

JAMA Cardiology Clinical Guidelines Synopsis

Assessment and Treatment of Syncope

Win-Kuang Shen, MD; Robert S. Sheldon, MD, PhD

GUIDELINE TITLE 2017 American College of Cardiology (ACC)/American Heart Association (AHA)/Heart Rhythm Society (HRS) Guideline for the Assessment and Management of Patients with Syncope

DEVELOPERS ACC/AHA/HRS

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PRIOR VERSION None

FUNDING SOURCES ACC/AHA/HRS

TARGET POPULATION Patients with syncope

MAJOR RECOMMENDATIONS

This guideline covers the assessment and treatment of patients with syncope. The broader categories of transient loss of consciousness and postural tachycardia syndrome were not covered.

Summary of the Clinical Problem

Syncope is a common clinical problem that can affect a wide range of patient populations. Like fever, it is a symptom with many causes, and its risk stratification, diagnosis, and treatment are frequently difficult. The purpose of the American College of Cardiology (ACC)/American Heart Association (AHA)/Heart Rhythm Society (HRS) Guideline¹ was to provide contemporary, accessible, succinct, and practical guidance on treating adult and pediatric patients with suspected syncope.

Characteristics of the Guideline Source

This guideline was developed by the ACC/AHA/HRS.¹ The writing committee was composed of clinicians with expertise in caring for patients with syncope. They included representatives from the ACC, AHA, HRS, American Academy of Neurology, American College of Emergency Physicians, and Society for Academic Emergency Medicine. It used systematic review methods derived from the ACC/AHA Guidelines classes of recommendations and levels of evidence. A key contribution was to compile, refine, and develop simple bedside definitions for syncope syndromes based on earlier reports, including those of the European Society of Cardiology,² the Gargano Workshop,³ and the American Autonomic Society.⁴

Evidence Base

The ACC/AHA Task Force on Clinical Practice Guidelines review, update, and modify guideline methods based on published standards from organizations, such as the Institute of Medicine, and on internal reevaluation. When developing recommendations, the writing committee uses evidence-based methods that are based on all available data. Literature searches include randomized clinical trials, registries, nonrandomized comparative and descriptive studies, case series, cohort studies, systematic reviews, and expert opinions.¹

Benefits and Harms

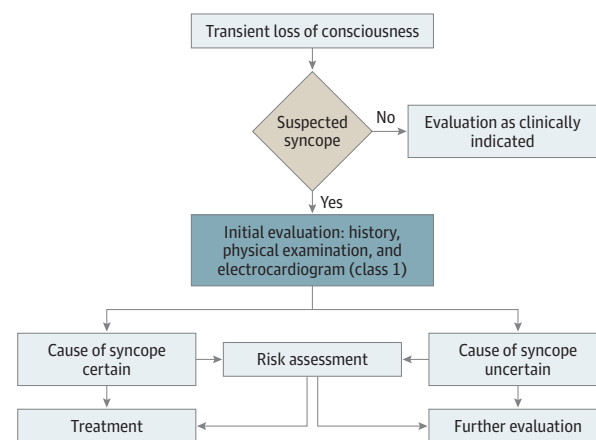
The guidelines are intended to reduce the heterogeneity in the current practice of syncope. They should reduce the harm caused by overinvestigation and underdiagnosis and provide the benefits of

better outcomes and quality of life and reduced costs. In the guideline documents, the class of recommendation indicates the strength of the recommendation, encompassing the estimated magnitude and certainty of benefits in proportion to risk. The level of evidence rates the quality of scientific evidence that supports the intervention on the basis of the type, quantity, and consistency of data from clinical trials and other sources. Class of recommendations are determined independently from the level of evidence. Class I recommendations denote that benefits strongly outweigh risks. Class II recommendations are made when benefits moderately outweigh risks. Class III recommendations are made when either there is no benefit or when risks outweigh benefits (harm).¹

Discussion**Risk Assessment and Initial Management**

Risk stratification is key in the initial assessment of syncope (Figure). Several independent factors predict poor outcomes, including being

Figure. Syncope Initial Evaluation



Colors correspond to class of recommendation. Adapted from Shen et al.¹

older than 60 years, being male, a lack of a prodrome, experiencing syncope while in a supine position or during exercise, experiencing palpitations preceding syncope, a family history of early sudden death, hypotension, anemia, and an abnormal electrocardiogram result. Patients with serious morbidities should be admitted to a hospital while those with clearly reflex-mediated syncope could be managed as outpatients. Intermediate-risk patients might benefit from investigation protocols in emergency departments.

Diagnostic Approach

A meticulous history, physical, and electrocardiogram are key to making a diagnosis. If a diagnosis can be made confidently on these bases, no further testing should be done; if not, neither blanket testing nor a uniform investigational protocol is recommended. Testing should be based on clinical judgment. Tilt testing can be helpful to investigate possible convulsive syncope, pseudosyncope, and suspected but uncertain vasovagal syncope. Brain computed tomography or magnetic resonance imaging, electroencephalogram, and carotid ultrasonography are unhelpful and should not be ordered. Ambulatory electrocardiograms can be helpful and the selected technology should be based on symptom frequency. Investigations of cardiac causes of syncope should follow the relevant guideline-directed management and therapy. Managing syncope in athletes and children should involve professionals with specific relevant expertise.

Treatment of Vasovagal Syncope

This should be tailored to the individual patient. All patients should be reassured about its benign outcome, encouraged to increase salt and fluid intake where possible, and coached on counterpressure maneuvers. Although the data are weak, they are sufficient to consider using fludrocortisone and midodrine for patients without hypertension or heart failure, β -blockers in patients older than 42 years without asthma or depression, and serotonin-reuptake inhibitors. A formal external systematic review and meta-analysis⁵ recommended that dual-chamber pacing could be used among highly symptomatic patients older than 40 years with recurrent vasova-

gal syncope and prolonged spontaneous pauses. This is a rapidly evolving field, and practitioners should restrict use to highly symptomatic patients and possibly seek advice from experts. The management of other cardiac causes of syncope should follow the guideline-directed management and therapy.

Orthostatic Hypotension

Orthostatic hypotension frequently causes syncope. Causes such as dehydration and overmedication should be determined, but some patients have autonomic neuropathies. These may be because of serious and occasionally occult conditions, and a referral for a specialized autonomic evaluation can be helpful. Treatment is supportive and involves counterpressure maneuvers, compression stockings, fludrocortisone, midodrine, and other medications.

Driving

The aim of assessing a patient's medical fitness to drive is to balance the risk of causing injury or death to the driver or others with the need for patients to drive to meet the demands of family life and work. There are few data available on this subject, and the writing committee only provided suggestions that were based on expert opinions. These apply to private drivers; commercial driving in the United States is governed by federal law and administered by the Department of Transportation. Health care professionals should know and follow local driving laws and regulations.

Areas in Need of Future Study or Ongoing Research

Standardized national registries and large databases are needed to understand syncope incidence and prevalence and patient risk, inform driving policies, improve patient outcomes, and improve the delivery of health services. Prospective studies are needed to define clinical outcomes and assess risks from recurrent syncope as well as nonfatal and fatal outcomes. They should gather data on quality of life, work loss, and functional capacity. Mechanistic investigations and randomized clinical trials are needed to improve therapeutic outcomes.

ARTICLE INFORMATION

Author Affiliations: Mayo Clinic, Phoenix, Arizona (Shen); University of Calgary, Calgary, Alberta, Canada (Sheldon).

Corresponding Author: Win-Kuang Shen, MD, Mayo Clinic, 5777 E Mayo Blvd, Phoenix, AZ 85054 (wshen@mayo.edu).

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