

Appendix 2 (as supplied by the authors): Serious adverse events and their definitions

The list of serious outcome measures collected, and their definitions are detailed below:

1) Deaths due to a cause of syncope or due to unknown cause.

2) Serious Non-Arrhythmic Outcomes

a) Myocardial infarction: Defined as a clinically important elevation in troponin or ECG change and must have been confirmed by the emergency physician or cardiologist or the most responsible physician;

b) Serious structural heart disease:

- aortic stenosis with valve area $\leq 1\text{cm}^2$;
- hypertrophic cardiomyopathy with outflow tract obstruction;
- left atrial myxoma or thrombus with outflow tract obstruction; or
- pericardial effusion with ventricular wall motion abnormalities or pericardial tamponade;

c) Aortic dissection - confirmed by computerized tomography of the chest, trans-esophageal echocardiogram, MRI or angiography;

d) Pulmonary embolism – confirmed by ventilation-perfusion (VQ) scan, computed tomography scan of the chest or angiography;

e) Severe pulmonary artery hypertension – detected by cardiac catheterization or echocardiography with a mean pulmonary arterial pressure $> 30\text{mmHg}$ and was responsible for the syncope;

f) Subarachnoid hemorrhage - Confirmed by computed tomography/magnetic resonance imaging of the brain with or without spinal fluid analysis by lumbar puncture;

g) Significant hemorrhage - Defined as syncope associated with detected source of bleeding such as gastrointestinal bleeding, ruptured abdominal aortic aneurysm, or ectopic pregnancy that is clinically significant to cause syncope in the opinion of the treating physician or that required transfusion;

h) Any other serious condition: Includes conditions such as ectopic pregnancy, pneumothorax, sepsis that will require treatment and will cause the patient to return to the emergency department if not detected;

i) Procedural interventions - Any interventions used to treat a non-arrhythmic cause of syncope. The procedural interventions include surgery for valvular heart disease, chest tube/pig tail catheter insertion for pneumothorax or pleural effusion, or surgery for abdominal aortic aneurysm or ruptured spleen.

3) Serious Arrhythmic Outcomes

j) Arrhythmias:

- Sustained (> 30 seconds) or polymorphic ventricular tachycardia;
- sick sinus with alternating sinus bradycardia and tachycardia;
- sinus pause > 3 seconds;
- Mobitz type II atrioventricular heart block;
- complete heart block or junctional/idioventricular rhythm;
- alternating left and right bundle branch block;
- symptomatic (light-headedness/dizziness, hypotension – systolic BP $< 90\text{mmHg}$) supraventricular tachycardia with rate $> 100/\text{minute}$;
- symptomatic atrial flutter or fibrillation with fast ($>100/\text{minute}$) or slow (RR interval $> 3\text{seconds}$) ventricular rate;
- symptomatic sinus bradycardia < 40 beats/minute;
- pacemaker or implantable cardioverter-defibrillator (ICD) malfunction with cardiac pauses, or
- an abnormal electrophysiological study (corrected sinus node recovery time > 550 milliseconds; His-Ventricular intervals >100 milliseconds; inducible ventricular tachycardia for > 30 second; polymorphic ventricular tachycardia/ventricular fibrillation in patients with Brugada or ventricular dysplasia or previous cardiac arrest; symptomatic supraventricular tachycardia, or infra-Hisian block);

k) Procedural interventions to treat arrhythmia - Any interventions used to treat arrhythmic cause of syncope. The procedural interventions include pacemaker and/or defibrillator insertion, cardioversion or dialysis for electrolyte abnormalities causing arrhythmia.