

Data Supplement S4. Results of Second Round Survey

Definition of Syncope (Q1-Q12)

1- Strongly agree; 2- Agree; 3-Don't know/ depends; 4- Disagree; 5- Strongly disagree

Items achieving >80% consensus (Rating=1,2) are in **BOLD**

Items achieving 70-80% consensus (Rating=1,2) are in *ITALICS*

The following components should be included in the definition of syncope for ED based studies:

Q2. Sudden

Rating	1	2	3	4	5
%	48	30	4	17	

Median: 2 IQR: 1

Q3. Inability to maintain postural tone

Rating	1	2	3	4	5
%	35	48	9	9	

Median: 2 IQR: 1

Q4. Immediate recovery

Rating	1	2	3	4	5
%	39	43	4	13	

Median: 2 IQR: 1

Q7. Due to transient global hypoperfusion

Rating	1	2	3	4	5
%	43	35	13	9	

Median: 2 IQR: 1

The following patients should be excluded from syncope risk stratification studies:

Q11. Head trauma followed by LOC

Rating	1	2	3	4	5
%	74	9	4	13	

Median: 1 IQR: 1

Relevant Outcome Timeframe for ED Decision-Making (Q13-Q17)

1- Strongly agree; 2- Agree; 3-Don't know/ depends; 4- Disagree; 5- Strongly disagree

Items achieving >80% consensus (Rating=1,2) are in **BOLD**

Items achieving 70-80% consensus (Rating=1,2) are in *ITALICS*

An ED-based risk stratification tool should:

Q13. Identify serious outcomes that are recognized during the ED evaluation

Rating	1	2	3	4	5
%	52	30	4	9	4

Median: 1 IQR: 1

Q16. Identify serious outcomes occurring between 31-180 days after the ED visit

Rating	1	2	3	4	5
%	9	39	22	26	4

Median: 3 IQR: 2

Q17. Identify serious outcomes occurring between 181-365 days after the ED visit

Rating	1	2	3	4	5
%	9	23	23	36	9

Median: 3 IQR: 2

Relevant Outcomes for ED Decision-making (Q18-Q35)

1- Strongly agree; 2- Agree; 3-Don't know/ depends; 4- Disagree; 5- Strongly disagree

Items achieving >80% consensus (Rating=1,2) are in **BOLD**

Items achieving 70-80% consensus (Rating=1,2) are in *ITALICS*

Explicit risk prediction for serious outcomes may improve clinical decision-making. Clinically important outcomes that should be predicted by a risk stratification tool include:

Mortality:

Q18. All-cause death

Rating	1	2	3	4	5
%	39	22	22	13	4

Median: 2 IQR: 2

Q20. Syncope-related death

Rating	1	2	3	4	5
%	57	26	4	9	4

Median: 1 IQR: 1

Arrhythmias:

Q24. Non-symptomatic ventricular tachycardia < 30 seconds

Rating	1	2	3	4	5
%	14	50	23	14	

Median: 2 IQR: 1

Q25. Symptomatic sinus bradycardia < 60 beats/minute

Rating	1	2	3	4	5
%	13	39	30	17	

Median: 2 IQR: 1

Q26. Sinus bradycardia < 40 beats/minute

Rating	1	2	3	4	5
%	43	26	22	9	

Median: 2 IQR: 2

Q27. Sick sinus syndrome with alternating sinus bradycardia and tachycardia

Rating	1	2	3	4	5
%	41	41	14	5	

Median: 2 IQR: 1

Q28. Sinus pause > 3 seconds

Rating	1	2	3	4	5
%	59	23	14	5	

Median: 1 IQR: 1

Q29. Symptomatic Mobitz type I atrioventricular heart block

Rating	1	2	3	4	5
%	14	38	29	10	10

Median: 2 IQR: 1

Q32. Junctional/idioventricular rhythm

Rating	1	2	3	4	5
%	27	32	23	18	
Median:	2		IQR:	2	

Q33. Symptomatic supraventricular tachycardia with ventricular rate > 100/minute

Rating	1	2	3	4	5
%	23	41	27	9	
Median:	2		IQR:	1	

Q34. Symptomatic atrial flutter/fibrillation with ventricular rate <60/min

Rating	1	2	3	4	5
%	32	41	27		
Median:	2		IQR:	2	

Q35. Pacemaker or implantable cardioverter-defibrillator malfunction with cardiac pauses.

Rating	1	2	3	4	5
%	70	22	9		
Median:	1		IQR:	1	

Electrophysiology Study Findings:

Q36. Corrected sinus node recovery time > 550 milliseconds

Rating	1	2	3	4	5
%	14	32	32	23	
Median:	3		IQR:	1	

Q37. His-ventricular intervals >100 milliseconds

Rating	1	2	3	4	5
%	27	36	32	5	
Median:	2		IQR:	2	

Q38. Inducible ventricular tachycardia for > 30 seconds

Rating	1	2	3	4	5
%	39	30	26	4	
Median:	2		IQR:	2	

Q39. Inducible polymorphic ventricular tachycardia or ventricular fibrillation in patients with Brugada

Rating	1	2	3	4	5
%	41	27	18	9	5

Median: 2 IQR: 2

Q40. Inducible polymorphic ventricular tachycardia or ventricular fibrillation in patients with ventricular dysplasia

Rating	1	2	3	4	5
%	36	27	27	9	

Median: 2 IQR: 2

Q41. Inducible polymorphic ventricular tachycardia or ventricular fibrillation in patients with previous cardiac arrest

Rating	1	2	3	4	5
%	45	23	18	14	

Median: 2 IQR: 2

Q42. Infra-Hisian block

Rating	1	2	3	4	5
%	41	27	27	5	

Median: 2 IQR: 2

Structural Heart Disease:

Q43. Aortic stenosis with valve area $\leq 1\text{cm}^2$

Rating	1	2	3	4	5
%	64	27	9		

Median: 1 IQR: 1

Q44. Hypertrophic cardiomyopathy with outflow tract obstruction

Rating	1	2	3	4	5
%	61	30	9		

Median: 1 IQR: 1

Q45. Hypertrophic cardiomyopathy without outflow tract obstruction

Rating	1	2	3	4	5
%	18	41	32	9	
Median:	2		IQR:	1	

Q47. Pericardial effusion with effect on ventricular wall motion or pericardial tamponade

Rating	1	2	3	4	5
%	55	23	14	9	
Median:	1		IQR:	1	

Q48. Pulmonary hypertension with a mean arterial pressure > 30 mmHg

Rating	1	2	3	4	5
%	18	32	27	23	
Median:	2.5		IQR:	1	

Q49. Mitral stenosis with valve area ≤ 2 cm²

Rating	1	2	3	4	5
%	41	27	23	9	
Median:	2		IQR:	2	

50. Left ventricular ejection fraction <40%

Rating	1	2	3	4	5
%	35	43	17	4	
Median:	2		IQR:	1	

Non-cardiac outcomes:

Q52. Cortical stroke

Rating	1	2	3	4	5
%	13	17	13	43	13
Median:	4		IQR:	2	

Q53. Vertebrobasilar stroke

Rating	1	2	3	4	5
%	13	30	17	26	13
Median:	3		IQR:	2	

Q57. Ectopic pregnancy

Rating	1	2	3	4	5
%	17	22	35	17	9

Median: 3 IQR: 2

Q58. Abdominal aortic aneurysm

Rating	1	2	3	4	5
%	23	27	18	23	9

Median: 2.5 IQR: 2

Q59. Subarachnoid hemorrhage

Rating	1	2	3	4	5
%	26	26	22	22	4

Median: 2 IQR: 3

Q60. Pneumothorax or pleural effusion

Rating	1	2	3	4	5
%	9	30	26	22	13

Median: 3 IQR: 2

Q61. Sepsis

Rating	1	2	3	4	5
%	17	35	13	22	13

Median: 2 IQR: 2

Medical/ Procedural Interventions:

Q64. Coronary artery bypass graft or coronary artery stent

Rating	1	2	3	4	5
%	17	48	26	9	13

Median: 2 IQR: 1

Q65. Cardiac valve surgery

Rating	1	2	3	4	5
%	30	35	22	9	4

Median: 2 IQR: 2

Q66. Elective cardioversion in the absence of objective evidence that tachyarrhythmia is responsible for the syncope

Rating	1	2	3	4	5
%	14	23	18	32	14
Median:	3		IQR:		2

Q67. Balloon-pump insertion

Rating	1	2	3	4	5
%	17	30	30	13	9
Median:	3		IQR:		1

Q68. Heart transplant

Rating	1	2	3	4	5
%	14	18	41	18	9
Median:	3		IQR:		2

Q69. Initiation of anti-arrhythmia medical therapy

Rating	1	2	3	4	5
%	14	41	32	9	5
Median:	2		IQR:		1

Q70. Ventricular assist device

Rating	1	2	3	4	5
%	23	27	27	9	14
Median:	2		IQR:		1

Q71. Endoscopic/ surgical treatment of esophageal varices

Rating	1	2	3	4	5
%	23	27	18	18	14
Median:	2.5		IQR:		2

Q72. Endoscopic/ surgical treatment of gastric/ duodenal ulcerations

Rating	1	2	3	4	5
%	23	27	18	18	14
Median:	2.5		IQR:		2

Q73. Dialysis for electrolyte abnormalities

Rating	1	2	3	4	5
%	9	23	27	32	9
Median:	3		IQR:		2

Q74. Use of vasopressors

Rating	1	2	3	4	5
%	19	38	14	19	10
Median:	2		IQR:		2

Q75. Cardiopulmonary resuscitation

Rating	1	2	3	4	5
%	55	41	5		
Median:	1		IQR:		1

Q76. Admission to the intensive care unit

Rating	1	2	3	4	5
%	27	27	14	23	9
Median:	2		IQR:		3

Health Services Use:

Q77. Return visit for syncope/fall resulting in admission, but without any of the above events

Rating	1	2	3	4	5
%	39	30	22	9	
Median:	2		IQR:		2

ECG Abnormalities (Q78-Q95)

1- Strongly agree; 2- Agree; 3-Don't know/ depends; 4- Disagree; 5- Strongly disagree
 Items achieving >80% consensus (Rating=1,2) are in **BOLD**
 Items achieving 70-80% consensus (Rating=1,2) are in *ITALICS*

ECG Abnormalities:

The following ECG findings should be considered abnormal:

Q79. Frequent PVCs (>3 on standard 10 second tracing)

Rating	1	2	3	4	5
%	26	30	26	17	
Median:	2		IQR:	2	

Q81. Left ventricular hypertrophy

Rating	1	2	3	4	5
%	17	30	26	26	
Median:	3		IQR:	2	

Q82. Right ventricular hypertrophy

Rating	1	2	3	4	5
%	13	35	22	30	
Median:	3		IQR:	2	

Q83. Left axis deviation

Rating	1	2	3	4	5
%	4	17	43	35	
Median:	3		IQR:	1	

Q84. Right axis deviation

Rating	1	2	3	4	5
%	3	26	35	35	
Median:	3		IQR:	2	

Q86. Complete right bundle branch block

Rating	1	2	3	4	5
%	17	30	26	26	
Median:	3		IQR:	2	

Q87. First degree block (>200 ms)

Rating	1	2	3	4	5
%	9	26	22	43	
Median:	3		IQR:	2	

Q88. Short PR interval (<10 ms)

Rating	1	2	3	4	5
%	9	43	26	17	4
Median:	2		IQR:	1	

Q90. Prolonged QRS (>100 ms)

Rating	1	2	3	4	5
%	32	55	5	5	5
Median:	2		IQR:	1	

Q94. Non-specific ST/T changes

Rating	1	2	3	4	5
%	4	13	22	57	4
Median:	4		IQR:	1	

Candidate Predictors (Q96-Q130)

1- Strongly agree; 2- Agree; 3-Don't know/ depends; 4- Disagree; 5- Strongly disagree

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Data on the following elements should be collected and reported:

Demographic characteristics:

Q98. Race and ethnicity (self reported)

Rating	1	2	3	4	5
%	14	45	18	18	5
Median:	2		IQR:	1	

Q99. Insurance status

Rating	1	2	3	4	5
%	4	17	26	30	22
Median:	4		IQR: 1		

Q100. Mode of arrival (self transport, ambulance, transfer from another facility)

Rating	1	2	3	4	5
%	13	30	22	22	13
Median:	3		IQR: 2		

Q101. Body mass index

Rating	1	2	3	4	5
%	14	23	32	23	9
Median:	3		IQR: 2		

Historical features:

Q104. While working

Rating	1	2	3	4	5
%	35	26	17	17	4
Median:	2		IQR: 2		

Q113. Vertigo

Rating	1	2	3	4	5
%	23	23	36	5	14
Median:	3		IQR: 1		

Q114. Headache

Rating	1	2	3	4	5
%	26	26	26	9	13
Median:	2		IQR: 2		

Q115. Incontinence of urine or stool

Rating	1	2	3	4	5
%	26	52	9	9	4
Median:	2		IQR: 1		

Q116. Lightheadedness

Rating	1	2	3	4	5
%	45	36	14	5	
Median:	2		IQR:	1	

Q118. Post-prandial (within 1 hour of meal)

Rating	1	2	3	4	5
%	39	48	9	4	
Median:	2		IQR:	1	

Q120. Abdominal pain

Rating	1	2	3	4	5
%	26	52	17		4
Median:	2		IQR:	1	

Q122. Feeling of cold

Rating	1	2	3	4	5
%	9	39	30	13	9
Median:	3		IQR:	1	

Q124. Cyanosis noted by bystander

Rating	1	2	3	4	5
%	41	32	14	14	
Median:	2		IQR:	2	

Q125. Blurred vision

Rating	1	2	3	4	5
%	22	61	9	9	
Median:	2		IQR:	0	

Q126. Any prodromes lasting greater than 5 seconds

Rating	1	2	3	4	5
%	35	57	4	4	
Median:	2		IQR:	1	

Q129. Recent history of diarrhea

Rating	1	2	3	4	5
%	22	43	13	22	
Median:	2		IQR:	1	

Q130. Recent history of decreased oral intake

Rating	1	2	3	4	5
%	13	30	35	22	
Median:	3		IQR:	1	

Co-morbidities:

Q134. Peripheral vascular disease

Rating	1	2	3	4	5
%	4	26	22	48	
Median:	3		IQR:	2	

Q135. Stroke / TIA

Rating	1	2	3	4	5
%	22	39	13	26	
Median:	2		IQR:	2	

Q141. Structural heart disease- cardiac valve disease, excluding aortic stenosis and mitral prolapse

Rating	1	2	3	4	5
%	43	48		9	
Median:	2		IQR:	1	

Q147. Diabetes requiring medication

Rating	1	2	3	4	5
%	17	57	13	13	
Median:	2		IQR:	1	

Q149. Renal insufficiency (creatinine >2 mg/dL in the ED)

Rating	1	2	3	4	5
%	13	43	26	17	
Median:	2		IQR:	1	

Q151. First syncope episode prior to age 35

Rating	1	2	3	4	5
%	30	39	13	22	

Median: 2 IQR: 2

Q152. Prior gastrointestinal bleeding

Rating	1	2	3	4	5
%	26	35	26	13	

Median: 2 IQR: 2

Medications:

Q154. Digoxin

Rating	1	2	3	4	5
%	26	30	26	13	4

Median: 2 IQR: 2

Q155. Alpha-blocker (e.g. tamsulosin, terazosin)

Rating	1	2	3	4	5
%	48	30	13	4	4

Median: 2 IQR: 1

Q156. Beta-blocker

Rating	1	2	3	4	5
%	43	39	9	9	

Median: 2 IQR: 1

Q157. Calcium channel blockers

Rating	1	2	3	4	5
%	22	48	22	4	4

Median: 2 IQR: 1

Q158. Nitrates

Rating	1	2	3	4	5
%	30	52	13	4	

Median: 2 IQR: 1

Physical examination findings:

Q161. Highest systolic blood pressure measured in ED

Rating	1	2	3	4	5
%	35	9	17	30	9
Median:	3		IQR:		3

Q164. Highest pulse measured in ED

Rating	1	2	3	4	5
%	43	22	13	22	
Median:	2		IQR:		2

Q167. Pulse oximetry on room air

Rating	1	2	3	4	5
%	39	26	22	13	
Median:	2		IQR:		2

Q168. Heart murmur

Rating	1	2	3	4	5
%	39	43	9	9	
Median:	2		IQR:		1

Q169. S3 or S4 gallop

Rating	1	2	3	4	5
%	22	39	17	17	4
Median:	2		IQR:		1

Q170. Carotid bruit

Rating	1	2	3	4	5
%	22	26	13	30	9
Median:	3		IQR:		2

Q172. Fecal occult blood

Rating	1	2	3	4	5
%	22	26	26	26	
Median:	3		IQR:		2

Q173. Dry mucous membranes

Rating	1	2	3	4	5
%	9	43	22	22	4

Median: 2 IQR: 2

Laboratory tests:

Q174. Blood urea nitrogen

Rating	1	2	3	4	5
%	9	35	26	30	

Median: 3 IQR: 2

Q175. Creatinine

Rating	1	2	3	4	5
%	13	30	26	30	

Median: 3 IQR: 2

Q176. Calculated creatinine clearance using Cockcroft-Gault formula: $CrCl (mL/min) = \frac{[(140 - \text{age}) \times \text{weight (kg)}]}{72 \times \text{serum creatinine (mg/dL)}} \times 0.85$ for women)

Rating	1	2	3	4	5
%	9	22	13	57	

Median: 4 IQR: 2

Q177. Glucose

Rating	1	2	3	4	5
%	17	52	9	22	

Median: 2 IQR: 1

Q178. Hematocrit and/or Hemoglobin

Rating	1	2	3	4	5
%	43	48	9		

Median: 2 IQR: 1

Q180. Initial troponin

Rating	1	2	3	4	5
%	17	30	35	17	

Median: 3 IQR: 1

Q181. Serial troponin at least 4 hours after initial troponin

Rating	1	2	3	4	5
%	9	23	45	23	

Median: 3 IQR: 1

Q182. Natriuretic peptide (BNP or NT-proBNP)

Rating	1	2	3	4	5
%	4	22	35	39	

Median: 3 IQR: 2

Q183. Pregnancy test

Rating	1	2	3	4	5
%	18	14	32	36	

Median: 3 IQR: 2