-9: 494. through 496.; ICD-10: J44.*, J47.*
- Pneumoconiosis: ICD-9: 501. through 505.; ICD-10: J60 through J64, J66.8 through J67.6, J67.8 through J67.9
- Chronic Liver Disease: ICD-9: 571.0 through 571.9; ICD-10: K70.11 through K70.41, K73.0 through K74.5, K74.69, K75.81
- Nephrotic Syndrome: ICD-9: 581.0 through 581.9; ICD-10: N02.*, N04.*, N08
- Renal Failure: ICD-9: 585.6, 585.9; ICD-10: N18.6 through N19
- Injury to spleen: ICD-9: 865.00 through 865.19
- Transplant: ICD-9: 996.80 through 996.89; ICD-10: T86.00 through T86.819, T86.83*, T86.850 through T86.899, Z48.21 through Z48.280, Z48.290, Z94.0 through Z94.4, Z94.6, Z94.81 through Z94.84, Z95.3, Z95.4
- Kidney Transplant: ICD-9: V42.0 through V42.89
- Chemotherapy: ICD-9: V58.1; ICD-10: Z51.11, Z51.12

- Chemotherapy follow-up: ICD-9: V67.2; ICD-10: Z08

Tdap Immunization:

Any of the following documented during the applicable time frame:

- Immunization (CVX) code: 115
- CPT 90715

Tdap Contraindication

Any of the following documented any time before the end of the Report Period:

- Immunization Package contraindication of "Anaphylaxis"
- PCC NMI Refusal

Td Immunization

Any of the following documented in the past 10 years:

- Immunization (CVX) code 9, 113, 138, 139
- POV ICD-9: V06.5
- CPT 90714, 90718

Td Contraindication

Any of the following documented any time before the end of the Report Period:

- Immunization Package contraindication of "Anaphylaxis"
- PCC NMI Refusal

2.3.2.5 Patient Lists

- List of patients 18 through 64 years of age considered high risk for pneumococcal with pneumococcal vaccination, contraindication, or NMI refusal.
- List of patients 18 through 64 years of age considered high risk for pneumococcal without pneumococcal vaccination, contraindication, or NMI refusal.
- List of diabetic patients with pneumococcal vaccination, contraindication, or NMI refusal.
- List of diabetic patients without pneumococcal vaccination, contraindication, or NMI refusal.
- List of patients 18 years and older with Tdap vaccination, contraindication, evidence of disease or NMI refusal.
- List of patients 18 years and older without Tdap vaccination, contraindication, evidence of disease or NMI refusal.

- List of patients 18 years and older with Tdap or Td vaccination or NMI refusal in the past 10 years, or contraindication or evidence of disease ever.
- List of patients 18 years and older without Tdap or Td vaccination or NMI refusal in the past 10 years, or contraindication or evidence of disease ever.

2.3.3 Adolescent Immunizations

2.3.3.1 Owner: Contact

Epidemiology Program: Dr. Scott Hamstra, Amy Groom, MPH

2.3.3.2 Denominators

1. Active Clinical patients ages 13 through 17 years.
2. Male Active Clinical patients ages 13 through 17 years.
3. Female Active Clinical patients ages 13 through 17 years.

2.3.3.3 Numerators

1. Patients who have received the 1:1:3 combination (i.e., 1 Tdap or Td, 1 Meningococcal, 3 HPV), including contraindications.

Note: The only refusals included in this numerator are NMI refusals.

2. Patients who have received the 1:1 combination (i.e., 1 Tdap or Td, 1 Meningococcal), including contraindications.

Note: The only refusals included in this numerator are NMI refusals.

3. Patients who have received 1 dose of Tdap ever, including contraindications.

Note: The only refusals included in this numerator are NMI refusals.

4. Patients who have received 1 dose of meningococcal ever, including contraindications.

Note: The only refusals included in this numerator are NMI refusals.

5. Patients who have received 3 doses of HPV ever, including contraindications.

Note: The only refusals included in this numerator are NMI refusals.

2.3.3.4 Definitions

Timing of Doses

Because IZ data comes from multiple sources, any IZ codes documented on dates within 10 days of each other will be considered as the same immunization.

Dosage and Types of Immunizations

- 1 dose of Td or Tdap
- 1 dose of Meningococcal
- 3 doses of HPV

Not Medically Indicated Refusal, Contraindication, and Evidence of Disease Information

NMI refusals and contraindications for individual immunizations will also count toward meeting the definition, as defined in the following section.

Note: NMI refusals are not counted as refusals; rather, they are counted as contraindications.

- For immunizations where required number of doses is greater than one, only one NMI refusal is necessary to be counted in the numerator. For example, if there is a single NMI refusal for HPV, the patient will be included in the numerator.
- For immunizations where required number of doses is greater than one, only one contraindication is necessary to be counted in the numerator. For example, if there is a single contraindication for HPV, the patient will be included in the numerator.

NMI Refusal Definitions

PCC Refusal type NMI for any of the following codes:

- Tdap
 - Immunization (CVX) codes 115
 - CPT 90715
- Td
 - Immunization (CVX) codes 9, 113, 138, 139
 - CPT 90714, 90718

- Meningococcal
 - Immunization (CVX) codes 32, 108, 114, 136, 147
 - CPT 90733, 90734
- HPV
 - Immunization (CVX) codes 62, 118, 137, 165
 - CPT 90649, 90650, 90651

Immunization Definitions:

- Tdap
 - Immunization (CVX) code 115
 - CPT 90715
- Tdap Contraindication
 - Immunization Package contraindication of “Anaphylaxis”
- Td
 - Immunization (CVX) code 9, 113, 138, 139
 - POV ICD-9: V06.5
 - CPT 90714, 90718
- Td Contraindication
 - Immunization Package contraindication of “Anaphylaxis”
- Meningococcal
 - Immunization (CVX) codes 32, 108, 114, 136, 147
 - CPT 90733, 90734
- Meningococcal Contraindication
 - Immunization Package contraindication of “Anaphylaxis”
- HPV
 - Immunization (CVX) codes 62, 118, 137, 165
 - CPT 90649, 90650, 90651
- HPV Contraindication
 - Immunization Package contraindication of “Anaphylaxis”

2.3.3.5 Patient Lists

- List of Active Clinical patients 13 through 17 years with 1:1:3 combination (i.e., 1 Tdap or Td, 1 Meningococcal, 3 HPV).

- List of Active Clinical patients 13 through 17 years without 1:1:3 combination (i.e., 1 Tdap or Td, 1 Meningococcal, 3 HPV). If a patient did not have all doses in a multiple dose vaccine, the IZ will not be listed. For example, if a patient only had 2 HPV, no IZ will be listed for HPV.
- List of Active Clinical patients 13 through 17 years with 1:1 combination (i.e., 1 Tdap or Td, 1 Meningococcal).
- List of Active Clinical patients 13 through 17 years without 1:1 combination (i.e., 1 Tdap or Td, 1 Meningococcal).
- List of Active Clinical patients 13 through 17 years with 1 Tdap ever.
- List of Active Clinical patients 13 through 17 years without 1 Tdap ever.
- List of Active Clinical patients 13 through 17 years with 1 Meningococcal ever.
- List of Active Clinical patients 13 through 17 years without 1 Meningococcal ever.
- List of Active Clinical patients 13 through 17 years with 3 doses of HPV ever.
- List of Active Clinical patients 13 through 17 years without 3 doses of HPV ever. If a patient did not have all doses, the IZ will not be listed.

2.4 Behavioral Health Group

2.4.1 Depression Screening

2.4.1.1 Owner: Contact

Miranda Carman, IHS Division of Behavioral Health

2.4.1.2 Denominators

1. Active Diabetes patients, defined as Active Clinical patients diagnosed with diabetes prior to the Report Period, *and* at least two visits during the Report Period, *and* two DM-related visits ever. Broken out by gender.

2.4.1.3 Numerators

1. Patients screened for depression or diagnosed with mood disorder at any time during the Report Period.

Note: This numerator does *not* include refusals.

A. Patients screened for depression during the Report Period.

- B. Patients with a diagnosis of a mood disorder during the Report Period.
2. Patients with depression-related education in past year.

2.4.1.4 Definitions

Diabetes

First DM POV ICD-9: 250.00 through 250.93 or ICD-10: E10.* through E13.* recorded in the V POV file prior to the Report Period

Depression Screening

Any of the following:

- Exam code 36
- POV ICD-9: V79.0
- CPT 1220F, 3725F, G0444
- Behavioral Health System (BHS) Problem code 14.1 (screening for depression)
- Measurement in PCC or BH of PHQ2, PHQ9 or PHQT

Mood Disorders

At least two visits in PCC or BHS during the Report Period with POV for: Major Depressive Disorder, Dysthymic Disorder, Depressive Disorder NOS, Bipolar I or II Disorder, Cyclothymic Disorder, Bipolar Disorder NOS, Mood Disorder Due to a General Medical Condition, Substance-induced Mood Disorder, or Mood Disorder NOS. These POV codes are:

- ICD-9: 296.*, 291.89, 292.84, 293.83, 300.4, 301.13, 311; ICD-10: F06.31 through F06.34, F1*.*4, F10.159, F10.180, F10.181, F10.188, F10.259, F10.280, F10.281, F10.288, F10.959, F10.980, F10.981, F10.988, F30.*, F31.0 through F31.71, F31.73, F31.75, F31.77, F31.81 through F31.9, F32.* through F39
- BHS POV 14, 15.

Depression-related patient education

Any of the following during the Report Period:

- Patient education codes containing “DEP-” (depression), 296.2*, 296.3*, “BH-” (behavioral and social health), 290 through 319, 995.5*, 995.80 through 995.85, “SB-” (suicidal behavior), 300.9, “PDEP-” (postpartum depression), 648.44, or SNOMED codes 14183003, 15193003, 15639000, 18818009, 191610000, 191611001, 191613003, 191616006, 191659001, 192080009, 19527009, 19694002, 20250007, 231504006, 231542000, 2506003, 25922000, 2618002, 268621008, 28475009, 3109008, 319768000,

320751009, 33078009, 35489007, 36170009, 36474008, 36923009, 370143000, 38451003, 38694004, 39809009, 40379007, 40568001, 42925002, 430852001, 442057004, 48589009, 63778009, 66344007, 67711008, 69392006, 71336009, 73867007, 75084000, 75837004, 76441001, 77486005, 77911002, 78667006, 79298009, 81319007, 83176005, 832007, 84760002, 85080004, 87512008

2.4.1.5 Patient Lists

- List of Active Diabetic patients screened for depression or diagnosed with mood disorder.
- List of Active Diabetic patients not screened for depression or diagnosed with mood disorder.

2.5 Cardiovascular Disease Related Group

2.5.1 Physical Activity Assessment

2.5.1.1 Owner: Contact

Patient Education Program: Chris Lamer, PharmD
Nutrition Program: Alberta Becenti

2.5.1.2 Denominators

1. Active Clinical patients ages 5 and older.
2. Numerator 1 (Active Clinical Patients assessed for physical activity during the Report Period).
3. User Population patients ages 5 and older.
4. Numerator 1 (User Population Patients assessed for physical activity during the Report Period).

2.5.1.3 Numerators

1. Patients assessed for physical activity during the Report Period. (With Denominators 1 and 3)
 - A. Patients from Numerator 1 who have received exercise education following their physical activity assessment. (With Denominators 2 and 4)
 - B. Patients from Numerator 1 who have set at least one exercise goal following their physical activity assessment. (With Denominators 2 and 4)

2.5.1.4 Definitions

Physical Activity Assessment

Any health factor for category Activity Level documented during the Report Period.

Exercise Education

- POV ICD-9: V65.41 exercise counseling
- Patient education codes ending “-EX” (Exercise) or containing V65.41

Exercise Goal

- Patient Goal with Goal Type of "Physical Activity" and Goal Status of "Goal Set".

2.5.1.5 Patient Lists

- List of Active Clinical patients 5 and older who had a physical activity assessment.
- List of Active Clinical patients 5 and older who did not have a physical activity assessment.
- List of Active Clinical patients 5 and older who had a physical activity assessment and received exercise education.
- List of Active Clinical patients 5 and older who had a physical activity assessment and did not receive exercise education.
- List of Active Clinical patients 5 and older who had a physical activity assessment and set at least one exercise goal.
- List of Active Clinical patients 5 and older who had a physical activity assessment and did not set at least one exercise goal.

2.5.2 Cardiovascular Disease and Blood Pressure Control

2.5.2.1 Owner: Contact

Dr. Dena Wilson, Chris Lamer, PharmD, and Mark Veazie

2.5.2.2 Denominators

1. Active Clinical patients ages 18 and over.
2. Active coronary heart disease (CHD) patients, defined as Active Clinical patients diagnosed with CHD prior to the Report Period, *and* at least two visits during the Report Period, *and* two CHD-related visits ever.

2.5.2.3 Numerators

1. Patients with blood pressure values documented during the Report Period.

2.5.2.4 Definitions

CHD

- POV ICD-9: 410.0 through 413.*, 414.0 through 414.9, 429.2; ICD-10: I20.0 through I22.8, I24.0 through I25.83, I25.89, I25.9, Z95.5
- One or more Coronary Artery Bypass Graft (CABG) or Percutaneous Coronary Interventions (PCI) procedures, defined as any of the following:
 - CABG Procedure
 - POV ICD-9: V45.81; ICD-10: Z95.1
 - CPT 33510 through 33514, 33516 through 33519, 33521 through 33523, 33530, 33533 through 33536, 33572, 35500, 35600, S2205 through S2209
 - Procedure ICD-9: 36.1*, 36.2*; ICD-10: 02100**, 021049*, 02104A*, 02104J*, 02104K*, 02104Z*, 02110**, 021149*, 02114A*, 02114J*, 02114K*, 02114Z*, 02120**, 021249*, 02124A*, 02124J*, 02124K*, 02124Z*, 02130**, 021349*, 02134A*, 02134J*, 02134K*, 02134Z*
 - PCI Procedure
 - POV ICD-9: V45.82; ICD-10: Z95.5, Z98.61
 - CPT 92920, 92924, 92928, 92933, 92937, 92941, 92943, 92980 (old code), 92982 (old code), 92995 (old code), G0290, C9600, C9602, C9604, C9606, C9607
 - Procedure ICD-9: 00.66, 36.01 (old code), 36.02 (old code), 36.05, (old code), 36.06 through 36.07; ICD-10: 02703**, 02704**, 02713**, 02714**, 02723**, 02724**, 02733**, 02734**

BP Values (all numerators)

Exclusions: When calculating all BPs (using vital measurements or CPT codes), the following visits will be excluded:

- Service Category H (Hospitalization), I (In Hospital), S (Day Surgery), or O (Observation)
- Clinic code 23 (Surgical), 30 (ER), 44 (Day Surgery), 79 (Triage), C1 (Neurosurgery), or D4 (Anesthesiology)

CRS uses mean of last 3 BPs documented during the Report Period. If 3 BPs are not available, uses the mean of last 2 BPs, or 1 BP if there is only one documented. If a visit contains more than 1 BP, the lowest BP will be used, defined as having the

lowest systolic value. The mean Systolic value is calculated by adding the last 3 (or 2) systolic values and dividing by 3 (or 2). The mean Diastolic value is calculated by adding the diastolic values from the last 3 (or 2) blood pressures and dividing by 3 (or 2). If the systolic and diastolic values do not *both* meet the current category, then the value that is least controlled determines the category.

For the Blood Pressure (BP) documented numerator only, if CRS is not able to calculate a mean BP, it will search for CPT 0001F, 2000F, 3074F through 3080F, G9273, G9274 or POV ICD-9: V81.1 documented during the Report Period.

2.5.2.5 Patient Lists

- List of Active Clinical patients 18+ who had their blood pressure assessed.
- List of Active Clinical patients 18+ who have not had their blood pressure assessed.
- List of Active Clinical patients who have CHD who had their blood pressure assessed.
- List of Active Clinical patients who have CHD who have not had their blood pressure assessed.

2.5.3 Appropriate Medication Therapy after a Heart Attack

2.5.3.1 Owner: Contact

Dr. Dena Wilson, Chris Lamer, PharmD, and Mark Veazie

2.5.3.2 Denominators

1. Active Clinical patients 35 and older discharged for an Acute Myocardial Infarction (AMI) during the first 51 weeks of the Report Period and were not readmitted for any diagnosis within seven days of discharge.

2.5.3.3 Numerators

Note: These numerators do *not* include refusals.

1. Patients with active prescription for or who have a contraindication or previous adverse reaction to beta-blockers.
2. Patients with active prescription for or who have a contraindication or previous adverse reaction to Aspirin (acetylsalicylic acid – or ASA) or other anti-platelet agent.

3. Patients with active prescription for or who have a contraindication or previous adverse reaction to ACEIs or ARBs.
4. Patients with active prescription for or who have a contraindication or previous adverse reaction to statins.
5. Patients with active prescriptions for all post-AMI medications (i.e., beta-blocker, ASA or anti-platelet, ACEI or ARB, AND statin) or who have a contraindication or previous adverse reaction.

2.5.3.4 Definitions

AMI:

POV ICD-9: 410.0*-410.9*, 412; ICD-10: I21.*, I22.*, I23.*, I25.2 with Service Category H. If patient has more than one episode of AMI during the first 51 weeks of the Report Period, CRS will include only the first discharge.

Denominator Exclusions

Patients meeting any of the following conditions will be excluded from the denominator:

- Patients with Discharge Type of Irregular (AMA), Transferred, or contains “Death”
- Patients readmitted for any diagnosis within seven days of discharge
- Patients with a Diagnosis Modifier of C (Consider), D (Doubtful), M (Maybe, Possible, Perhaps), O (Rule Out), P (Probable), R (Resolved), S (Suspect, Suspicious), T (Status Post)
- Patients with a Provider Narrative beginning with “Consider”, “Doubtful”, “Maybe”, “Possible”, “Perhaps”, “Rule Out”, “R/O”, “Probable”, “Resolved”, “Suspect”, “Suspicious”, “Status Post”

To Be Included in the Numerators

A patient must meet one of the two conditions that follow:

- An active prescription (not discontinued as of discharge date plus seven days and does not have a comment of RETURNED TO STOCK) that was prescribed prior to admission, during the inpatient stay, or within seven days after discharge. “Active” prescription defined as:

$$\text{Days Prescribed} > (\text{Discharge Date} + 7 \text{ days}) - \text{Order Date}$$
- Have a contraindication or previous adverse reaction to the indicated medication.

Contraindications or previous ADR or allergies are only counted if a patient did not have a prescription for the indicated medication. Patients without a prescription who have a contraindication or ADR or allergy will be counted toward meeting the numerator.

Note: If a medication was started and then discontinued, CRS will recalculate the number of Days Prescribed by subtracting the prescription date (i.e., visit date) from the V Medication Discontinued Date. For example:
 - Rx Date: November 15, 2017
 - Discontinued Date: November 19, 2017
 Recalculated number of Days Prescribed:
 November 19, 2017 – November 15, 2017 = 4

Numerator Logic

In the logic that follows, “ever” is defined as anytime through the end of the Report Period.

Beta-Blocker Numerator Logic

- **Beta-blocker medication codes**

Defined with medication taxonomy BGP PQA BETA BLOCKER MEDS:

- Noncardioselective Beta Blockers: Carvedilol, Labetalol, Nadolol, Penbutolol, Pindolol, Propranolol, Timolol, Sotalol
- Cardioselective Beta Blockers: Acebutolol, Atenolol, Betaxolol, Bisoprolol, Metoprolol, Nebivolol
- Antihypertensive Combinations: Atenolol-Chlorthalidone, Bendroflumethiazide-nadolol, Bisoprolol-hydrochlorothiazide, Hydrochlorothiazide-metoprolol, and Hydrochlorothiazide-propranolol.

- **Contraindications to beta-blockers**

Defined as any of the following occurring ever unless otherwise noted:

- **Asthma.** Two diagnoses (POV) of ICD-9: 493*; ICD-10: J45.* on different visit dates
- **Hypotension.** One diagnosis (POV or Problem List entry where the status is not Deleted):
 - ICD-9: 458*; ICD-10: I95.*
 - SNOMED data set PXR M BGP HYPOTENSION (Problem List only)
- **Heart block greater than 1 degree.** One diagnosis (POV or Problem List entry where the status is not Deleted):

- ICD-9: 426.0, 426.12, 426.13, 426.2, 426.3, 426.4, 426.51, 426.52, 426.53, 426.54, 426.7; ICD-10: I44.1, I44.2, I45.2, I45.3, I45.6
- SNOMED data set PXRMBGP OVER 1 DEG HEART BLK (Problem List only)
- **Sinus bradycardia.** One diagnosis (POV or Problem List entry where the status is not Deleted):
 - ICD-9: 427.81; ICD-10: I49.5, R00.1
 - SNOMED data set PXRMBGP SINUS BRADYCARDIA (Problem List only)
- **COPD.** Two diagnoses on different visit dates of ICD-9: 491.2*, 496, 506.4; ICD-10: J44.*, J68.4, J68.8, or a combination of any of these codes, such as one visit with 491.20 and one with 496
- NMI refusal for any beta-blocker at least once during hospital stay through seven days after discharge date
- CPT G8011 (Clinician documented that AMI patient was not an eligible candidate for beta-blocker at arrival) (old code), G9190 (Documentation of medical reason(s) for not prescribing beta-blocker therapy (e.g., allergy, intolerance, other medical reasons)) at least once during hospital stay through seven days after discharge date
- **Adverse drug reaction or documented beta blocker allergy**
Defined as any of the following occurring ever:
 - POV ICD-9: 995.0 through 995.3 and E942.0
 - Beta block* entry in ART
 - Beta block*, bblock* or b block* contained within Problem List (where status is not Deleted) or in Provider Narrative field for any POV ICD-9: 995.0 through 995.3, V14.8; ICD-10: Z88.8
 - Problem List entry where the status is not Deleted of SNOMED data set PXRMBGP ADR BETA BLOCKER

ASA or Other Anti-Platelet Numerator Logic

- **ASA medication codes**
 - Defined with medication taxonomy DM AUDIT ASPIRIN DRUGS
- **Other antiplatelet medication codes**
 - Defined with medication taxonomy site-populated BGP ANTI-PLATELET DRUGS taxonomy, any medication with VA Drug Class BL700.

- **Contraindications to ASA or other antiplatelet**

Defined as any of the following occurring ever unless otherwise noted:

- Patients with active prescription for Warfarin (Coumadin) at time of arrival or prescribed at discharge, using site-populated BGP CMS WARFARIN MEDS taxonomy
- Hemorrhage diagnosis (POV or Problem List entry where the status is not Deleted):
 - ICD-9: 459.0; ICD-10: R58
 - SNOMED data set PXRMBGPHEMORRHAGE (Problem List only)
- NMI refusal for any aspirin at least once during hospital stay through seven days after discharge date
- CPT G8008 (Clinician documented that AMI patient was not an eligible candidate to receive aspirin at arrival) (old code) at least once during hospital stay through seven days after discharge date

- **Adverse drug reaction, documented ASA, or other antiplatelet allergy**

Defined as any of the following occurring ever:

- POV ICD-9: 995.0 through 995.3 *and* E935.3; ICD-10: T39.015* or T39.095*
- Aspirin entry in ART
- ASA or aspirin contained within Problem List (where status is not Deleted) or in Provider Narrative field for any POV ICD-9: 995.0 through 995.3, V14.8; ICD-10: Z88.8
- Problem List entry where the status is not Deleted of SNOMED data set PXRMBGPADRASA

ACEI/ARB Numerator Logic

- **Ace Inhibitor (ACEI) medication codes**

Defined with medication taxonomy BGP HEDIS ACEI MEDS:

- **ACEI medications:** (Benazepril, Captopril, Enalapril, Fosinopril, Lisinopril, Moexipril, Perindopril, Quinapril, Ramipril, Trandolopril).
- **Antihypertensive Combinations:** (Amlodipine-benazepril, Benazepril-hydrochlorothiazide, Captopril-hydrochlorothiazide, Enalapril-hydrochlorothiazide, Fosinopril-hydrochlorothiazide, Hydrochlorothiazide-lisinopril, Hydrochlorothiazide-moexipril, Hydrochlorothiazide-quinapril, Trandolapril-verapamil).
- **Contraindications to ACEI** defined as any of the following:
 - **Pregnancy:** See the definition that follows

- **Breastfeeding:** defined as POV ICD-9: V24.1; ICD-10: Z39.1 or Breastfeeding Patient Education codes BF-BC, BF-BP, BF-CS, BF-EQ, BF-FU, BF-HC, BF-ON, BF-M, BF-MK, BF-N or containing SNOMED 169745008, 200430001, 405029003, 406213009, 413711008, 413712001 during the Report Period
- **Diagnosis ever for moderate or severe aortic stenosis**
 - POV or Problem List entry where the status is not Deleted:
 - ICD-9: 395.0, 395.2, 396.0, 396.2, 396.8, 424.1, 425.1, 747.22
 - SNOMED data set PXRMBGP MOD SEV AORTIC STEN (Problem List only)
- **NMI refusal** for any ACEI at least once during hospital stay through seven days after discharge date.
- **Adverse drug reaction or documented ACEI allergy**

Defined as any of the following occurring ever:

- POV ICD-9: 995.0 through 995.3 and E942.6; ICD-10: T46.4X5*
- Ace inhibitor or ACEI entry in ART
- Ace i* or ACEI contained within Problem List (where status is not Deleted) or in Provider Narrative field for any POV ICD-9: 995.0 through 995.3, V14.8; ICD-10: Z88.8
- Problem List entry where the status is not Deleted of SNOMED data set PXRMBGP ADR ACEI

- **ARB medication codes**

Defined with medication taxonomy BGP HEDIS ARB MEDS:

- **ARB medications:** Angiotensin II Inhibitors (Azilsartan, Candesartan, Eprosartan, Irbesartan, Losartan, Olmesartan, Telmisartan, Valsartan.)
- **Antihypertensive Combinations:** Aliskiren-valsartan, Amlodipine-hydrochlorothiazide-olmesartan, Amlodipine-hydrochlorothiazide-valsartan, Amlodipine-olmesartan, Amlodipine-Telmisartan, Amlodipine-valsartan, Azilsartan-chlorthalidone, Candesartan-hydrochlorothiazide, Eprosartan-hydrochlorothiazide, Hydrochlorothiazide-Irbesartan, Hydrochlorothiazide-Losartan, Hydrochlorothiazide-olmesartan, Hydrochlorothiazide-Telmisartan, Hydrochlorothiazide-Valsartan
- **Contraindications to ARB** defined as any of the following:
 - **Pregnancy:** See the definition that follows
 - **Breastfeeding:** Defined as POV V24.1; ICD-10: Z39.1 or breastfeeding patient education codes BF-BC, BF-BP, BF-CS, BF-EQ, BF-FU, BF-HC, BF-ON, BF-M, BF-MK, BF-N or containing SNOMED 169745008,

200430001, 405029003, 406213009, 413711008, 413712001 during the Report Period

– **Diagnosis ever for moderate or severe aortic stenosis**

- POV or Problem List entry where the status is not Deleted:
 - ICD-9: 395.0, 395.2, 396.0, 396.2, 396.8, 424.1, 425.1, 747.22
 - SNOMED data set PXRMBGP MOD SEV AORTIC STEN (Problem List only)
- **NMI refusal** for any ARB at least once during hospital stay through seven days after discharge date.

• **Adverse drug reaction or documented ARB allergy**

Defined as any of the following occurring ever:

- POV ICD-9: 995.0 through 995.3 and E942.6
- Angiotensin Receptor Blocker or ARB entry in ART
- Angiotensin Receptor Blocker or ARB contained within Problem List (where status is not Deleted) or in Provider Narrative field for any POV ICD-9: 995.0 through 995.3, V14.8; ICD-10: Z88
- Problem List entry where the status is not Deleted of SNOMED data set PXRMBGP ADR ARB

Statins Numerator Logic:

• **Statin medication codes**

Defined with medication taxonomy BGP PQA STATIN MEDS:

- **Statin medications:** Atorvastatin (Lipitor), Fluvastatin (Lescol), Lovastatin (Altacor, Altoprev, Mevacor), Pravastatin (Pravachol), Pitavastatin (Livalo), Simvastatin (Zocor), Rosuvastatin (Crestor).
- **Statin Combination Products:** Niacin-lovastatin, Niacin-simvastatin, Ezetimibe-simvastatin, Amlodipine-Atorvastatin, Sitagliptin-simvastatin, Ezetimibe-atorvastatin.

• **Contraindications to Statins:** defined as any of the following:

- **Pregnancy:** See the definition that follows
- **Breastfeeding:** defined as POV ICD-9: V24.1; ICD-10: Z39.1 or breastfeeding patient education codes BF-BC, BF-BP, BF-CS, BF-EQ, BF-FU, BF-HC, BF-ON, BF-M, BF-MK, BF-N or containing SNOMED 169745008, 200430001, 405029003, 406213009, 413711008, 413712001 during the Report Period
- **Acute Alcoholic Hepatitis:** defined as POV or Problem List entry where the status is not Deleted during the Report Period:
 - ICD-9: 571.1; ICD-10: K70.10, K70.11

- SNOMED data set PXRМ BGP ACUTE ETOH HEPATITIS (Problem List only)
- **NMI refusal** for any statin at least once during hospital stay through seven days after discharge date.

- **Adverse drug reaction or documented statin allergy**

Defined as any of the following:

- ALT or AST greater than three times the Upper Limit of Normal (ULN) (i.e., Reference High) on two or more consecutive visits during the Report Period
- Creatine Kinase (CK) levels greater than 10 times ULN or CK greater than 10,000 IU/L during the Report Period
- Myopathy or Myalgia, defined as any of the following during the Report Period:
 - POV or Problem List entry where the status is not Deleted:
 - ICD-9: 359.0 through 359.9, 729.1, 710.5, 074.1; ICD-10: G71.14, G71.19, G72.0, G72.2, G72.89, G72.9, M35.8, M60.80 through M60.9, M79.1
 - SNOMED data set PXRМ BGP MYOPATHY MYALGIA (Problem List only)
- Any of the following occurring ever:
 - POV ICD-9: 995.0 through 995.3 *and* E942.9
 - Statin or Statins entry in ART
 - Statin or Statins contained within Problem List (where status is not Deleted) or in Provider Narrative field for any POV ICD-9: 995.0 through 995.3, V14.8; ICD-10: Z88.8
 - Problem List entry where the status is not Deleted of SNOMED data set PXRМ BGP ADR STATIN

Pregnancy Definition

Any of the following:

- The Currently Pregnant field in Reproductive Factors file set to "Yes" during the Report Period.
- At least two visits during the Report Period where the primary provider is not a CHR (Provider code 53) with any of the following:
 - POV or Problem diagnosis ICD-9: 640.*3, 641.*3, 642.*3, 643.*3, 644.*3, 645.*3, 646.*3, 647.*3, 648.*3, 649.*3, 651.*3, 652.*3, 653.*3, 654.*3, 655.*3, 656.*3, 657.*3, 658.*3, 659.*3, 660.*3, 661.*3, 662.*3,

663.*3, 665.*3, 668.*3, 669.*3, 671.*3, 673.*3, 678.*3, 679.*3, V22.0 through V23.9, V24.*, V27.*, V28.81, V28.82, V28.89, V72.42, V89.01 through V89.09; ICD-10: O09.00 through O10.02, O10.111 through O10.12, O10.211 through O10.22, O10.311 through O10.32, O10.411 through O10.42, O10.911 through O10.92, O11.1 through O15.1, O15.9 through O24.02, O24.111 through O24.12, O24.311 through O24.32, O24.41*, O24.811 through O24.82, O24.911 through O24.92, O25.10 through O25.2, O26.00 through O26.62, O26.711 through O26.72, O26.811 through O26.93, O29.011 through O30.93, O31.* through O48.*, O60.0*, O61.* through O66.*, O68, O69.*, O71.00 through O71.1, O71.89, O71.9, O74.0 through O75.81, O75.89, O75.9, O76 through O77.*, O88.011 through O88.02, O88.111 through O88.12, O88.211 through O88.22, O88.311 through O88.32, O88.811 through O88.82, O90.3, O91.011 through O91.019, O91.111 through O91.119, O91.211 through O91.219, O92.011 through O92.019, O92.20, O92.29, O98.011 through O98.02, O98.111 through O98.12, O98.211 through O98.22, O98.311 through O98.32, O98.411 through O98.42, O98.511 through O98.52, O98.611 through O98.62, O98.711 through O98.72, O98.811 through O98.82, O98.911 through O98.92, O99.011 through O99.02, O99.111 through O99.12, O99.210 through O99.214, O99.280 through O99.284, O99.310 through O99.314, O99.320 through O99.324, O99.330 through O99.334, O99.340 through O99.344, O99.350 through O99.354, O99.411 through O99.42, O99.511 through O99.52, O99.611 through O99.62, O99.711 through O99.72, O99.810, O99.814, O99.820, O99.824, O99.830, O99.834, O99.840 through O99.844, O99.89, O9A.111 through O9A.12, O9A.211 through O9A.22, O9A.311 through O9A.32, O9A.411 through O9A.42, O9A.511 through O9A.52, Z03.7*, Z32.01, Z33.1, Z34.*, Z36.

- Procedure ICD-9: 72.*, 73.*, 74.*
- CPT 59000-59076, 59300, 59320, 59400-59426, 59510, 59514, 59610, 59612, 59618, 59620, 76801-76828

Pharmacy-only visits (clinic code 39) will not count toward the two visits. If the patient has more than two pregnancy-related visits during the Report Period, CRS will use the first two visits in the Report Period.

The patient must not have a documented miscarriage or abortion occurring after the second pregnancy-related visit or the date the Currently Pregnant field was set to "Yes".

- **Miscarriage definition:**

- POV ICD-9: 630, 631, 632, 633*, 634*; ICD-10: O03.9
- CPT 59812, 59820, 59821, 59830

- **Abortion definition:**
 - POV ICD-9: 635*, 636* 637*; ICD-10: O00.* through O03.89, O04.*, Z33.2
 - CPT 59100, 59120, 59130, 59136, 59150, 59151, 59840, 59841, 59850, 59851, 59852, 59855, 59856, 59857, S2260 through S2267,
 - Procedure ICD-9: 69.01, 69.51, 74.91, 96.49; ICD-10: 0WHR73Z, 0WHR7YZ, 10A0***, 3E1K78Z, 3E1K88Z

All Medications Numerator Logic

To be included in this numerator, a patient must have a prescription or a contraindication for *all* of the four medication classes (i.e., beta-blocker, ASA or other anti-platelet, ACEI or ARB, *and* statin).

Test Definitions

- **ALT**
 - Site-populated taxonomy DM AUDIT ALT TAX
 - LOINC taxonomy
- **AST**
 - Site-populated taxonomy DM AUDIT AST TAX
 - LOINC taxonomy
- **Creatine Kinase**
 - Site-populated taxonomy BGP CREATINE KINASE TAX
 - LOINC taxonomy

2.5.3.5 Patient Lists

- List of Active Clinical patients 35 and older discharged for AMI with beta-blocker therapy.
- List of Active Clinical patients 35 and older discharged for AMI without beta-blocker therapy.
- List of Active Clinical patients 35 and older discharged for AMI with ASA therapy.
- List of Active Clinical patients 35 and older discharged for AMI without ASA therapy.
- List of Active Clinical patients 35 and older discharged for AMI with ACEI or ARB therapy.
- List of Active Clinical patients 35 and older discharged for AMI without ACEI or ARB therapy.

- List of Active Clinical patients 35 and older discharged for AMI with statin therapy.
- List of Active Clinical patients 35 and older discharged for AMI without statin therapy.
- List of Active Clinical patients 35 and older discharged for AMI with all appropriate medications.
- List of Active Clinical patients 35 and older discharged for AMI without all appropriate medications.

2.5.4 Heart Failure and Evaluation of LVS Function

2.5.4.1 Owner: Contact

Dr. Dena Wilson, Chris Lamer, PharmD and Mark Veazie

2.5.4.2 Denominators

1. Active Clinical ages 18 and older discharged with heart failure during the Report Period.

2.5.4.3 Numerators

1. Patients whose Left Ventricular Systolic (LVS) function was evaluated before arrival, during hospitalization, or is planned for after discharge.

2.5.4.4 Definitions

Heart Failure

- Primary diagnosis code of ICD-9: 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.30, 428.31, 428.32, 428.33, 428.40, 428.41, 428.42, 428.43, 428.9, 429.1, 997.1 ICD-10: I11.0, I13.0, I13.2, I50.* *and* with Service Category H (hospitalization).

Note: If a patient has multiple admissions matching these criteria during the Report Period, the earliest admission will be used.

Denominator Exclusions

Defined as any of the following:

- Patients receiving comfort measures only (i.e., patients who received palliative care and usual interventions were not received because a medical decision was made to limit care).
- Patients with a Discharge Type of Transferred or Irregular or containing “Death.”
- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospitalization.

Comfort Measures

- POV ICD-9: V66.7 (Encounter for palliative care); ICD-10: Z51.5 documented during hospital stay.

LVAD/Heart Transplant

Any of the following during hospital stay:

- Procedure ICD-9: 33.6, 37.41, 37.51 through 37.54, 37.61 through 37.66, 37.68; ICD-10: 02HA**Z, 02PA*RZ, 02RK0JZ, 02RL0JZ, 02UA4JZ, 02WA0JZ, 02WA0QZ, 02WA0RZ, 02WA3QZ, 02WA3RZ, 02WA4QZ, 02WA4RZ, 02YA0Z*, 5A02*10, 5A02*16, 5A02*1D

Evaluation of LVS Function

Any of the following:

- An ejection fraction ordered or documented anytime one year prior to discharge date, defined as any of the following:
 - Measurement “CEF”
 - Procedure ICD-9: 88.53, 88.54; ICD-10: B205*ZZ, B206*ZZ, B215*ZZ, B216*ZZ
 - CPT 78414, 78468, 78472, 78473, 78480, 78481, 78483, 78494, 93303, 93304, 93307, 93308, 93312, 93314 through 93318, 93350, 93543, 93555
- Referred Care Information System (RCIS) order for Cardiovascular Disorders referral that is ordered during the hospital stay but no later than the hospital discharge date. (RCIS referral defined as:
 - ICD Diagnostic Category "Cardiovascular Disorders" combined with any of the following CPT Categories: “Evaluation and/or Management, “Non-surgical Procedures” or “Diagnostic Imaging.”)
- Any of the following documented anytime 1 year prior to discharge date:

- Echocardiogram: Procedure ICD-9: 88.72, 37.28, 00.24; ICD-10: B245YZZ, B245ZZ4, B245ZZZ, B246YZZ, B246ZZ4, B246ZZZ, B24BYZZ, B24BZZ4, B24BZZZ
- Nuclear Medicine Test: Procedure ICD-9: 92.2*
- Cardiac Catheterization with a Left Ventriculogram: Procedure ICD-9: 37.22, 37.23, 88.53, 88.54; ICD-10: 4A02*N7, 4A02*N8, B205*ZZ, B206*ZZ, B215*ZZ, B216*ZZ

2.5.4.5 Patient Lists

- List of Active Clinical heart failure patients 18 and older who received evaluation of LVS function.
- List of Active Clinical heart failure patients 18 and older who did not receive evaluation of LVS function.

2.6 STD-Related Group

2.6.1 HIV Quality of Care

2.6.1.1 Owner: Contact

Lisa Neel, MPH, Dr. Marie Russell, and Jonathan Iralu

2.6.1.2 Denominators

1. User Population patients 13 and older with at least two direct care visits, (i.e., not contract or PRC) during the Report Period with HIV diagnosis *and* one HIV visit in last six months.

2.6.1.3 Numerators

1. Patients who received CD4 test only (without HIV viral load) during the Report Period.
2. Patients who received HIV viral load only (without CD4), during the Report Period.
3. Patients who received both CD4 and HIV viral load tests during the Report Period.
4. Total Numerators 1, 2 and 3.
5. Patients who received at least one prescription for an Antiretroviral medication.

2.6.1.4 Definitions

HIV

POV ICD-9: 042, 042.0 through 044.9 (old codes), 079.53, V08, 795.71; ICD-10: B20, B97.35, R75, Z21, O98.711 through O98.73

Lab Test CD4

- CPT 86359, 86360, 86361, G9214
- LOINC taxonomy
- Site-populated taxonomy BGP CD4 TAX

HIV Viral Load

- CPT 87536, 87539, G9242, G9243
- LOINC taxonomy
- Site-populated taxonomy BGP HIV VIRAL TAX

Antiretroviral Medication

- Defined with medication taxonomy BGP PQA ANTIRETROVIRAL MEDS. Medications must not have a comment of RETURNED TO STOCK.

Antiretroviral medications are:

- Single Agents (Enfuvirtide, Maraviroc, Atazanavir, Darunavir, Fosamprenavir, Indinavir, Nelfinavir, Ritonavir, Saquinavir, Tipranavir, Dolutegravir, Raltegravir, Delavirdine, Efavirenz, Etravirine, Nevirapine, Abacavir, Didanosine, Emtricitabine, Lamivudine, Stavudine, Tenofovir, Zidovudine, Rilpivirine, Elvitegravir).
- Combination Agents (Lopinavir-Ritonavir, Lamivudine-zidovudine, Darunavir-Cobicistat, Atazanavir-Cobicistat, Abacavir-Lamivudine-Zidovudine, Efavirenz-emtricitabine-Tenofovir, Emtricitabine-tenofovir, Abacavir-lamivudine, Emtricitabine-rilpivirine-Tenofovir, Elvitegravir-cobicistat-emtricitabine-tenofovir, Abacavir-dolutegravir-lamivudine).

2.6.1.5 Patient Lists

- List of patients 13 and older with HIV diagnosis during the Report Period who received CD4 test only.
- List of patients 13 and older with HIV diagnosis during the Report Period who did not receive CD4 test only.
- List of patients 13 and older with HIV diagnosis during the Report Period who received HIV viral load only.

- List of patients 13 and older with HIV diagnosis during the Report Period who did not receive HIV viral load only.
- List of patients 13 and older with HIV diagnosis during the Report Period who received CD4 and HIV viral load.
- List of patients 13 and older with HIV diagnosis during the Report Period who did not receive CD4 and HIV viral load.
- List of patients 13 and older with HIV diagnosis during the Report Period who received CD4 or HIV viral load.
- List of patients 13 and older with HIV diagnosis during the Report Period who did not receive CD4 or HIV viral load.
- List of patients 13 and older with HIV diagnosis during the Report Period who received a prescription for an antiretroviral medication.
- List of patients 13 and older with HIV diagnosis during the Report Period who did not receive a prescription for an antiretroviral medication.

2.6.2 Sexually Transmitted Infection Screening

2.6.2.1 Owner: Contact

Andria Apostolou, PhD, MPH

2.6.2.2 Denominators

1. HIV/AIDS screenings needed for key Sexually Transmitted Infection (STI) incidents for Active Clinical patients that occurred during the defined period. Broken down by gender.

2.6.2.3 Numerators

1. Count only (no percentage comparison to denominator). The total count of Active Clinical patients who were diagnosed with one or more key STIs during the period 60 days prior to the Report Period through the first 300 days of the Report Period.
2. Count only (no percentage comparison to denominator). The total count of separate key STI incidents for Active Clinical patients during the defined period.
3. For use with denominator 1: Number of needed HIV/AIDS screenings performed from one month prior to the date of first STI diagnosis of each incident through two months after.

Note: This numerator does not include refusals.

2.6.2.4 Definitions

Key STIs

Chlamydia, gonorrhea, HIV/AIDS, and syphilis. Key STIs defined with the following POVS:

- Chlamydia: ICD-9: 079.88, 079.98, 099.41, 099.50 through 099.59; ICD-10: A56.*, A74.81 through A74.9
- Gonorrhea: ICD-9: 098.0 through 098.89; ICD-10: A54.*, O98.2*
- HIV/AIDS: ICD-9: 042, 042.0 through 044.9, 079.53, 795.71, V08; ICD-10: B20, B97.35, R75, Z21, O98.711 through O98.73
- Syphilis: ICD-9: 090.0 through 093.9, 094.1 through 097.9; ICD-10: A51.* through A53.*

Logic for Identifying Patients Diagnosed with Key STI (numerator #1)

Any patient with one or more diagnoses of the key STIs defined above during the period 60 days prior to the beginning of the Report Period through the first 300 days of the Report Period.

Logic for Identifying Separate Incidents of Key STIs (numerator #2)

One patient may have one or multiple occurrences of one or multiple STIs during the year, except for HIV. An occurrence of HIV is only counted if it is the initial HIV diagnosis for the patient. Incidents of an STI are identified beginning with the date of the first key STI diagnosis (see definition above) occurring between 60 days prior to the beginning of the Report Period through the first 300 days of the Report Period. A second incident of the same STI (other than HIV) is counted if another diagnosis with the same STI occurs 2 months or more after the initial diagnosis. A different STI diagnosis that occurs during the same 60-day time period as the first STI counts as a separate incident.

Table 2-1: Example of Patient with Multiple Incidents of Single STI

Date	Visit	Total Incidents
August 1, 2016	Patient screened for Chlamydia	0
August 8, 2016	Patient diagnosed with Chlamydia	1
August 15, 2016	Patient diagnosed with Chlamydia	2
October 25, 2016	Follow-up for Chlamydia	2
November 15, 2016	Patient diagnosed with Chlamydia	2
March 1, 2017	Patient diagnosed with Chlamydia	3

Denominator Logic for Needed Screenings (Denominator #1)

One patient may need multiple screening tests based on one or more STI incidents occurring during the time period.

To be included in the needed HIV screening tests denominator, the count will be derived from the number of separate non-HIV STI incidents. HIV screening tests are recommended for the following key STIs: Chlamydia, Gonorrhea, Syphilis.

“Needed” screenings are recommended screenings that are further evaluated for contraindications. The following are reasons that a recommended screening is identified as not needed (i.e., contraindicated).

- Only one screening for HIV is needed during the relevant time period, regardless of the number of different STI incidents identified. For example, if a patient is diagnosed with Chlamydia and Gonorrhea on the same visit, only one screening is needed for HIV/AIDS.
- A patient with HIV/AIDS diagnosis prior to any STI diagnosis that triggers a recommended HIV/AIDS screening does not need the screening ever.

Numerator Logic

To be counted in the numerator, each needed screening in the denominator must have a corresponding lab test or test refusal documented in the period from 1 month prior to the relevant STI diagnosis date through 2 months after the STI incident.

HIV/AIDS Screening

Any of the following during the specified time period:

- CPT 86689, 86701 through 86703, 87390 through 87391, 87534 through 87539
- Site-populated taxonomy BGP HIV TEST TAX
- LOINC taxonomy

2.6.2.5 Patient Lists

- List of Active Clinical patients diagnosed with an STI who were screened for other key STIs.
- List of Active Clinical patients diagnosed with an STI who were not screened for other key STIs.
- List of Active Clinical patients diagnosed with an STI who were screened for HIV.

- List of Active Clinical patients diagnosed with an STI who were not screened for HIV or who had a prior HIV diagnosis.

2.7 Other Clinical Measures Group

2.7.1 Asthma

2.7.1.1 Owner: Contact

Chris Lamer, PharmD

2.7.1.2 National Reporting

Not reported nationally

2.7.1.3 Denominators

1. Active Clinical patients. Broken down by age groups: younger than 15 years, 15 through 34 years, 35 through 64 years, 65 years and older.

2.7.1.4 Numerators

1. Patients who have had two asthma-related visits during the Report Period or with persistent asthma.

2.7.1.5 Definitions

Asthma Visits

Asthma visits are defined as diagnosis (POV) ICD-9: 493.*; ICD-10: J45.*.

Persistent Asthma

Any of the following:

- Problem List entry where the status is not Inactive or Deleted for ICD-9: 493.*; ICD-10: J45.*; SNOMED data set PXRMASTHMA with Severity of 2, 3 or 4 at any time before the end of the Report Period
- Problem List entry where the status is not Inactive or Deleted for SNOMED data set PXRMASTHMA PERSISTENT at ANY time before the end of the Report Period or
- Most recent visit-related asthma entry (i.e., V Asthma) with Severity of 2, 3, or 4 documented any time before the end of the Report Period.

2.7.1.6 Patient Lists

List of Active Clinical patients diagnosed with asthma.

2.7.2 Medication Therapy for Persons with Asthma**2.7.2.1 Owner: Contact**

Chris Lamer, PharmD

2.7.2.2 Denominators

1. Active Clinical patients ages 5 through 50 years with persistent asthma within the year prior to the beginning of the Report Period and during the Report Period, without a documented history of emphysema or COPD.

2.7.2.3 Numerators

1. Suboptimal Control: Patients who were dispensed more than three canisters of a short-acting Beta-2 agonist inhaler during the same 90-day period during the Report Period.
2. Absence of Controller Therapy: Patients who were dispensed more than three canisters of short acting Beta-2 agonist inhalers over a 90-day period and who did not receive controller therapy during the same 90-day period.

2.7.2.4 Definitions**Denominator Exclusions**

Patients diagnosed with emphysema or COPD at any time on or before the end of the Report Period are excluded from the denominator.

Emphysema

Any visit at any time on or before the end of the Report Period with POV or Problem List entry where the status is not Deleted:

- ICD-9: 492.*, 506.4, 518.1, 518.2; ICD-10: J43.*, J68.4, J68.8, J98.2, J98.3.
- SNOMED data set PXRMBGP EMPHYSEMA (Problem List only)

COPD

Any visit at any time on or before the end of the Report Period with POV or Problem List entry where the status is not Deleted:

- ICD-9: 491.20, 491.21, 491.22, 493.2*, 496, 506.4; ICD-10: J44.*, J68.4, J68.8.
- SNOMED data set PXR M BGP COPD (Problem List only)

Persistent Asthma

Meeting any of the following four criteria within the year prior to the beginning of the Report Period and during the Report Period:

- At least one visit to Clinic code 30 (Emergency Medicine) with primary diagnosis ICD-9: 493.*; ICD-10: J45.* (asthma)
- At least one acute inpatient discharge with primary diagnosis ICD-9: 493.*; ICD-10: J45.* Acute inpatient discharge defined as Service Category of H
- At least four outpatient visits, defined as Service Categories A, S, or O, with primary or secondary diagnosis of ICD-9: 493.*; ICD-10: J45.* and at least two asthma medication dispensing events (see definition that follows)
- At least four asthma medication dispensing events (see definition that follows). If the sole medication was leukotriene modifiers, then must also have at least one visit with POV ICD-9: 493.*; ICD-10: J45.* in the same year as the leukotriene modifier (i.e. during the Report Period or within the year prior to the beginning of the Report Period.), or

Meeting any of the following criteria:

- Problem List entry where the status is not Inactive or Deleted for ICD-9: 493.*; ICD-10: J45.*; SNOMED data set PXR M ASTHMA PERSISTENT with Severity of 2, 3 or 4 at any time before the end of the Report Period
- Most recent visit-related asthma entry (i.e., V Asthma) with Severity of 2, 3, or 4 documented any time before the end of the Report Period.

Dispensing Event

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

$$100 \div 30 = 3.33, \text{ rounded down to } 3$$

Also, two different prescriptions dispensed on the same day are counted as two different dispensing events. Inhalers should also be counted as one dispensing event.

Note: If a medication was started and then discontinued, CRS will recalculate the number of Days Prescribed by subtracting the prescription date (i.e., visit date) from the V Medication Discontinued Date. For example:

- Rx Date: November 15, 2017
- Discontinued Date: November 19, 2017

Recalculated number of Days Prescribed:
November 19, 2017 – November 15, 2017 = 4

- Asthma medication codes for denominator defined with medication taxonomies:
 - BGP HEDIS ASTHMA MEDS
 - BGP HEDIS ASTHMA LEUK MEDS
 - BGP HEDIS ASTHMA INHALED MEDS
 - Medications are: Antiasthmatic Combinations (Dyphylline-Guaifenesin, Guaifenesin-Theophylline), Antibody Inhibitor (Omalizumab), Inhaled Steroid Combinations (Budesonide-Formoterol, Fluticasone-Salmeterol, Formoterol-Mometasone), Inhaled Corticosteroids (Belclomethasone, Budesonide, Ciclesonide CFC Free, Flunisolide, Fluticasone CFC Free, Mometasone), Lekotriene Modifiers (Montelukast, Zafirlukast, Zileuton), Mast Cell Stabilizers (Cromolyn), Methylxanthines (Aminophylline, Dyphylline, Theophylline), Short-Acting, Inhaled Beta-2 Agonists (Albuterol, Levalbuterol, Pirbuterol. Medications must not have a comment of RETURNED TO STOCK.

Numerator Inclusion

To be included in the Suboptimal Control and Absence of Controller Therapy numerators, patient must have one or more non-discontinued prescriptions for short acting Beta-2 Agonist inhalers totaling at least four canisters in one 90 day period. Short acting Beta-2 Agonist inhaler medications defined with medication taxonomy BGP PQA SABA MEDS. (Medications are: Albuterol, Levalbuterol, Pirbuterol). Medications must not have a comment of RETURNED TO STOCK.

Controller Therapy

At least one non-discontinued prescription of controller therapy medications during the same 90-day period.

Controller Therapy Medications

Controller therapy medications defined with medication taxonomy BGP PQA CONTROLLER MEDS. (Medications are: Beclomethasone, Budesonide, Budesonide-Formoterol, Ciclesonide, Flunisolide, Fluticasone, Fluticasone-Salmeterol, Formoterol, Mometasone, Mometasone-Formoterol, Montelukast,

Salmeterol, Theophylline, Zafirlukast, Zileuton). Medications must not have a comment of RETURNED TO STOCK.

2.7.2.5 Patient Lists

- List of Active Clinical patients ages 5 through 50 years with asthma who were dispensed more than three canisters of a short-acting Beta-2 agonist inhaler during the same 90-day period.
- List of Active Clinical patients ages 5 through 50 years with asthma who were not dispensed more than three canisters of a short-acting Beta-2 agonist inhaler during the same 90-day period.
- List of Active Clinical patients ages 5 through 50 years with asthma who did not receive controller therapy.

2.7.3 Proportion of Days Covered by Medication Therapy

2.7.3.1 Owner: Contact

Chris Lamer, PharmD

2.7.3.2 Denominators

1. Active Clinical patients ages 18 and older who had two or more prescriptions for beta-blockers during the Report Period.
2. Active Clinical patients ages 18 and older who had two or more prescriptions for RAS Antagonists and no documented history of ESRD or one or more prescriptions for ARB/Nepriylsin inhibitor combination medications during the Report Period.
3. Active Clinical patients ages 18 and older who had two or more prescriptions for calcium channel blockers (CCB) during the Report Period.
4. Active Clinical patients ages 18 and older who had two or more prescriptions for biguanides and no documented history of ESRD during the Report Period.
5. Active Clinical patients ages 18 and older who had two or more prescriptions for sulfonylureas and no documented history of ESRD during the Report Period.
6. Active Clinical patients ages 18 and older who had two or more prescriptions for thiazolidinediones and no documented history of ESRD during the Report Period.

7. Active Clinical patients ages 18 and older who had two or more prescriptions for DiPeptidyl Peptidase (DPP)-IV Inhibitors and no documented history of ESRD during the Report Period.
8. Active Clinical patients ages 18 and older who had two or more prescriptions for Diabetes All Class medications and no documented history of ESRD during the Report Period.
9. Active Clinical patients ages 18 and older who had two or more prescriptions for statins during the Report Period.
10. Active Clinical patients ages 18 and older who had two or more prescriptions for non-warfarin oral anticoagulants during the Report Period.
11. Active Clinical patients ages 18 and older who had two or more prescriptions for antiretroviral agents during the Report Period.

2.7.3.3 Numerators

1. Patients with Proportion of Days Covered (PDC) 80% or more during the Report Period.
2. Patients with a gap in medication therapy 30 days or longer.
3. Patients with PDC 90% or higher during the Report Period. (With Denominator 11)

2.7.3.4 Definitions

Denominator Inclusion

Patients must have at least two prescriptions for that particular type of medication on two unique dates of service at any time during the Report Period. Medications must not have a comment of RETURNED TO STOCK.

For the Non-warfarin anticoagulants measures, the two unique dates of service must be at least 180 days apart and the patient must have received greater than 60 days' supply of the medication during the Report Period. Patients who received one or more prescriptions for warfarin, low molecular weight heparin (LMWH), heparin, or an SC Factor Xa inhibitor (defined by medication taxonomy BGP PQA WARFARIN) will be excluded from the denominator.

Index Prescription Start Date

The date when the medication was first dispensed within the Report Period. For all measures except Non-warfarin anticoagulants, this date must be greater than 90 days from the end of the Report Period to be counted in the denominator.

Medications

Medications are defined with the following taxonomies:

- BGP PQA BETA BLOCKER MEDS
 - Beta-blocker medications (Acebutolol HCL, Atenolol, Betaxolol HCL, Bisoprolol fumarate, Carvedilol, Labetalol HCL, Metoprolol Succinate, Metoprolol Tartrate, Nadolol, Nebivolol HCL, Penbutolol Sulfate, Pindolol, Propranolol HCL, Timolol maleate); Beta-Blocker combination products (Atenolol-chlorthalidone, Bisoprolol-HCTZ, Nadolol-Bendroflumethiazide, Metoprolol-HCTZ, Propranolol-HCTZ)
- BGP PQA RASA MEDS
 - Angiotensin Converting Enzyme Inhibitors (Benazepril, Captopril, Enalapril, Fosinopril, Lisinopril, Moexipril, Perindopril, Quinapril, Ramipril, Trandolopril); Antihypertensive Combinations (Amlodipine-benazepril, Benazepril-HCTZ, Captopril-HCTZ, Enalapril-HCTZ, Fosinopril-HCTZ, Lisinopril-HCTZ, Moexipril-HCTZ, Quinapril-HCTZ, Trandolapril-Verapamil); Angiotensin II Inhibitors (Azilsartan, Candesartan, Eprosartan, Irbesartan, Losartan, Olmesartan, Telmisartan, Valsartan); Antihypertensive Combinations (Aliskiren-Valsartan, Amlodipine-Valsartan, Amlodipine-Valsartan-HCTZ, Amlodipine-olmesartan, Azilsartan-Chlorthalidone, Candesartan-HCTZ, Eprosartan-HCTZ, Irbesartan-HCTZ, Losartan-HCTZ, Olmesartan-Amlodipine-HCTZ, Olmesartan-HCTZ, Telmisartan-Amlodipine, Telmisartan-HCTZ, Valsartan-HCTZ); Direct Renin Inhibitors (Aliskiren); Direct Renin Inhibitor Combination Products (Aliskiren-amlodipine, Aliskiren-Amlodipine-HCTZ, Aliskiren-HCTZ, Aliskiren-valsartan)
- BGP PQA CCB MEDS
 - Calcium-Channel Blocker medications (Amlodipine Besylate, Diltiazem HCL, Felodipine, Isradipine, Nicardipine HCL, Nifedipine (long acting only), Verapamil HCL, Nisoldipine); CCB Combination Products (Amlodipine besylate-benazepril HCL, Amlodipine-valsartan, Amlodipine-valsartan-HCTZ, Aliskiren-amlodipine, Aliskiren-amlodipine-HCTZ, Telmisartan-amlodipine, Amlodipine-olmesartan, Trandolapril-verapamil HCL, Amlodipine-atorvastatin, Olmesartan-amlodipine-HCTZ)
- BGP PQA BIGUANIDE MEDS
 - Biguanides (Metformin); Combination Products (Glipizide-metformin, Glyburide-metformin, Rosiglitazone-metformin, Pioglitazone-metformin, Repaglinide-metformin, Sitagliptin-metformin IR-SR, Saxagliptin-metformin SR, Linagliptin-metformin, Alogliptin-metformin, Dapagliflozin-Metformin, Canagliflozin-Metformin)

- BGP PQA SULFONYLUREA MEDS
 - Sulfonylureas (Chlorpropamide, Glimepiride, Glipizide, Glyburide, Tolazamide, Tolbutamide); Combination Products (Glipizide-metformin, Glyburide-metformin, Rosiglitazone-glimepiride, Pioglitazone-glimepiride)
- BGP PQA THIAZOLIDINEDIONE MEDS
 - Thiazolidinediones (Pioglitazone, Rosiglitazone); Combination Products (Rosiglitazone-metformin, Pioglitazone-metformin, Rosiglitazone-glimepiride, Pioglitazone-glimepiride, Alogliptin-pioglitazone)
- BGP PQA DPP IV MEDS
 - DPP-IV Inhibitors (Sitagliptin, Linagliptin, Saxagliptin, Alogliptin); Combination Products (Sitagliptin-metformin IR-SR, Saxagliptin-metformin SR, Sitagliptin-simvastatin, Linagliptin-metformin, Alogliptin-metformin, Alogliptin-pioglitazone, Linagliptin-empagliflozin)
- BGP PQA DIABETES ALL CLASS
 - Biguanide medications (see list above); Sulfonylurea medications (see list above); Thiazolidinedione medications (see list above); DPP-IV Inhibitor medications (see list above); Incretin Mimetic Agents (Albiglutide, Exenatide, Liraglutide, Dulaglutide); Meglitinides (Nateglinide, Repaglinide, Repaglinide-metformin); Sodium glucose co-transporter2 (SGLT2) inhibitors (Canagliflozin, Dapagliflozin, Empagliflozin, Dapagliflozin-Metformin, Linagliptin-empagliflozin, Canagliflozin-Metformin)
- BGP PQA STATIN MEDS
 - Statins (Lovastatin, Rosuvastatin, Fluvastatin, Atorvastatin, Pravastatin, Pitavastatin); Combination Products (Niacin-lovastatin, Atorvastatin-amlodipine, Niacin-simvastatin, Sitagliptin-simvastatin, Ezetimibe-simvastatin, Ezetimibe-atorvastatin)
- BGP PQA NON-WARFARIN ANTICOAG
 - (Apixaban, Dabigatran, Rivaroxaban, Edoxaban)
- BGP PQA WARFARIN
 - (Warfarin, Dalteparin, Fondaparinux, Enoxaparin, Heparin, Tinzaparin)
- BGP PQA ANTIRETROVIRAL MEDS
 - Single Agents (Enfuvirtide, Maraviroc, Atazanavir, Darunavir, Fosamprenavir, Indinavir, Nelfinavir, Ritonavir, Saquinavir, Tipranavir, Dolutegravir, Raltegravir, Delavirdine, Efavirenz, Etravirine, Nevirapine, Abacavir, Didanosine, Emtricitabine, Lamivudine, Stavudine, Tenofovir, Zidovudine, Rilpivirine, Elvitegravir); Combination Agents (Lopinavir-

Ritonavir, Lamivudine-zidovudine, Darunavir-Cobicistat, Atazanavir-Cobicistat, Abacavir-Lamivudine-Zidovudine, Efavirenz-emtricitabine-Tenofovir, Emtricitabine-tenofovir, Abacavir-lamivudine, Emtricitabine-rilpivirine-Tenofovir, Elvitegravir-cobicistat-emtricitabine-tenofovir, Abacavir-dolutegravir-lamivudine)

- BGP PQA ARB NEPRILYSIN INHIB
 - ARB/Nepriylsin Inhibitor Combinations (Sacubitril/Valsartan)

ESRD

Any of the following ever:

- CPT 36145 (old code), 36147, 36800, 36810, 36815, 36818, 36819, 36820, 36821, 36831 through 36833, 50300, 50320, 50340, 50360, 50365, 50370, 50380, 90918 through 90925 (old codes), 90935, 90937, 90939 (old code), 90940, 90945, 90947, 90951 through 90970, 90989, 90993, 90997, 90999, 99512, G0257, G0308 through G0327 (old codes), G0392 (old code), G0393 (old code), G9231, S2065, S9339
- Diagnosis (POV or Problem List entry where the status is not Deleted):
 - ICD-9: 585.6, V42.0, V45.1 (old code), V45.11 V45.12, V56.*; ICD-10: I12.0, I13.11, I13.2, N18.5, N18.6, N19., Z48.22, Z49.*, Z91.15, Z94.0, Z99.2
 - SNOMED data set PXRME END STAGE RENAL DISEASE (Problem List only)
- Procedure ICD-9: 38.95, 39.27, 39.42, 39.43, 39.53, 39.93 through 39.95, 54.98, 55.6*

Each PDC Numerator

The PDC equals the number of days the patient was covered by at least one drug in the class divided by the number of days in the patient's measurement period.

The patient's measurement period is defined as the number of days between the Index Prescription Start Date and the end of the Report Period. When calculating the number of days the patient was covered by at least one drug in the class, if prescriptions for the same drug overlap, the prescription start date for the second prescription will be adjusted to be the day after the previous fill has ended.

Note: If a medication was started and then discontinued, CRS will recalculate the number of Days Prescribed by subtracting the prescription date (i.e., visit date) from the V Medication Discontinued Date. For example:

- Rx Date: November 15, 2017
- Discontinued Date: November 19, 2017

Recalculated number of Days Prescribed:
November 19, 2017 – November 15, 2017 = 4

Example of PDC

Report Period: January 1 through December 31, 2017

- First prescription:
 - Index Rx Start Date: March 1, 2017
 - Days' Supply: 90
 - Prescription covers patient through May 29, 2017
- Second prescription:
 - Rx Date: May 26, 2017
 - Days' Supply: 90
 - Prescription covers patient through August 27, 2017
- Third prescription:
 - Rx Date: September 11, 2017
 - Days' Supply: 180
 - Gap:
 - September 11, 2017 – August 27, 2017 = 15 days*
 - Prescription covers patient through March 8, 2018

Patient's measurement period:

March 1, 2017 through December 31, 2017 = 306 days

Days patient was covered:

*March 1, 2017 through August 27, 2017 +
September 11, 2017 through December 31, 2017 = 292 days*

PDC:

$292 \div 306 = 95\%$

Each Gap Numerator

CRS will calculate whether a gap in medication therapy of 30 or more days has occurred between each consecutive medication dispensing event during the Report Period. A gap is calculated as the days not covered by the days' supply between consecutive medication fills.

Example of Medication Gap 30 Days or Longer:

Report Period: January 1 through December 31, 2017

- First prescription:
 - Rx Date: April 1, 2017
 - Days' Supply: 30
 - Prescription covers patient through April 30, 2017
- Second prescription:
 - Rx Date: July 1, 2017
 - Days' Supply: 90
 - Gap #1:
July 1, 2017 – April 30, 2017 = 61 days

Prescription covers patient through September 28, 2017

- Third prescription:
 - Rx Date: October 1, 2017
 - Days' Supply: 90
 - Gap #2:
October 1, 2017 – September 28 – 2017 = 2 days

Prescription covers patient through December 29, 2017

Gap #1 \geq 30 days

Patient will be included in the numerator for that medication.

2.7.3.5 Patient Lists

- List of Active Clinical patients 18 and older whose PDC for beta-blockers is 80% or more.
- List of Active Clinical patients 18 and older whose PDC for beta-blockers is less than 80%.
- List of Active Clinical patients 18 and older who had a gap of 30 days or more in their beta-blocker medication therapy.
- List of Active Clinical patients 18 and older whose PDC for RAS Antagonists is 80% or more.
- List of Active Clinical patients 18 and older whose PDC for RAS Antagonists is less than 80%.

- List of Active Clinical patients 18 and older who had a gap of 30 days or more in their RAS Antagonist medication therapy.
- List of Active Clinical patients 18 and older whose PDC for CCBs is 80% or more.
- List of Active Clinical patients 18 and older whose PDC for CCBs is less than 80%.
- List of Active Clinical patients 18 and older who had a gap of 30 days or more in their CCB medication therapy.
- List of Active Clinical patients 18 and older whose PDC for biguanides is 80% or more.
- List of Active Clinical patients 18 and older whose PDC for biguanides is less than (<) 80%.
- List of Active Clinical patients 18 and older who had a gap of 30 days or more in their biguanide medication therapy.
- List of Active Clinical patients 18 and older whose PDC for sulfonylureas is 80% or more.
- List of Active Clinical patients 18 and older whose PDC for sulfonylureas is less than (<) 80%.
- List of Active Clinical patients 18 and older who had a gap of 30 days or more in their sulfonylurea medication therapy.
- List of Active Clinical patients 18 and older whose PDC for thiazolidinediones is 80% or more.
- List of Active Clinical patients 18 and older whose PDC for thiazolidinediones is less than (<) 80%.
- List of Active Clinical patients 18 and older who had a gap of 30 days or more in their thiazolidinedione medication therapy.
- List of Active Clinical patients 18 and older whose PDC for DPP-IV is greater than or equal to (\geq) 80%.
- List of Active Clinical patients 18 and older whose PDC for DPP-IV is less than (<) 80%.
- List of Active Clinical patients 18 and older who had a gap greater than or equal to (\geq) 30 days in their DPP-IV medication therapy.
- List of Active Clinical patients 18 and older whose PDC for Diabetes All Class is greater than or equal to (\geq) 80%.

- List of Active Clinical patients 18 and older whose PDC for Diabetes All Class is less than (<) 80%.
- List of Active Clinical patients 18 and older who had a gap greater than or equal to (>=) 30 days in their Diabetes All Class medication therapy.
- List of Active Clinical patients 18 and older whose PDC for statins is 80% or more.
- List of Active Clinical patients 18 and older whose PDC for statins is less than (<) 80%.
- List of Active Clinical patients 18 and older who had a gap of 30 days or more in their statin medication therapy.
- List of Active Clinical patients 18 and older whose PDC for antiretroviral agents is 90% or more.
- List of Active Clinical patients 18 and older whose PDC for antiretroviral agents is less than (<) 90%.

2.7.4 Primary Medication Non-adherence

2.7.4.1 Owner and Contact

Chris Lamer, PharmD

2.7.4.2 National Reporting

Not reported nationally

2.7.4.3 Denominators

1. Number of e-prescriptions for newly initiated drug therapy for chronic medications for Active Clinical patients ages 18 and older.

2.7.4.4 Numerators

1. Number of medications returned to stock within 30 days.

2.7.4.5 Definitions

Denominator Inclusion

To be included in the denominator, the e-prescription must be for a chronic medication during the Report Period.

Denominator Exclusions

- Any prescription where there is a prescription dispensing record in the preceding 180 days for the same drug.
- Any duplicate medications, defined as any medication that has been e-prescribed twice in a 30-day period with no prescription fill in between the e-prescriptions.
- Any prescription sent to an outside pharmacy, as it is not possible to know if the medication was returned to stock.

Chronic Medications

Defined by the following taxonomies: BGP PQA ASTHMA INHALED STEROIDS, BGP PQA COPD, BGP PQA DIABETES ALL CLASS, BGP PQA RASA MEDS, BGP PQA STATIN MEDS

Numerator Inclusion

To be included in the numerator, the e-prescription medication must have a comment of RETURNED TO STOCK within 30 days of the prescription date (i.e., visit date).

2.7.4.6 Patient List

List of Active Clinical patients ages 18 and older with an e-prescription for a chronic medication that has been returned to stock.

2.7.5 Medication Therapy Management Services

2.7.5.1 Owner: Contact

Chris Lamer, PharmD

2.7.5.2 National Reporting

Not reported nationally

2.7.5.3 Denominators

1. Active Clinical patients 18 and older with Medications dispensed at their facility during the Report Period.

2.7.5.4 Numerators

1. Patients who received Medication Therapy Management (MTM) during the Report Period.

2.7.5.5 Definitions**Patients receiving medications**

Identified by any entry in the VMed file for your facility.

MTM

- CPT 99605 through 99607
- Clinic codes: D1, D2, D5

2.7.5.6 Patient List

List of patients 18 and older receiving medications with MTM, if any.

2.7.6 Public Health Nursing**2.7.6.1 Owner: Contact**

Tina Tah, RN, BSN, MBA

2.7.6.2 Denominators

No denominators. These measures are total count only, not a percentage.

2.7.6.3 Numerators

1. Count only (no percentage comparison to denominator). Number of visits to User Population patients by PHNs in any setting, including Home.
 - A. Number of visits to patients, ages 0 through 28 days (Neonate) in any setting.
 - B. Number of visits to patients, ages 29 days through 12 months (infants) in any setting.
 - C. Number of visits to patients, ages 1 through 64 years in any setting.
 - D. Number of visits to patients ages 65 and older (Elders) in any setting.
2. Count only (no percentage comparison to denominator). Number of visits to User Population patients by PHNs in Home setting.
 - A. Number of Home visits to patients, ages 0 through 28 days (Neonate).

- B. Number of Home visits to patients, ages 29 days through 12 months (infants).
- C. Number of Home visits to patients, ages, 1 through 64 years.
- D. Number of visits to patients, ages 65 and older (Elders) in any setting.
- E. Number of PHN driver/interpreter (Provider code 91) visits in a HOME setting.

2.7.6.4 Definitions

PHN Visit-Any Setting

Any visit with primary or secondary Provider codes 13 or 91.

PHN Visit-Home

Any visit with one of the following:

- Clinic code 11 and a primary or secondary provider code of 13 or 91, or
- Location Home (as defined in Site Parameters) and a primary or secondary Provider code 13 or 91

2.7.6.5 Patient Lists

- List of patients with a PHN visit in any setting, including Home.
- List of patients with a PHN visit in Home setting

2.7.7 Use of High Risk Medications in the Elderly

2.7.7.1 Owner and Contact

Dr. Bruce Finke

2.7.7.2 National Reporting

Not reported nationally

2.7.7.3 Denominators

1. Active Clinical patients ages 65 years and older with no hospice indicator during the Report Period. Broken down by gender and age groups: 65 through 74 years, 75 through 84 years, and 85 years and older.

2.7.7.4 Numerators

1. Patients who received at least one high risk medication for the elderly during the Report Period.
2. Patients who received at least two different high risk medications for the elderly during the Report Period.

2.7.7.5 Definitions

Note: The logic below is a deviation from the logic written by PQA, as PQA requires at least two prescriptions fills for the same high-risk medication during the Report Period, while the logic below only requires one prescription fill.

- For nitrofurantoin, a patient must have received a cumulative day's supply for any nitrofurantoin product greater than 90 days during the Report Period.
- For nonbenzodiazepine hypnotics (BGP HEDIS NONBENZODIAZ MEDS), a patient must have received a cumulative day's supply for any nonbenzodiazepine hypnotic products greater than 90 days during the Report Period.

Hospice

- CPT 99377, 99378, G9473 - G9479
- SNOMED codes 170935008, 183919006, 183920000, 183921001, 284546000, 305336008, 305911006, 385763009, 385765002, 444933003, 445449000, 444933003, 428361000124107, 428371000124100

High Risk Medications for the Elderly

Defined with medication taxonomies:

- BGP HEDIS ANTICHOLINERGIC MEDS
 - First-generation antihistamines (Includes combination drugs) (Brompheniramine, Carbinoxamine, Chlorpheniramine, Clemastine, Cyproheptadine, Dexbrompheniramine, Dexchlorpheniramine, Diphenhydramine (oral), Doxylamine, Hydroxyzine, Promethazine, Triprolidine); Antiparkinson agents (Benzotropine (oral), Trihexyphenidyl)
- BGP HEDIS ANTITHROMBOTIC MEDS
 - (Ticlopidine, Dipyridamole, oral short-acting)
- BGP HEDIS ANTI-INFECTIVE MEDS
 - (Nitrofurantoin)
- BGP HEDIS CARDIOVASCULAR MEDS

- Alpha blockers, central (Guanfacine, Methyldopa, Reserpine); Cardiovascular, other (Disopyramide, Digoxin, Nifedipine, immediate release)
- BGP HEDIS CENTRAL NERVOUS MEDS
 - Tertiary TCAs (Includes combination drugs) (Amitriptyline, Clomipramine, Doxepin, Imipramine, Trimipramine); Antipsychotics, first-generation (conventional) (Thioridazine); Barbiturates (Amobarbital, Butabarbital, Butalbital, Pentobarbital, Phenobarbital, Secobarbital); Central Nervous System, other (Chloral hydrate, Meprobamate); Nonbenzodiazepine hypnotics (Eszopiclone, Zolpidem, Zaleplon); Vasodilators (Ergoloid mesylates, Isoxsuprine)
- BGP HEDIS ENDOCRINE MEDS
 - Endocrine (Desiccated thyroid, Estrogens with or without progesterone (oral and topical patch products only), Megestrol); Sulfonylureas, long-duration (Chlorpropamide, Glyburide)
- BGP HEDIS GASTROINTESTINAL MED
 - (Trimethobenzamide)
- BGP HEDIS PAIN MEDS
 - Other (Meperidine, Pentazocine); Non-COX-selective NSAIDs (Indomethacin, Ketorolac)
- BGP HEDIS SKL MUSCLE RELAX MED
 - (Includes combination drugs) (Carisoprodol, Chlorzoxazone, Cyclobenzaprine, Metaxalone, Methocarbamol, Orphenadrine)

Note: For each medication, the days' supply must be > 0. If a medication was started and then discontinued, CRS will recalculate the number of Days Prescribed by subtracting the prescription date (i.e., visit date) from the V Medication Discontinued Date. For example:

- Rx Date: November 15, 2017
- Discontinued Date: November 19, 2017

Recalculated number of Days Prescribed:
November 19, 2017 – November 15, 2017 = 4

Medications must not have a comment of RETURNED TO STOCK.

2.7.7.6 Patient Lists

- List of Active Clinical patients 65 years of age and older with at least one high-risk medication.

- List of Active Clinical patients 65 years of age and older without at least one high-risk medication.

2.7.8 Use of Benzodiazepine Sedative Hypnotic Medications in the Elderly

2.7.8.1 Owner and Contact

Chris Lamer, PharmD

2.7.8.2 National Reporting

Not reported nationally

2.7.8.3 Denominators

1. Active Clinical patients ages 65 and older.

2.7.8.4 Numerators

1. Patients who received at least two prescription fills for any benzodiazepine sedative hypnotic medications for more than 90 days.

2.7.8.5 Definitions

- The patient must have received a cumulative day's supply for any benzodiazepine sedative hypnotic products greater than 90 days during the Report Period.
- Benzodiazepine sedative hypnotic medications defined with medication taxonomy BGP PQA BENZODIAZ MEDS. (Medications are: Estazolam, Flurazepam, Quazepam, Temazepam, Triazolam)

Note: For each medication, the days' supply must be > 0. If a medication was started and then discontinued, CRS will recalculate the number of Days Prescribed by subtracting the prescription date (i.e., visit date) from the V Medication Discontinued Date. For example:
- Rx Date: November 15, 2017
- Discontinued Date: November 19, 2017
Recalculated number of Days Prescribed:
November 19, 2017 – November 15, 2017 = 4
Medications must not have a comment of RETURNED TO STOCK.

2.7.8.6 Patient Lists

- List of Active Clinical patients 65 and older with two or more prescriptions for benzodiazepine sedative hypnotic medications.
- List of Active Clinical patients 65 and older without two or more prescriptions for benzodiazepine sedative hypnotic medications.

List of Acronyms

Acronym	Meaning
ACE	Angiotensin Converting Enzyme
ACEI	Angiotensin Converting Enzyme Inhibitor
ADR	Adverse Drug Reaction
AI/AN	American Indian/Alaska Native
AMA	Against Medical Advice
AMI	Acute Myocardial Infarction
APT	Acute Phase Treatment
ARB	Angiotensin Receptor Blocker
ART	Patient Allergies File
ASA	Aspirin (acetylsalicylic acid)
BH	Behavioral Health
BHS	Behavioral Health System
BNI	Brief Negotiated Interview
BP	Blood Pressure
CABG	Coronary Artery Bypass Graft
CCB	Calcium Channel Blocker
CHD	Coronary Heart Disease
CHR	Community Health Representative
CK	Creatine Kinase
CLD	Chronic Lung Disease
COPD	Chronic Obstructive Pulmonary Disease
CPT	Current Procedural Terminology
CRS	Clinical Reporting System
DEP	Depression
DM	Diabetes Mellitus
DNKA	Did Not Keep Appointment
DPST	Demo/Test Patient Search Template
ER	Emergency Room
ESRD	End Stage Renal Disease
ETDRS	Early Treatment Diabetic Retinopathy Study
EX	Exercise
GFR	Glomerular Filtration Rate
GPRA	Government Performance and Results Act of 1993

Acronym	Meaning
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
ICD	International Classification of Diseases
IHD	Ischemic Heart Disease
IHS	Indian Health Service
IVD	Ischemic Vascular Disease
LDL	Low-Density Lipoprotein
LOINC	Logical Observations Identifiers Names and Codes
LVAD	Left Ventricular Assistive Device
LVS	Left Ventricular Systolic
MTM	Medication Therapy Management
NMI	Not Medically Indicated
ONM	Other National Measure
PCC	Patient Care Component
PCI	Percutaneous Coronary Intervention
PDC	Proportion of Days Covered
PDEP	Postpartum Depression
PHN	Public Health Nursing
POV	Purpose of Visit
PRC	Purchased and Referred Care
RAS	Renin Angiotensin System
RCIS	Referred Care Information System
STI	Sexually Transmitted Infection
TCA	Tricyclic Antidepressants
UACR	Urine Albumin Creatinine Ratio
ULN	Upper Limit of Normal

Contact Information

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