

Definition: Syncope is a consciousness loss due to transient Global Cerebral Hypo-perfusion characterized by rapid onset, short duration, and spontaneous complete recovery

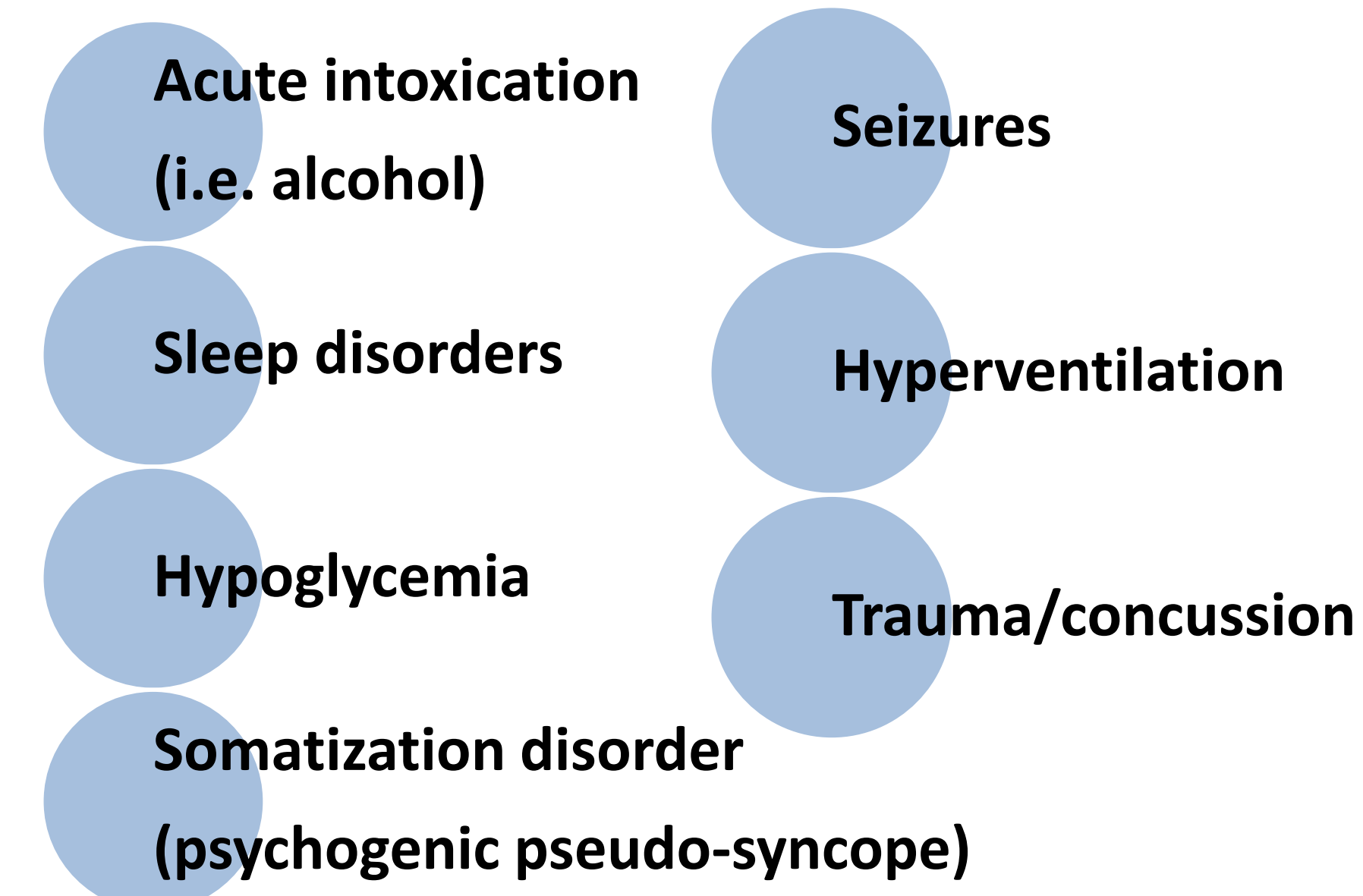
Introduction: Syncope is a common condition responsible for 1–1.5% of Emergency Department (ED) visits. Incidence in the general population is up to 50 times higher. Despite guidelines (GL), hospitalization rates are still high (up to 50%), especially compared with the incidence of short-term adverse events (11% globally, decreasing to 4% with ED diagnosed events excluded). However, despite generally favorable outcomes, the incidence of short or long term adverse events in low-risk patients discharged from the ED is not negligible. The 2018 European Society of Cardiology (ESC) GL for diagnosis and management of syncope focuses on decreasing inappropriate admissions and tests while maintaining patient safety.

Causes of true Syncope

Neurally-Mediated	Orthostatic	Cardiac Arrhythmia	Structural Cardio-Pulmonary
1	2	3	4
*VVS *CSS *Situational -Cough -Post-Micturition	*Drug-Induced *ANS Failure *Situational -Primary -Secondary	*Brady -SN Dysfunction -AV Block *Tachy -VT -SVT *Situational -Primary -Secondary	*Acute Myocardial Ischemia *Aortic Stenosis *HCM *Pulmonary Hypertension *Aortic Dissection

Unexplained Causes = Approximately 1/3

Syncope Mimics



Initial evaluation: Diagnostic criteria and clinically suggestive features

- Presence of typical prodromes of reflex Syncope
- Long history of recurrent syncope with low-risk features
- Relationship with unpleasant sight, sound, smell or pain
- Prolonged standing; presence in crowded/hot settings
- During a meal or postprandial
- Triggered by cough, defecation or micturition; standing up with head rotation; pressure on carotid sinus
- Persistent bradycardia or slow AF (b40 bpm) or repetitive sinoatrial block or sinus pause N3", when awake
- Presence of a Mobitz II 2nd degree AV Block Dysfunction of an implantable cardiac device Short QTc interval (≤ 340 ms) ST segment elevation with type 1 morphology in leads V1–V3 (Brugada pattern)
- Non-sustained VT
- Paroxysmal SVT or AF

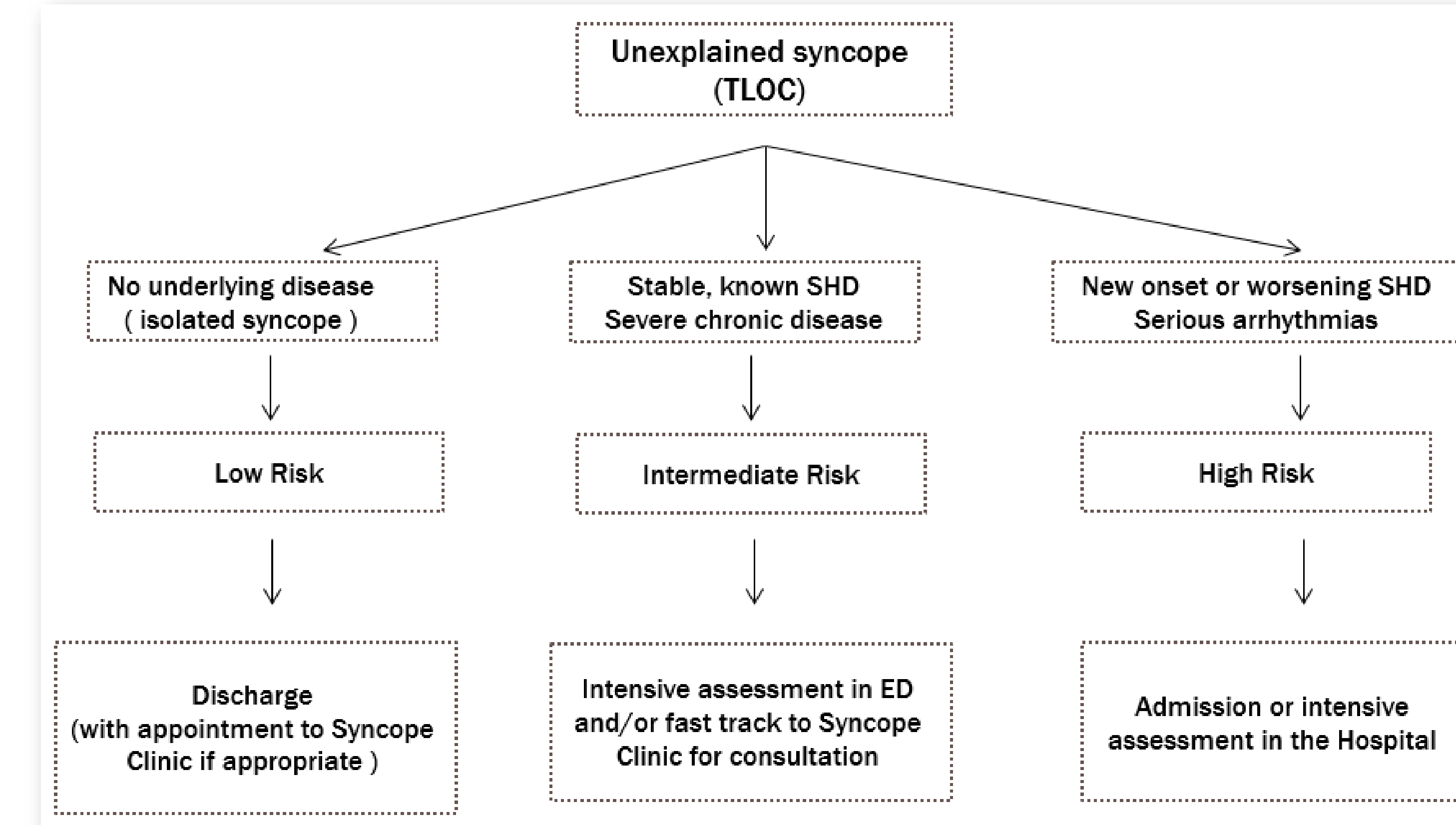
Criteria to decide the management of ED patient with unexplained syncope after initial evaluation, based on risk stratification

- During exertion, when supine/sitting or without prodromes
- Sudden onset palpitation immediately followed by syncope
- Undiagnosed systolic murmur
- Family history of unexplained sudden death at young age
- Severe structural or coronary heart disease (heart failure, low LVEF, previous myocardial infarction), in a stable condition

ECG findings:

- Bivascular block (LBBB or RBBB plus LAFB or LPFB)
- AV block 2nd degree type 1 or marked 1st degree (PR ≥ 0.3 s)
- Asymptomatic mild sinus bradycardia or slow AF (40–50 bpm)
- Long QT interval
- Q waves consistent with a previous MI or cardiomyopathy
- Left ventricular hypertrophy suggesting HCM Minor injuries (not needing admission per se)

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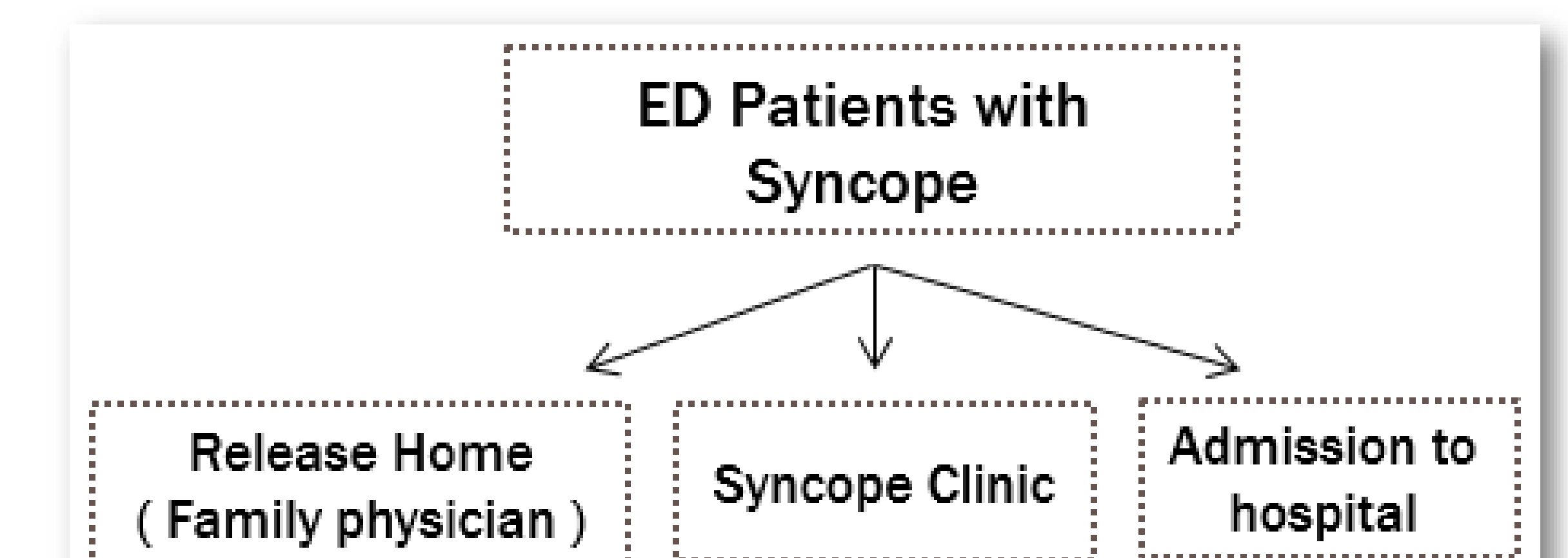


Conclusion: To date, the approach suggested by the 2018 ESC GL is the primary means to achieve “zero admission for syncope”. The GL introduced a clear-cut distinction between syncope associated with a clear diagnosis (to be managed per to the underlying condition), and truly undetermined cases (to be managed via prognostic stratification). The ESC GL emphasize the pivotal importance of managing patients in facilities such as EDOUs or outpatient SUs, to avoid hospital admission.

Nevertheless, we believe that this approach could be further improved by:

- Improving the prognostic stratification table usability and retention
- Increasing its use in crowded ED settings
- Clarifying role of laboratory investigations to support clinical judgment
- Defining a diagnostic protocol to be used in EDOU.

These topics will require further studies, conducted with multicenter investigations with common patient selection criteria, careful identification of clinical outcomes.



ESC guidelines for ED management of syncopal patients:

Evaluation of syncope in the ED should be carried out with the following steps:

1. Differentiation between syncope and non-syncopal transient loss of consciousness (TLOC)
2. Initial evaluation: history; physical examination (including supine and standing blood pressure); ECG; additional tests needed to achieve etiological diagnosis
3. Management according to final diagnosis
4. Risk stratification of patients with undetermined syncope

- The primary aim of emergency physicians (EPs) is to identify syncopal episodes that hide acute underlying diseases, especially those associated with risk of rapid deterioration.
- Only after excluding these conditions, patients should be managed with initial evaluation and risk stratification.
- Short-term serious events are most frequently identified within 72 hours, mainly in the ED, and primarily associated with the acute disease causing the syncope or serious related injuries .
- This approach appears crucial for focusing priorities in ED management of patients with syncope.