

<b>Electrocardiogram for chest pain</b>	
<b>Measure Description:</b> Proportion of patients, 5-18 years old, with a chief complaint of chest pain who completed an electrocardiogram (ECG).	
<b>Numerator</b>	Number of patients who had an ECG performed within 30 days (before or after) their initial consultation for chest pain.
<b>Denominator</b>	Number of patients, age 5-18 years old, seen for an initial consultation in an ambulatory pediatric cardiology clinic with a chief complaint of chest pain during the measurement period.
<b>Denominator Exclusions</b>	Patient refusal
<b>Denominator Exceptions</b>	None
<b>Definitions/Notes</b>	None
<b>Measurement Period</b>	Quarterly
<b>Sources of Data</b>	Retrospective medical record review, electronic medical record, ECG storage systems
<b>Attribution</b>	This measure should be reported by physicians or physician extenders
<b>Care Setting</b>	Outpatient
<b>Rationale</b>	
Cardiac etiology for chest pain is rare in children <sup>1-11</sup> . Of 3700 patients presenting with chest pain to outpatient cardiology clinic with an ECG, there were no cardiac deaths at median 4.4 year follow up <sup>1</sup> . Multiple retrospective studies show small number of abnormal ECGs in patients presenting with chest pain with the following diagnoses: pericarditis, myocarditis, arrhythmias, and cardiomyopathy <sup>2-7</sup> . Meta-analysis of asymptomatic children who underwent ECG screening demonstrated high negative predictive value for hypertrophic cardiomyopathy, long QT syndrome, and Wolff-Parkinson-White syndrome <sup>9</sup> .	
Class I Recommendation Level of evidence: C	
<b>Clinical Recommendation(s)</b>	
<u>ACC/AHA Guidelines</u> ACC/AHA Guidelines for Ambulatory Electrocardiography. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the Guidelines for Ambulatory Electrocardiography). Developed in collaboration with the North American Society for Pacing and Electrophysiology. JACC 1999; 34(3): 912-48.	
<u>Other guidelines:</u> Management of Pediatric Chest Pain Using a Standardized Assessment and Management Plan. Pediatrics 2011; 128; 239-245 Resource Utilization Reduction for Evaluation of Chest Pain in Pediatrics Using a Novel Standardized	

Clinical Assessment and Management Plan (SCAMP). J Am Heart Assoc. 2012; 1:1-7

References:

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**Challenges to Implementation**

- ECG may not be well documented in patient chart.
- Chest pain may not be listed as the chief complaint but may be an associated symptom.
- Noncompliance with getting the ECG done.

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