

<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>	
<p>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>.</p> <p>Class I Recommendation            Level of evidence: C</p>	
<b>Clinical Recommendation(s)</b>	
<p><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.</p> <p><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</p>	

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

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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.

**Authors**

Roy Jedeikin, FACC	Bahram Kakavand, FACC
Sarina Behera, FACC	Jeff Boris, FACC
John Hokanson, FACC	Brian Cardis, NMI
Jimmy Lu, Affiliate	Manish Bansal, Affiliate
Agustin E. Rubio, Affiliate	