CARDIOVASCULAR PREVENTION MEASURES GROUP OVERVIEW

2016 PQRS OPTIONS FOR MEASURES GROUPS:

2016 PQRS MEASURES IN THE CARDIOVASCULAR PREVENTION MEASURES GROUP:
#130 Documentation of Current Medications in the Medical Record
#204 Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic
#226 Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention
#236 Controlling High Blood Pressure
#317 Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented
#438 Statin Therapy for the Prevention and Treatment of Cardiovascular Disease

INSTRUCTIONS FOR REPORTING:

- It is not necessary to submit the measures group-specific intent G-code for registry-based submissions. However, the measures group-specific intent G-code has been created for registry only measures groups for use by registries that utilize claims data.

G9673: I intend to report the Cardiovascular Prevention Measures Group

- Report the patient sample method:
  20 Patient Sample Method via registries: 20 unique patients (a majority of which must be Medicare Part B FFS patients) meeting patient sample criteria for the measures group during the reporting period (January 1 through December 31, 2016).

- Patient sample criteria for the Cardiovascular Prevention Measures Group are for patients aged 21 years and older with a specific patient encounter:

  One of the following patient encounter codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, G0438, G0439

- To satisfactorily report the Cardiovascular Prevention Measures Group requires reporting a numerator option on all applicable measures, for each patient within the eligible professional’s patient sample, a minimum of once during the reporting period.

- Measure #204 need only be reported when the patient has one of the following diagnosis codes indicating Ischemic Vascular Disease (IVD) or Acute Myocardial Infarction:

I70.298, I70.299, I70.92, I74.01, I74.09, I74.10, I74.11, I74.19, I74.2, I74.3, I74.4, I74.5, I74.8, I74.9, I75.011, I75.012, I75.013, I75.019, I75.021, I75.022, I75.023, I75.029, I75.81, I75.89

OR

- Measure #236 need only be reported on patients 21 to 85 years of age who had a diagnosis of essential hypertension within the first six months of the measurement period or any time prior to the measurement period:
  ICD-10-CM: I10

- Measure #236 does not need to be reported (is not applicable) if the patient has evidence of end stage renal disease (ESRD), dialysis or renal transplant before or during the measurement period or if the patient has a diagnosis of pregnancy during the measurement period (G9231).

- Measure #317 does not need to be reported (is not applicable) if the patient has an active diagnosis of hypertension.

- When reporting measure #317, eligible professionals must perform the blood pressure screening at the time of a qualifying visit and may not obtain measurements from external sources.

- Measure #438 has three criteria by which a patient can be eligible for the measure*. Report if patient is in at least one of the three populations below:

  Previously diagnosed or have an active diagnosis of clinical ASCVD (G9662)
  OR
  Any fasting or direct LDL-C laboratory test result ≥ 190 mg/dL (G9663)
  OR

Patients aged 40 to 75 years at the beginning of the measurement period

AND
Type 1 or Type 2 diabetes diagnosis:


AND
The highest fasting or direct LDL-C laboratory test result of 70 – 189 mg/dL in the measurement period or two years prior to the beginning of the measurement period (G9666)

*All patients who meet one or more of the criteria indicated above would be considered at “high risk” for cardiovascular events under the 2013 ACC/AHA guidelines.
• Instructions for qualifying numerator option reporting for each of the measures within the Cardiovascular Prevention Measures Group are displayed on the next several pages. The following composite Quality Data Code (QDC) has been created for registries that utilize claims data. This QDC may be reported in lieu of individual QDCs when all quality clinical actions for all applicable measures within the group have been performed.

  **Composite QDC G9677:** All quality actions for the applicable measures in the Cardiovascular Prevention Measures Group have been performed for this patient

• Measure Group Reporting Calculations:

  Measures groups containing a measure with a 0% performance rate will not be counted as satisfactorily reporting the measures group. The recommended clinical quality action must be performed on at least one patient for each applicable measure within the measures group reported by the eligible professional.

  Performance exclusion QDCs are not counted in the performance denominator. If the eligible professional submits all performance exclusion QDCs, the performance rate would be 0/0 (null) and would be considered satisfactorily reporting.

  If a measure within a measures group is not applicable to a patient, the patient would not be counted in the performance denominator for that measure (e.g., Preventive Care Measures Group - Measure #39: Screening for Osteoporosis for Women Aged 65-85 Years of Age would not be applicable to male patients according to the patient sample criteria). If the measure is not applicable for all patients within the sample, the performance rate would be 0/0 (null) and would be considered satisfactorily reporting.

• **NOTE:** The detailed instructions in this specification apply exclusively to the reporting and analysis of the included measures under the measures group option.
Measure #130 (NQF 0419): Documentation of Current Medications in the Medical Record -- National Quality Strategy Domain: Patient Safety

DESCRIPTION:
Percentage of visits for patients aged 18 years and older for which the eligible professional attests to documenting a list of current medications using all immediate resources available on the date of the encounter. This list must include ALL known prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements AND must contain the medications’ name, dosage, frequency and route of administration.

NUMERATOR:
Eligible professional attests to documenting, updating or reviewing a patient’s current medications using all immediate resources available on the date of encounter. This list must include ALL known prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements AND must contain the medications’ name, dosages, frequency and route of administration.

Definitions:
- **Current Medications** – Medications the patient is presently taking including all prescriptions, over-the-counters, herbals and vitamin/mineral/dietary (nutritional) supplements with each medication’s name, dosage, frequency and administered route.
- **Route** - Documentation of the way the medication enters the body (some examples include but are not limited to: oral, sublingual, subcutaneous injections, and/or topical).
- **Not Eligible** - A patient is not eligible if the following reason is documented:
  - Patient is in an urgent or emergent medical situation where time is of the essence and to delay treatment would jeopardize the patient’s health status.

NUMERATOR NOTE: The eligible professional must document in the medical record they obtained, updated, or reviewed a medication list on the date of the encounter. Eligible professionals reporting this measure may document medication information received from the patient, authorized representative(s), caregiver(s) or other available healthcare resources. G8427 should be reported if the eligible professional documented that the patient is not currently taking any medications.

Numerator Options:
- **Performance Met:** Eligible professional attests to documenting in the medical record they obtained, updated, or reviewed the patient’s current medications (G8427)
- **Other Performance Exclusion:** Eligible professional attests to documenting in the medical record the patient is not eligible for a current list of medications being obtained, updated, or reviewed by the eligible professional (G8430)
- **Performance Not Met:** Current list of medications not documented as obtained, updated, or reviewed by the eligible professional, reason not given (G8428)
**Measure #204 (NQF 0068): Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic -- National Quality Strategy Domain: Effective Clinical Care**

**DESCRIPTION:**
Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI) in the 12 months prior to the measurement period, or who had an active diagnosis of ischemic vascular disease (IVD) during the measurement period, and who had documentation of use of aspirin or another antithrombotic during the measurement period.

**NUMERATOR:**
Patients who have documentation of use of aspirin or another antithrombotic therapy during the measurement period.

**Numerator Instructions:** Oral antithrombotic therapy consists of aspirin, clopidogrel, combination of aspirin and extended release dipyridamole, prasugrel, ticagrelor or ticlopidine.

**Numerator Options:**
- **Performance Met:** Aspirin or another antithrombotic therapy used (G8598)
- **OR**
- **Performance Not Met:** Aspirin or another antithrombotic therapy not used, reason not given (G8599)
Measure #226 (NQF 0028): Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention – National Quality Strategy Domain: Community/Population Health

DESCRIPTION:
Percentage of patients aged 18 years and older who were screened for tobacco use one or more times within 24 months AND who received cessation counseling intervention if identified as a tobacco user

NUMERATOR:
Patients who were screened for tobacco use at least once within 24 months AND who received tobacco cessation intervention if identified as a tobacco user

Definitions:
Tobacco Use – Includes use of any type of tobacco.
Tobacco Cessation Intervention – Includes brief counseling (3 minutes or less), and/or pharmacotherapy.

NUMERATOR NOTE: In the event that a patient is screened for tobacco use and identified as a user but did not receive tobacco cessation intervention report 4004F with 8P.

Numerator Options:
Performance Met:
Patient screened for tobacco use AND received tobacco cessation intervention (counseling, pharmacotherapy, or both), if identified as a tobacco user (4004F)

OR
Performance Met:
Current tobacco non-user (1036F)

OR
Medical Performance Exclusion:
Documentation of medical reason(s) for not screening for tobacco use (eg, limited life expectancy, other medical reasons) (4004F with 1P)

OR
Performance Not Met:
Tobacco screening OR tobacco cessation intervention not performed, reason not otherwise specified (4004F with 8P)
Measure #236 (NQF 0018): Controlling High Blood Pressure -- National Quality Strategy Domain: Effective Clinical Care

DESCRIPTION:
Percentage of patients 18 through 85 years of age who had a diagnosis of hypertension and whose blood pressure was adequately controlled (< 140/90 mmHg) during the measurement period.

NUMERATOR:
Patients whose blood pressure at the most recent visit is adequately controlled (systolic blood pressure < 140 mmHg and diastolic blood pressure < 90 mmHg) during the measurement period.

Numerator Instructions: To describe both systolic and diastolic blood pressure values, each must be reported separately. If there are multiple blood pressures on the same date of service, use the lowest systolic and lowest diastolic blood pressure on that date as the representative blood pressure.

Numerator Options:
**Performance Met:**
- Most recent systolic blood pressure < 140 mmHg (G8752)

**OR**
- Most recent systolic blood pressure ≥ 140 mmHg (G8753)

**AND**
- Most recent diastolic blood pressure < 90 mmHg (G8754)

**OR**
- Most recent diastolic blood pressure ≥ 90 mmHg (G8755)

**OR**
- No documentation of blood pressure measurement, reason not given (G8756)
Measure #317: Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented – National Quality Strategy Domain: Community/Population Health

DESCRIPTION:
Percentage of patients aged 18 years and older seen during the reporting period who were screened for high blood pressure AND a recommended follow-up plan is documented based on the current blood pressure (BP) reading as indicated

NUMERATOR:
Patients who were screened for high blood pressure AND have a recommended follow-up plan documented, as indicated, if the blood pressure is pre-hypertensive or hypertensive

Definitions:
Blood Pressure (BP) Classification – BP is defined by four (4) BP reading classifications: Normal, Pre-Hypertensive, First Hypertensive, and Second Hypertensive Readings.

Recommended BP Follow-Up – The Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) recommends BP screening intervals, lifestyle modifications and interventions based on the current BP reading as listed in the “Recommended Blood Pressure Follow-Up Interventions” listed below.

Recommended Lifestyle Modifications – The JNC 7 report outlines lifestyle modifications which must include one or more of the following as indicated:
- Weight Reduction
- Dietary Approaches to Stop Hypertension (DASH) Eating Plan
- Dietary Sodium Restriction
- Increased Physical Activity
- Moderation in alcohol (ETOH) Consumption

Second Hypertensive Reading:
Requires a BP reading of Systolic BP ≥ 140 mmHg OR Diastolic BP ≥ 90 mmHg during the current encounter AND a most recent BP reading within the last 12 months Systolic BP ≥ 140 mmHg OR Diastolic BP ≥ 90 mmHg

Second Hypertensive BP Reading Interventions:
The JNC 7 report outlines BP follow-up interventions for a second hypertensive BP reading and must include one or more of the following as indicated:
- Anti-Hypertensive Pharmacologic Therapy
- Laboratory Tests
- Electrocardiogram (ECG)

Recommended Blood Pressure Follow-up Interventions:
- Normal BP: No follow-up required for Systolic BP <120 mmHg AND Diastolic BP < 80 mmHg
- Pre-Hypertensive BP: Follow-up with rescreen every year with systolic BP of 120 – 139 mmHg OR diastolic BP of 80 – 89 mmHg AND recommended lifestyle modifications OR referral to Alternate/Primary Care Provider
- First Hypertensive BP Reading: Patients with one elevated reading of systolic BP >= 140 mmHg OR diastolic BP >= 90 mmHg:
  - Follow-up with rescreen > 1 day and < 4 weeks AND recommend lifestyle modifications OR referral to Alternative/Primary Care Provider
- Second Hypertensive BP Reading: Patients with second elevated reading of systolic BP >= 140 mmHg OR diastolic BP >= 90 mmHg:
  - Follow-up with Recommended lifestyle modifications AND one or more of the Second Hypertensive Reading Interventions OR referral to Alternative/Primary Care Provider
Table 15 - Recommended Blood Pressure Follow-Up

<table>
<thead>
<tr>
<th>BP Classification</th>
<th>Systolic BP mmHg</th>
<th>Diastolic BP mmHg</th>
<th>Recommended Follow-Up (must include all indicated actions for each BP Classification)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal BP Reading</td>
<td>&lt; 120</td>
<td>AND &lt; 80</td>
<td>• No Follow-Up required</td>
</tr>
<tr>
<td>Pre-Hypertensive BP Reading</td>
<td>≥ 120 AND ≤ 139</td>
<td>OR ≥ 80 AND ≤ 89</td>
<td>• Rescreen BP within a minimum of 1 year AND Recommend Lifestyle Modifications OR Referral to Alternative/Primary Care Provider</td>
</tr>
<tr>
<td>First Hypertensive BP Reading</td>
<td>≥ 140</td>
<td>OR ≥ 90</td>
<td>• Rescreen BP within a minimum of &gt; 1 day and &lt; 4 weeks AND Recommend Lifestyle Modifications OR Referral to Alternative/Primary Care Provider</td>
</tr>
<tr>
<td>Second Hypertensive BP Reading</td>
<td>≥ 140</td>
<td>OR ≥ 90</td>
<td>• Recommend Lifestyle Modifications AND 1 or more of the Second Hypertensive Reading Interventions (see definitions) OR Referral to Alternative/Primary Care Provider</td>
</tr>
</tbody>
</table>

**Not Eligible** – A patient is not eligible if one or more of the following reason(s) are documented:
- Patient has an active diagnosis of hypertension
- Patient refuses to participate (either BP measurement or follow-up)
- Patient is in an urgent or emergent situation where time is of the essence and to delay treatment would jeopardize the patient’s health status. This may include but is not limited to severely elevated BP when immediate medical treatment is indicated

**NUMERATOR NOTE:** Although the recommended screening interval for a normal BP reading is every 2 years, to meet the intent of this measure, BP screening and follow-up must be performed once per measurement period. For patients with Normal blood pressure a follow-up plan is not required.

**Numerator Options:**

**Performance Met:**
- Normal blood pressure reading documented, follow-up not required (G8783)

**OR**

**Performance Met:**
- Pre-Hypertensive or Hypertensive blood pressure reading documented, AND the indicated follow-up is documented (G8950)

**OR**

**Other Performance Exclusion:**
- Patient not eligible (e.g. documentation the patient is not eligible due to active diagnosis of hypertension, patient refuses, urgent or emergent situation, documentation the patient is not eligible (G8784)

**OR**

**Performance Not Met:**
- Blood pressure reading not documented, reason not given (G8785)
Performance Not Met: Pre-Hypertensive or Hypertensive blood pressure reading documented, indicated follow-up not documented, reason not given (G8952)
Measure #438: Statin Therapy for the Prevention and Treatment of Cardiovascular Disease --
National Quality Strategy Domain: Effective Clinical Care

DESCRIPTION:
Percentage of the following patients—all considered at high risk of cardiovascular events—who were prescribed or were on statin therapy during the measurement period:

- Adults aged ≥ 21 years who were previously diagnosed with or currently have an active diagnosis of clinical atherosclerotic cardiovascular disease (ASCVD); OR
- Adults aged ≥21 years with a fasting or direct low-density lipoprotein cholesterol (LDL-C) level ≥ 190 mg/dL; OR
- Adults aged 40-75 years with a diagnosis of diabetes with a fasting or direct LDL-C level of 70-189 mg/dL

NUMERATOR
Patients who are statin therapy users during the measurement period or who receive an order (prescription) to receive statin therapy at any point during the measurement period

Definitions:
Clinical Atherosclerotic Cardiovascular Disease (ASCVD) Defined as -
- Acute Coronary Syndromes
- History of Myocardial Infarction
- Stable or Unstable Angina
- Coronary or other Arterial Revascularization
- Stroke or Transient Ischemic Attack (TIA)
- Peripheral Arterial Disease of Atherosclerotic Origin

Lipoprotein Density Cholesterol (LDL-C) - A fasting or direct LDL-C laboratory test performed and test result documented in the medical record.

Active Liver Disease or Hepatic Disease or Insufficiency – The following codes are included in the Medical Performance Exclusion (G9667) to define liver disease: B17.0, B17.2, B17.8, B17.10, B17.11, B18.2, B18.8, B18.9, B19.0, B19.20, B19.21, K70.0, K70.9, K70.30, K70.31, K70.40, K70.41, K71.3, K71.4, K71.9, K71.10, K71.11, K71.50, K71.51, K72.00, K72.01, K72.10, K72.11, K72.90, K72.91, K73.0, K73.2, K73.8, K73.9, K74.0, K74.1, K74.2, K74.3, K74.4, K74.5, K74.60, K74.69, K75.4, K76.0, K76.2, K76.3, K76.7, K76.9, K76.89, O98.419

Statin therapy - Administration of one or more of a group of medications that are used to lower plasma lipoprotein levels in the treatment of hyperlipoproteinemia; the group includes all statin-containing medication (HMG-CoA [3-hydroxy-3-methylglutaryl coenzyme A] Reductase Inhibitors).

Sample list of statin medications (list is NOT inclusive of all agents) is included in the clinical recommendations.

NUMERATOR NOTE: In order to meet the measure, a current statin medication therapy use must be documented in the current medication list. Statin therapy use is considered active for the measurement period if it is active during any denominator-eligible encounter. Only statin therapy meets measure Numerator criteria (NOT other cholesterol lowering medications). Prescription or order does not need to be linked to an encounter or visit; may be called to the pharmacy. Statin medication “samples” provided to patients can be documented as “current statin therapy” if documented/specified in the medication list in health/medical record. Patients who meet the denominator criteria for inclusion but are not using statin therapy will not meet performance for this measure. Adherence is not calculated in this measure.
**Numerator Options:**

**Performance Met:**
Patients who are currently statin therapy users or received an order (prescription) for statin therapy (G9664)

OR

**Medical Performance Exclusion:**
Documentation of medical reason(s) for not currently being a statin therapy user or receive an order (prescription) for statin therapy (e.g., patient with adverse effect, allergy or intolerance to statin medication therapy, patients who have an active diagnosis of pregnancy or who are breastfeeding, patients who are receiving palliative care, patients with active liver disease or hepatic disease or insufficiency, patients with end stage renal disease (ESRD), and patients with diabetes who have a fasting or direct LDL-C laboratory test result < 70 mg/dL and are not taking statin therapy) (G9667)

OR

**Performance Not Met:**
Patients who are not currently statin therapy users or did not receive an order (prescription) for statin therapy (G9665)
CARDIOVASCULAR PREVENTION MEASURES GROUP RATIONALE AND CLINICAL RECOMMENDATION STATEMENTS

MEASURE #130 – DOCUMENTATION OF CURRENT MEDICATIONS IN THE MEDICAL RECORD

RATIONALE:

In the American Medical Association’s (AMA) Physician's Role in Medication Reconciliation (2007), critical patient information, including medical and medication histories, current medications the patient is receiving and taking, and sources of medications, is essential to the delivery of safe medical care. However, interruptions in the continuity of care and information gaps in patient health records are common and significantly affect patient outcomes. Consequently, clinical judgments may be based on incomplete, inaccurate, poorly documented or unavailable information about the patient and his or her medication.

As identified by The Agency for Healthcare Research and Quality in the National Healthcare Disparities report (2013), "different providers may prescribe medications for the same patient. Patients are responsible for keeping track of all their medications, but medication information can be confusing, especially for patients on multiple medications. When care is not well coordinated and some providers do not know about all of a patient's medications, patients are at greater risk for adverse events related to drug interactions, overdosing, or underdosing."

In addition, providers need to periodically review all of a patient's medications to ensure that they are taking what is needed and only what is needed. Medication reconciliation has been shown to reduce both medication errors and adverse drug events (Whittington & Cohen, 2004).

Medication safety efforts have primarily focused on hospitals; however, the majority of health care services are provided in the outpatient setting where two-thirds of physician visits result in writing at least one prescription (Stock et al., 2009). Chronically ill patients are increasingly being treated as outpatients, many of whom take multiple medications requiring close monitoring (Nassaralla et al., 2007).

Adverse drug events (ADE) prove to be more fatal in outpatient settings (1 of 131 outpatient deaths) than in hospitals (1 of 854 inpatient deaths) (Nassaralla et al., 2007). According to the first study to utilize nationally-representative data to examine annual rates of ADEs in the ambulatory care setting "Adverse Drug events in U.S. Adult Ambulatory Medical Care," ADE rates increase with age, adults 25-44 years old had a rate of 1.3 per 10,000 person per year, those 45-64 had a rate of 2.2 per 10,000 per year, and those 65 years and older had the highest rate, at 3.8 ADEs per 10,000 persons per year. This study estimates that 13.5 million ADE related visits occurred between 2005-2007, estimating that approximately 4.5 million ambulatory ADE visits occur each year. These 4.5 million visits are associated with approximately 400,000 hospitalizations annually. According to the Institute of Medicine (IOM), in the US, as many as 98,000 deaths per year are attributable to preventable adverse events that occur in the hospitals setting with annual costs of between $17 billion and $29 billion. (Sarkar et al., 2011)

Additionally, findings of The Commonwealth Fund (2010) studies identified 11% to 28% of the 4.3 million visit related ADEs (VADE) in 2001 might have been prevented with improved systems of care and better patient education, yielding an estimate of 473,000 to 1.2 million potentially preventable VADEs annually and potential cost-savings of $946 million to $2.4 billion.

According to the AMA's published report, The Physician's Role in Medication Reconciliation, the rate of medication errors during hospitalization was estimated to be 52 per 100 admissions, or 70 per 1,000 patient days in 2005. Emerging research suggests the scope of medication-related errors in ambulatory settings is as extensive as or more extensive than during hospitalization. Ambulatory visits result in a prescription for medication 50 to 70% of the time. One study estimated the rate of ADEs in the ambulatory setting to be 27 per 100 patients. It is estimated that between 2004 and 2005, in the United States 701,547 patients were treated for ADEs in emergency departments and 117,318 patients were hospitalized for injuries caused by an ADE. Individuals aged 65 years and older are more likely than any other population group to require treatment in the emergency department for ADEs. (AMA, 2007).
A Systematic Review on "Prevalence of Adverse Drug Events in Ambulatory Care" finds that "In the ambulatory care setting, adverse drug events (ADEs) have been reported to occur at a rate of 25%. Approximately 39% of these ADEs were preventable. Since many ADEs are associated with medication errors, and thus potentially preventable, understanding the nature of medication errors in ambulatory care settings can direct attention toward improvement of medication safety in ambulatory care." Data extracted and synthesized across studies indicated the median preventable ADE rates in ambulatory care-based studies were 16.5%. (Tache et al., 2011).

The Agency for Healthcare Research and Quality's (AHRQ) National's Healthcare Disparities Report (2011) identified the rate of adverse drug events (ADE) among Medicare beneficiaries in ambulatory settings 50 per 1,000 person-years. In 2005, AHRQ reported data on adults age 65 and over who received potentially inappropriate prescription medicines in the calendar year, by race, ethnicity, income, education, insurance status, and sex. The disparities were identified as follows: older Asians were more likely than older Whites to have inappropriate drug use (20.3% compared with 17.3%); Older Hispanics were less likely than older non-Hispanic Whites to have inappropriate drug use (13.5% compared with 17.6%); Older women were more likely than older men to have inappropriate drug use (20.2% compared with 14.3%); there were no statistically significant differences by income or education.

Weeks et al. (2010) noted fragmented medication records across the health care continuum, inaccurate reporting of medication regimens by patients, and provider failure to acquire all of the necessary elements of medication information from the patient or record, present significant obstacles to obtaining an accurate medication list in the ambulatory care setting. Because these obstacles require solutions demonstrating improvements in access to information and communication, the Institute of Medicine and others have encouraged the incorporation of IT solutions in the medication reconciliation process. In a survey administered to office-based physicians with high rates of EMR use, Weeks et al. found there is an opportunity for universal medication lists utilizing health IT.

CLINICAL RECOMMENDATION STATEMENTS:
The Joint Commission's 2015 Ambulatory Care National Patient Safety Goals guide providers to maintain and communicate accurate patient medication information. Specifically, the section "Use Medicines Safely NPSG.03.06.01" states the following: "Maintain and communicate accurate patient medication information. The types of information that clinicians use to reconcile medications include (among others) medication name, dose, frequency, route, and purpose. Organizations should identify the information that needs to be collected to reconcile current and newly ordered medications and to safely prescribe medications in the future." (Joint Commission, 2015, retrieved at: Joint Commission's 2015 Ambulatory Care National Patient Safety Goals guide).

The National Quality Forum's 2010 update of the Safe Practices for Better Healthcare, states healthcare organizations must develop, reconcile, and communicate an accurate patient medication list throughout the continuum of care. Improving the safety of healthcare delivery saves lives, helps avoid unnecessary complications, and increases the confidence that receiving medical care actually makes patients better, not worse. Every healthcare stakeholder group should insist that provider organizations demonstrate their commitment to reducing healthcare error and improving safety by putting into place evidence-based safe practices.

The AMA's published report, The Physician’s Role in Medication Reconciliation, identified the best practice medication reconciliation team as one that is multidisciplinary and--in all settings of care--will include physicians, pharmacists, nurses, ancillary health care professionals and clerical staff. The team’s variable requisite knowledge, skills, experiences, and perspectives are needed to make medication reconciliation work as safely and smoothly as possible. Team members may have access to vital information or data needed to optimize medication safety. Because physicians are ultimately responsible for the medication reconciliation process and subsequently accountable for medication management, physician leadership and involvement in all phases of developing and initiating a medication reconciliation process or model is important to its success.
MEASURE #204 - ISCHEMIC VASCULAR DISEASE (IVD): USE OF ASPIRIN OR ANOTHER ANTITHROMBOTIC
RATIONALE:
Coronary heart disease (CHD) is a major cause of death in the United States – in 2004, it was an underlying or contributing cause of death for 451,300 people (1 of every 5 deaths). Acute myocardial infarction (AMI) was as an underlying or contributing cause of death for 156,000 people (American Heart Association 2008). In addition, nearly 16 million people (or 7.3 percent of the American population) had CHD in 2005 (American Heart Association 2008). The cost of cardiovascular diseases and stroke in the United States for 2008 was estimated at $448.5 billion (American Heart Association 2008). This figure includes health expenditures (direct costs such as the cost of physicians and healthcare practitioners, hospital and nursing home services, medications, home health care and other medical durables) and lost productivity resulting from morbidity and mortality (indirect costs). AMI accounts for 18 percent of hospital discharges and 28 percent of deaths due to heart disease (National Heart, Lung, and Blood Institute 2000). Research has shown that costs associated with cardiovascular disease for hospitals are easily $156 billion (American Heart Association 2008).

Aspirin treatments reduce MI in men (127 events per 100,000 person-years) and women (17 events per 100,000 person-years) (Grieving et al. 2008). While studies have shown warfarin to be more effective, aspirin is a safer, more convenient, and less expensive form of therapy (Patrono et al. 2004). Aspirin therapy has been shown to directly reduce the odds of cardiovascular events among men by 14 percent and among women by 12 percent (Berger et al. 2006). Aspirin use has been shown to reduce the number of strokes by 20 percent, MI by 30 percent, and other vascular events by 30 percent (Weisman and Graham 2002).

CLINICAL RECOMMENDATION STATEMENTS:
U.S. Preventive Services Task Force (2009):
The U.S. Preventive Services Task Force (USPSTF) strongly recommends that clinicians discuss aspirin chemoprevention with adults who are at increased risk (5-year risk of greater than or equal to 3 percent) for coronary heart disease (CHD). Discussions with patients should address both the potential benefits and harms of aspirin therapy.

The USPSTF found good evidence that aspirin decreases the incidence of coronary heart disease in adults who are at increased risk for heart disease. They also found good evidence that aspirin increases the incidence of gastrointestinal bleeding and fair evidence that aspirin increases the incidence of hemorrhagic strokes. The USPSTF concluded that the balance of benefits and harms is most favorable in patients at high risk of CHD (5-year risk of greater than or equal to 3 percent) but is also influenced by patient preferences.

USPSTF encourages men age 45 to 79 years to use aspirin when the potential benefit of a reduction in myocardial infarctions outweighs the potential harm of an increase in gastrointestinal hemorrhage. They encourage women age 55 to 79 years to use aspirin when the potential benefit of a reduction in ischemic strokes outweighs the potential harm of an increase in gastrointestinal hemorrhage.

American Diabetes Association (2008):
Use aspirin therapy (75-162 mg/day) as a primary prevention strategy in those with type 1 or 2 diabetes at increased cardiovascular risk, including those who are 40 years of age or who have additional risk factors (family history of CVD, hypertension, smoking, dyslipidemia, or albuminuria).

American Heart Association/American Stroke Association (2006):
AHA/ASA: The use of aspirin is recommended for cardiovascular (including but not specific to stroke) prophylaxis among persons whose risk is sufficiently high for the benefits to outweigh the risks associated with treatment (a 10-year risk of cardiovascular events of 6% to 10%).

American College of Clinical Pharmacy (2004):
For long-term treatment after PCI, the guideline developers recommend aspirin, 75 to 162 mg/day. For long-term treatment after PCI in patients who receive antithrombotic agents such as clopidogrel or warfarin, the guideline
developers recommend lower-dose aspirin, 75 to 100 mg/day. For patients with ischemic stroke who are not receiving thrombolysis, the guideline developers recommend early aspirin therapy, 160 to 325 mg/day.

**MEASURE #226 – PREVENTIVE CARE AND SCREENING: TOBACCO USE: SCREENING AND CESSATION INTERVENTION**

**RATIONALE:**
This measure is intended to promote adult tobacco screening and tobacco cessation interventions for those who use tobacco products. There is good evidence that tobacco screening and brief cessation intervention (including counseling and/or pharmacotherapy) is successful in helping tobacco users quit. Tobacco users who are able to stop smoking lower their risk for heart disease, lung disease, and stroke.

**CLINICAL RECOMMENDATION STATEMENTS:**
The following evidence statements are quoted verbatim from the referenced clinical guidelines:

- **All patients should be asked if they use tobacco and should have their tobacco use status documented on a regular basis. Evidence has shown that clinic screening systems, such as expanding the vital signs to include tobacco use status or the use of other reminder systems such as chart stickers or computer prompts, significantly increase rates of clinician intervention.** (Strength of Evidence = A) (U.S. Department of Health and Human Services. Public Health Service, 2008)

- **All physicians should strongly advise every patient who smokes to quit because evidence shows that physician advice to quit smoking increases abstinence rates.** (Strength of Evidence = A) (U.S. Department of Health and Human Services. Public Health Service, 2008)

- **Minimal interventions lasting less than 3 minutes increase overall tobacco abstinence rates. Every tobacco user should be offered at least a minimal intervention, whether or not he or she is referred to an intensive intervention.** (Strength of Evidence = A) (U.S. Department of Health and Human Services. Public Health Service, 2008)

- **The combination of counseling and medication is more effective for smoking cessation than either medication or counseling alone. Therefore, whenever feasible and appropriate, both counseling and medication should be provided to patients trying to quit smoking.** (Strength of Evidence = A) (U.S. Department of Health and Human Services. Public Health Service, 2008)

- **Clinicians should encourage all patients attempting to quit to use effective medications for tobacco dependence treatment, except where contraindicated or for specific populations for which there is insufficient evidence of effectiveness (ie, pregnant women, smokeless tobacco users, light smokers, and adolescents).** (Strength of Evidence = A) (U.S. Department of Health and Human Services. Public Health Service, 2008)

- **The USPSTF recommends that clinicians ask all adults about tobacco use and provide tobacco cessation interventions for those who use tobacco products.** (A Recommendation) (U.S. Preventive Services Task Force, 2009)

**MEASURE #236 – CONTROLLING HIGH BLOOD PRESSURE**

**RATIONALE:**
Hypertension is a very significant health issue in the United States. Fifty million or more Americans have high blood pressure that warrants treatment, according to the National Health and Nutrition Examination Survey (NHANES) survey (Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure 2003). The United States Preventive Services Task Force (USPSTF) recommends that clinicians screen adults aged 18 and older for high blood pressure (United States Preventive Services Task Force 2007).

The most frequent and serious complications of uncontrolled hypertension include coronary heart disease, congestive heart failure, stroke, ruptured aortic aneurysm, renal disease, and retinopathy. The increased risks of hypertension are present in individuals ranging from 40 to 89 years of age. For every 20 mmHg systolic or 10 mmHg
diastolic increase in blood pressure, there is a doubling of mortality from both ischemic heart disease and stroke (Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure 2003).

Better control of blood pressure has been shown to significantly reduce the probability that these undesirable and costly outcomes will occur. The relationship between the measure (control of hypertension) and the long-term clinical outcomes listed is well established. In clinical trials, antihypertensive therapy has been associated with reductions in stroke incidence (35-40 percent), myocardial infarction incidence (20-25 percent) and heart failure incidence (>50 percent) (Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure 2003).

CLINICAL RECOMMENDATION STATEMENTS:
The United States Preventive Services Task Force (2007) recommends screening for high blood pressure in adults age 18 years and older. This is a grade A recommendation.

Treating systolic blood pressure and diastolic blood pressure to targets that are < 140/90 mmHg is associated with a decrease in cardiovascular disease complications.

MEASURE #317 - PREVENTIVE CARE AND SCREENING: SCREENING FOR HIGH BLOOD PRESSURE AND FOLLOW-UP DOCUMENTED
RATIONALE:
Hypertension is a prevalent condition that affects approximately 66.9 million people in the United States. It is estimated that about 20-40% of the adult population has hypertension; the majority of people over age 65 have a hypertension diagnosis (Appleton SL, et. al., 2012 and Luehr D, et. al., 2012). Winter (2013) noted that 1 in 3 American adults have hypertension and the lifetime risk of developing hypertension is 90% (Winter KH, et. al., 2013). The African American population or non-Hispanic Blacks, the elderly, diabetics and those with chronic kidney disease are at increased risk of stroke, myocardial infarction and renal disease. Non-Hispanic Blacks have the highest prevalence at 38.6% (Winter KH, et. al., 2013). Hypertension is a major risk factor for ischemic heart disease, left ventricular hypertrophy, renal failure, stroke and dementia (Luehr D, et. al., 2012).

Hypertension is the most common reason for adult office visits other than pregnancy. Garrison (2013) stated that in 2007, 42 million ambulatory visits were attributed to hypertension (Garrison GM and Oberhelman S, 2013). It also has the highest utilization of prescription drugs. Numerous resources and treatment options are available, yet only about 40-50% of the hypertensive patients have their blood pressure under control (<140/90) (Appleton SL, et. al., 2012, Luehr D, et. al., 2012). In addition to medication non-compliance, poor outcomes are also attributed to poor adherence to lifestyle changes such as a low-sodium diet, weight loss, increased exercise and limiting alcohol intake. Many adults find it difficult to continue medications and lifestyle changes when they are asymptomatic. Symptoms of elevated blood pressure usually do not occur until secondary problems arise such as with vascular diseases (myocardial infarction, stroke, heart failure and renal insufficiency) (Luehr D, et. al., 2012).

Appropriate follow-up after blood pressure measurement is a pivotal component in preventing the progression of hypertension and the development of heart disease. Detection of marginally or fully elevated blood pressure by a specialty clinician warrants referral to a provider familiar with the management of hypertension and prehypertension. The 2010 ACCF/AHA Guideline for the Assessment of Cardiovascular Risk in Asymptomatic Adults continues to support using a global risk score such as the Framingham Risk Score, to assess risk of coronary heart disease (CHD) in all asymptomatic adults (Greenland P, et. al., 2010). Lifestyle modifications have demonstrated effectiveness in lowering blood pressure (JNC 7, 2003). The synergistic effect of several lifestyle modifications results in greater benefits than a single modification alone. Baseline diagnostic/laboratory testing establishes if a co-existing underlying condition is the etiology of hypertension and evaluates if end organ damage from hypertension has already occurred. Landmark trials such as ALLHAT have repeatedly proven the efficacy of pharmacologic therapy to
control blood pressure and reduce the complications of hypertension. Follow-up intervals based on blood pressure control have been established by the JNC 7 and the USPSTF.

**CLINICAL RECOMMENDATION STATEMENTS:**
The U.S. Preventive Services Task Force (USPSTF) recommends screening for high blood pressure in adults age 18 years and older. This is a grade A recommendation.

**MEASURE #438 - STATIN THERAPY FOR THE PREVENTION AND TREATMENT OF CARDIOVASCULAR DISEASE**

**RATIONALE:**
This measure specification is based on the following clinical guidelines: “2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults: A Report of the American College of Cardiology [ACC]/American Heart Association [AHA] Task Force on Practice Guidelines” (Stone et al. 2013). It is an update to the National Cholesterol Education Program (NCEP), National Heart, Lung, and Blood Institute (NHLBI), and National Institutes of Health (NIH) guideline called ATP III, published in 2002.

To produce the 2013 ACC/AHA guidelines, an expert panel synthesized evidence from randomized controlled trials to identify people most likely to benefit from cholesterol-lowering therapy. The 2013 ACC/AHA guidelines are intended to provide a strong evidence-based foundation for the treatment of blood cholesterol for the primary and secondary prevention and treatment of ASCVD in adult men and women (≥ 21 years of age). The evidence demonstrated that cholesterol management recommendations should be based on a treatment strategy to incorporate optimal doses of statin therapy rather than on achievement of a target LDL-C level; however, it is important to monitor LDL cholesterol levels.

The 2013 ACC/AHA guidelines identify four major statin benefit categories:
1. Secondary prevention in individuals with clinical ASCVD
2. Primary prevention in individuals with primary elevations (i.e., initial readings) of LDL-C ≥ 190 mg/dL
3. Primary prevention in individuals with diabetes ages 40 to 75 years who have LDL-C 70 to 189 mg/dL
4. Primary prevention in individuals ages 40 to 75 years without diabetes but with estimated 10-year ASCVD risk ≥ 7.5%, and LDL-C 70 to 189 mg/dL

The first three of these four categories were deemed “high risk” in the 2013 ACC/AHA guidelines, so this measure of statin therapy focuses on patients in those high-risk categories. Stone et al. (2013) state as follows:

The Expert Panel found extensive and consistent evidence supporting the use of statins for the prevention of ASCVD in many higher-risk primary- and all secondary-prevention individuals without New York Heart Association class II–IV heart failure who were not receiving hemodialysis.

In addition, the relative reduction in ASCVD risk is consistent for primary and secondary prevention and for various patient subgroups. Therefore, statin therapy is recommended for individuals at increased ASCVD risk who are most likely to experience a net benefit in terms of the potential for ASCVD risk reduction and the potential for adverse effects.

**CLINICAL RECOMMENDATION STATEMENTS:**
The addition of statin therapy reduces the risk of cardiovascular events (such as stroke and myocardial infarction) among high-risk individuals, defined as follows: individuals with clinical ASCVD, with LDL-C ≥ 190 mg/dL, or with diabetes and LDL-C 70–189 mg/dL (Stone et al. 2013).

This electronic clinical quality measure aligns with the 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol (Stone et al. 2013), which indicates the use of statins as the first line of cholesterol-lowering medication therapy to reduce the risk of ASCVD among those who currently do not have an ASCVD diagnosis and to lower the risk of cardiovascular events (such as stroke and myocardial infarction) among at-risk populations.
Intensity of statin therapy in primary and secondary prevention:
The expert panel of the 2013 ACC/AHA Guidelines (Stone et al. 2013) defines recommended intensity of statin therapy on the basis of the average expected LDL-C response to specific statin and dose. Although intensity of statin therapy is important in managing cholesterol, this measure assesses prescription of ANY statin therapy, irrespective of intensity. Assessment of appropriate intensity and dosage documentation added too much complexity to allow inclusion of statin therapy intensity in the measure at this time.

Table 15 - Sample (List is NOT inclusive of all agents) Statin Medication Therapy List

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand or Trade Name</th>
<th>Medication Type, If Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atorvastatin</td>
<td>Lipitor</td>
<td>Statin</td>
</tr>
<tr>
<td>Fluvastatin</td>
<td>Lescol XL or Lescol</td>
<td>Statin</td>
</tr>
<tr>
<td>Lovastatin (Mevinolin)</td>
<td>Mevacor or Altoprev</td>
<td>Statin</td>
</tr>
<tr>
<td>Pitavastatin</td>
<td>Livalo</td>
<td>N/A</td>
</tr>
<tr>
<td>Pravastatin Sodium</td>
<td>Pravachol</td>
<td>Statin</td>
</tr>
<tr>
<td>Rosuvastatin Calcium</td>
<td>Crestor</td>
<td>Statin</td>
</tr>
<tr>
<td>Simvastatin</td>
<td>Zocor</td>
<td>Statin</td>
</tr>
<tr>
<td>Amlodipine Besylate/Atorvastatin Calcium</td>
<td>Caduet</td>
<td>Combination</td>
</tr>
<tr>
<td>Ezetimibe/Simvastatin</td>
<td>Vytorin</td>
<td>Combination</td>
</tr>
<tr>
<td>Niacin/Lovastatin</td>
<td>Advicor</td>
<td>Combination</td>
</tr>
<tr>
<td>Niacin/Simvastatin</td>
<td>Simcor</td>
<td>Combination</td>
</tr>
<tr>
<td>Sitagliptin/Simvastatin</td>
<td>Juvisync</td>
<td>Diabetes Combination</td>
</tr>
<tr>
<td>Sitagliptin Phosphate/Simvastatin</td>
<td>Juntadueto</td>
<td>Diabetes Combination</td>
</tr>
</tbody>
</table>