Client: HMSA: PQSR 2007

Measure Title: AVOIDANCE OF CALCIUM CHANNEL BLOCKERS FOR CONGESTIVE HEART FAILURE

Disease State: Congestive Heart Failure

Indicator Classification

1. Disease Management

Strength of Recommendation

1. A- Heart Failure with Decreased Left Ventricular Ejection Fraction
2. C- Heart Failure with Normal Left Ventricular Ejection Fraction

Clinical Intent: To ensure that eligible members identified with congestive heart failure do NOT receive calcium channel blocker medication.

Physician Specialties: Refer to PQSR 2007 Specialty Matrix

Clinical Rationale: Disease Burden

- In 2003, approximately 5 million Americans had Congestive Heart Failure (CHF) and each year, approximately 550,000 new cases are diagnosed while 57,000 people die from the disease.[1]
- CHF affects 1% of individuals 65 and older yet it represents 20% of all hospital admissions for this population.[1]
- From 1979 to 2003, hospitalizations for CHF increased 174%.[1]

Reason for Indicated Intervention or Treatment

- Calcium channel blockers can lead to worsening congestive heart failure (CHF) and have been associated with an increased risk of cardiovascular events.[2-6]
- Appropriate pharmacologic therapy can prevent or reduce the frequency and severity of CHF exacerbations.

Evidence supporting Intervention or Treatment

- Verapamil and diltiazem possess negative chronotropic activity. An early open-label trial showed marked hemodynamic and clinical deterioration in patients with an ejection fraction (EF) of less than 35% treated with verapamil after 1 year.[7] Although diltiazem has less negative inotropy and chronotropy than verapamil, it has also been associated with HF deterioration in patients with an EF of less than 40% at baseline.[8]
- In addition, dihydropyridine calcium channel blockers (CCBs) administered for 2 to 4 months had marked increases in clinical deterioration and hospital admissions for HF exacerbations likely secondary to activation of detrimental neurohormonal systems. These agents were compared with placebo, isosorbide, or standard heart failure therapy that included an ACE inhibitors.[9, 10]

Clinical Recommendations

- The American College of Cardiology (ACC) and the American Heart Association (AHA), in conjunction with the American College of Chest Physicians and the International Society for Heart and Lung Transplantation, suggest not using CCBs in patients with current or prior symptoms of HF and reduced LVEF.[11]
- The ACC/AHA guidelines support the withdrawal of CCBs because of the potential for this class to adversely affect the clinical status of patients with HF. In addition, their use is not recommended to treat patients with...
HF who have comorbid disease (hypertension or chronic atrial fibrillation). On the basis of current guidelines and previous studies, verapamil, diltiazem, nifedipine, nisoldipine, and nicardipine are not recommended for long-term treatment of patients with HF.

- According to the jointly issued guidelines from the American College of Cardiology and the American Heart Association, the optimal management for patients with Stage C disease (i.e. underlying structural disease and past or current symptoms of CHF) includes 4 types of drugs: a diuretic, an ACE inhibitor, a beta-adrenergic blocker, and usually digitalis.[11-17]

**Source**
Health Benchmarks, Inc.

**Denominator**
Continuously enrolled members ages 20 years and older by the end of the measurement year, who were identified as having congestive heart failure in the year prior to the measurement year.

**Relevant Billing Codes:**

**ICD-9 diagnosis code(s):** 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0x, 428.1x, 428.20-428.23, 428.40-428.43, 428.9x


**Denominator Exclusion**
N/A

**Numerator**
Members who did not receive calcium channel blocker prescription during the year after the index date.

**Interpretation of Score**
High score implies better performance

**Physician Attribution**
If member does not receive a prescription, attribute all physicians who saw the member during the year after the index date. If member receives a prescription, attribute prescribing physician during the year after the index date.

**References**


Indicator Classification (Adapted from Health Plan Employer Data Information Set (HEDIS®) technical specifications)

Diagnosis Measures applicable to patients receiving diagnostic workups for a symptom or condition that delineate appropriate laboratory or radiological testing to be performed (e.g., evaluation of thyroid nodule; pregnancy test in patients with vaginal bleeding or abdominal pain).

Effectiveness of Care

Prevention Measures applicable to asymptomatic individuals that are designed to prevent the onset of the targeted condition (e.g., immunizations).

Screening Measures applicable to asymptomatic patients who have risk factors or pre-clinical disease, but in whom the condition has not become clinically apparent (e.g., pap smears; screening for elevated blood pressure).

Disease Management Measures applicable to individuals diagnosed with a condition that are part of the treatment or management of the condition (e.g., cholesterol reduction in patients with diabetes; radiation therapy following breast conserving surgery; appropriate follow-up after acute event).

Medication Monitoring Measures applicable to patients taking medications with narrow therapeutic windows and/or potential preventable significant side effects or adverse reactions (e.g., thyroid stimulating hormone (TSH) testing after levothyroxine dose change; hepatic enzyme monitoring for patients using antimycotic pharmacotherapy).

Medication Adherence Measures applicable to patients taking medications for chronic conditions that are designed to assess patient adherence to medication (e.g., adherence to lipid lowering medication).

Utilization Measures applicable to patients receiving treatment for a symptom or condition that advocate appropriate utilization of laboratory and pharmaceutical resources (e.g., conservative use of imaging for low back pain; inappropriate use of antibiotics for viral upper respiratory infection).
FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation based on the benefits, harms, and costs of the intervention being recommended. (USPSTF = U.S. Preventive Services Task Force)