Table 3. Continued

Term	Definition or Description
Conduction tissue disease[S2.1-2] (Continued)	Nonspecific intraventricular conduction delay (as defined in adults): QRS duration >110 ms where morphology criteria for RBBB or LBBB are not present
	Left anterior fascicular block:
	QRS duration <120 ms
	Frontal plane axis between –45° and –90°
	qR (small r, tall R) pattern in lead aVL
	R-peak time in lead aVL of ≥45 ms
	rS pattern (small r, deep S) in leads II, III, and aVF
	Left posterior fascicular block:
	QRS duration <120 ms
	Frontal plane axis between 90° and 180° in adults. Because of the more rightward axis in children up to 16 years of age, this criterion should only be applied to them when a distinct rightward change in axis is documented.
	rS (small r, deep S) pattern in leads I and aVL
	qR (small q, tall R) pattern in leads III and aVF

Maximum predicted heart rate for age calculated as 220–age (y).
AF indicates atrial fibrillation; bpm, beats per minute; LBBB, left bundle branch block; and RBBB, right bundle branch block.

3. CLINICAL MANIFESTATION OF BRADYCARDIA AND CONDUCTION DISORDERS

3.1. Clinical Manifestations of Bradycardia

The clinical manifestations of bradycardia can vary widely from insidious symptoms to episodes of frank syncope. Bradycardia can be broadly classified into 2 general categories: SND and atrioventricular block. The associated wide range of clinical presentations can be explained by the disparate electrophysiologic manifestations, ventricular rates, transience of these abnormalities, overall medical conditions, and medications.

The electrocardiographic findings in patients with SND are varied and the diagnosis may be considered in patients with sinus bradycardia or atrial depolarization from a subsidiary pacemaker other than the sinus node (ie, ectopic atrial rhythm, junctional rhythm, or ventricular escape), intermittent sinus pauses, or a blunted heart rate response with exercise (chronotropic incompetence).[S3.1-1] The clinical manifestations of atrioventricular block will also depend on whether the atrioventricular block is fixed or intermittent and the ventricular rate or duration of ventricular asystole associated with atrioventricular block. In addition, symptoms will vary depending on underlying cause and timing. For example, patients with vagally mediated atrioventricular block can be asymptomatic if the periods of atrioventricular block occur at night while sleeping when parasympathetic tone is increased. Vagally mediated atrioventricular block during sleep can be recognized by the presence of concomitant sinus node slowing (P-P prolongation). Conversely the sudden increase in parasympathetic tone with vasovagal syncope can cause bradycardia (usually sinus node slowing or sinus arrest, but sometimes with atrioventricular block).[S3.1-2]

Regardless of whether the bradycardia is caused by SND or atrioventricular block, the term "symptomatic bradycardia" is used throughout this document and has been defined as a "documented bradyarrhythmia that is directly responsible for development of the clinical manifestations of syncope or presyncope, transient dizziness or lightheadedness, heart failure symptoms, or confusional states resulting from cerebral hypoperfusion attributable to slow heart rate."[S3.1-3] Direct attribution of bradycardia as the sole source of symptoms is challenging. For example, in patients with vasovagal syncope, bradycardia is often accompanied by a significant vasodepressor effect. In addition, nonspecific symptoms such as fatigue can be multifactorial and therefore difficult to correlate with bradycardia particularly in the setting of modest resting sinus bradycardia or with exercise.[S3.1-4]

3.2. Clinical Manifestations of Conduction Disorders

The clinical manifestations of conduction tissue disease primarily will depend on the underlying cause of the conduction tissue disorder. Patients may often be asymptomatic, particularly in the setting of isolated right bundle branch block (RBBB) or fascicular block. However, patients with LBBB may present with heart failure that may be attributable to cardiac dyssynchrony or because of an underlying cardiomyopathy. The definitions outlined in the "AHA/ACCF/HRS Recommendations for the Standardization and Interpretation of the