#### CARDIOVASCULAR DISORDERS

Cardiovascular disease may affect a driver's ability in a variety of ways, most particularly being the possibility of cardiac syncope or near syncope, due to either dysrhythmia or medications/devices used to treat the cardiac disorder. Guidelines are provided for two important categories of diagnoses that may require driving restriction or periodic review.

#### Supraventricular Arrhythmia and Cardiac Syncope

In general, the first two levels of this profile apply to individuals whose arrhythmia has been of a minor nature or so remote and well controlled that the patient is expected to drive without his/her condition presenting a risk to the public. In other cases, such as Supraventricular Tachycardia, Atrial Fibrillation, or bradydysrhythmias, the risk is related to the likelihood of recurrence, and the likelihood that recurrence may result in alteration or loss of consciousness.

### Ventricular Tachycardia and Ventricular Fibrillation (VT and VF)

Implantable Cardioverter-Defibrillators (ICD) present special circumstances and problems. Generally, a patient who receives such a device for a presenting rhythm that resulted in loss of consciousness (e.g., for secondary prevention<sup>i</sup>, following syncope or sudden death), or a person who experiences Loss of Consciousness(LOC) associated with discharge of the device for an abnormal rhythm, should not drive for 6 months. Driving may be resumed after 6 months without an event. Patients, who have a device implanted for primary prevention<sup>1</sup> due to non-syncopal rhythms may be allowed to resume driving within a week. It is important to note that each of these is a discrete decision by the treating clinician and must be considered individually.

#### **Other Cardiac Conditions**

Any other cardiac condition which could cause syncope or near syncope so that a person might not be safe to drive, may be profiled using the generic profile levels described in SECTION 3 of the FAP. Vasovagal syncope is excluded from this FAP. The clinician may make recommendations about driving or the interval for review. A person with generalized deconditioning which reduces functional capacity should be evaluated using the "Miscellaneous Musculoskeletal and Neurological Conditions" FAP.

#### **Footnotes:**

<sup>i</sup>Primary prevention refers to placement of an ICD in a person that has not experienced a sudden cardiac arrest, but is at high risk for such an event. Placement in a person that has already experienced a cardiac event such as syncope or cardiac arrest is referred to as secondary prevention.

FOR REFERENCES, SEE BIBLIOGRAPHY AT END OF DOCUMENT.

## FUNCTIONAL ABILITY PROFILE

# Cardiovascular Disorders¹: Ventricular Tachycardia/Ventricular Fibrillation

Profile Levels	Degree of Impairment <sup>2</sup> / Potential for At Risk Driving	Condition Definition / Example	Interval for Review and Other Actions
1.	No diagnosed condition	No known disorder	N/A
2.	Condition fully recovered	Arrhythmia by history, not documented, asymptomatic	N/A
3.	Active impairment		
	a. Minimal	Non-syncopal, non-sustained ventricular tachycardia.	4 years
	b. Moderate	Sustained VT without syncope under treatment; and/or  VT or VF, treated with medication or ICD <sup>3</sup> , greater than 6 months without syncope or LOC. If driver has ICD - no pre or post shock syncope, alteration of consciousness, or interference with ability to control a motor vehicle, within past 6 months.	2 years
	c. Severe	Same as Profile 3.b., but under treatment less than 6 months, or syncope pre or post ICD <sup>3</sup> discharge, or syncopal arrhythmia not responding to treatment; or  New conditions under investigation to determine potential risk for unsafe driving.	No driving

For further discussion regarding CARDIOVASCULAR DISORDERS, please refer to NARRATIVE found at beginning of this section.
<sup>2</sup> For further explanation of degree of impairment, please refer to SECTION 3.
<sup>3</sup> ICD includes implantable cardioverter defibrillators

# FUNCTIONAL ABILITY PROFILE Cardiovascular Disorders<sup>1</sup>: Supraventricular Arrhythmias<sup>2</sup>/Cardiac Syncope/Bradyarrhythmias

Profile Levels	Degree of Impairment <sup>3</sup> / Potential for At Risk Driving	Condition Definition / Example	Interval for Review and Other Actions
1.	No diagnosed condition	No known disorder	N/A
2.	Condition fully recovered	Arrhythmias by history, not documented, asymptomatic; or  Documented arrhythmias (excluding VT/VF <sup>4</sup> ) with none in the last 18 months and no other identified heart disease.	N/A
3.	Active impairment	Excluding VT or VF <sup>4</sup>	
	a. Minimal	Documented arrhythmias associated with syncope more than 18 months ago, asymptomatic; and/or  A-fib or supraventricular tachycardia without syncope, only mildly symptomatic (e.g., dyspnea, mild lightheadedness).	6 years
	b. Moderate	Documented arrhythmias associated with syncope within the past 6-18 months, mildly symptomatic (e.g., dyspnea, mild lightheadedness).	2 years
	c. Severe	Documented arrhythmias associated with syncope within the past 6 months or symptoms that interfere with normal functioning; or  History of syncope of unknown cause less than 6 months ago, with underlying heart disease(For exception see <sup>5</sup> ); or  New conditions under investigation to determine potential risk for unsafe driving.	No driving

<sup>&</sup>lt;sup>1</sup>For further discussion regarding CARDIOVASCULAR DISORDERS, please refer to NARRATIVE found at the beginning of this section.

<sup>&</sup>lt;sup>2</sup>Excludes transient arrhythmias or conduction defects associated with acute myocardial infarction.

<sup>&</sup>lt;sup>3</sup> For further explanation of circumstances, please refer to SECTION 3.

<sup>&</sup>lt;sup>4</sup> For Ventricular Tachycardia or Ventricular Fibrillation, see appropriate FAP Table.

<sup>&</sup>lt;sup>5</sup> Definitive therapy for prevention of syncope may allow driving in <6months on an individual basis.