Metric #: 001
Effective: 4.15.2016

| Complete Aortic Evaluation for Adults with Repaired COA | |
|---|---|
| **Measure Description:** Proportion of adults, > 18 years of age, with repaired coarctation of the aorta (rCOA) who have undergone a complete aortic evaluation. | |
| **Numerator** | Number of patients who have had a complete aortic evaluation[1] ordered or performed during the measurement period, in the 3 years prior to the clinic visit[2], or after turning 18 years old. |
| **Denominator** | Number of patients, > 18 years old, who had a rCOA[3] and an outpatient cardiology clinic visit during the measurement period. |
| **Denominator Exclusions** | • Documentation of gadolinium AND dye allergy<br>• Patient refusal<br>• Pregnant women |
| **Denominator Exceptions** | None |
| **Definitions/Notes** | 1. **Complete aortic evaluation** is defined as having undergone at least one of the following: thoracic CMR, CT scan, or angiography<br>2. **Clinic Visit:** If the patient has had multiple visits during the measurement period, use the most recent visit (i.e. last visit in the measurement period).<br>3. **Repaired coarctation of the aorta** can either be surgical or catheter-based. |
| **Measurement Period** | Quarterly |
| **Sources of Data** | Retrospective medical or electronic record review |
| **Attribution** | Pediatric Cardiologists, Internal Medicine Cardiologists, ACHD Cardiologists (Clinician, practice or institution) |
| **Care Setting** | Outpatient |

**Rationale**

Adults with rCOA may develop aortic aneurysm/pseudoaneurysm proximal, distal, or at the coarctation repair site and may be asymptomatic until aortic dissection or rupture. CMR/CT is superior to physical examination and echocardiography for surveying the entire thoracic aorta for complicated vascular anatomy and future comparison

**Clinical Recommendation(s)**

ACC/AHA Guidelines:
Class 1

Every patient with coarctation (repaired or not) should have at least 1 cardiovascular MRI or CT scan for complete evaluation of the thoracic aorta and intracranial vessels. (Level of Evidence: B)

Warnes C, Williams, R, Bashore T, et al. ACC/AHA guidelines for the management of adults with congenital heart disease. JACC 2008:52:e143-263.

Other guidelines:

All patients should have a periodic MRI or angiogram following repair of the aortic coarctation to document the post-repair anatomy and mechanical complications (restenosis or aneurysm formation)
Grade: Consensus

Therrien J, Gatzoulis M, Graham T, Bink-Boelkens M, Connelly M, Niwa K, Mulder B, Pyeritz R, Perloff J, Somerville J, Webb GD. Canadian Cardiovascular Society Consensus Conference 2001 update: Recommendations for the Management of Adults with Congenital Heart Disease--Part II. Can J Cardiol. 2001 Oct;17(10):1029-50.

## Challenges to Implementation

Some institutions without electronic medical records and proper coding of CHD diagnoses may find difficulty identifying rCOA patients from their cardiology outpatient charts.

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