Complete Summary

GUIDELINE TITLE

Clinical policy: critical issues in the evaluation and management of adult patients presenting to the emergency department with syncope.

BIBLIOGRAPHIC SOURCE(S)

Huff JS, Decker WW, Quinn JV, Perron AD, Napoli AM, Peeters S, Jagoda AS, American College of Emergency Physicians. Clinical policy: critical issues in the evaluation and management of adult patients presenting to the emergency department with syncope. Ann Emerg Med 2007 Apr;49(4):431-44. [42 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American College of Emergency Physicians (ACEP). Clinical policy: critical issues in the evaluation and management of patients presenting with syncope. Ann Emerg Med 2001 Jun;37(6):771-6.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Syncope

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Risk Assessment

CLINICAL SPECIALTY

Cardiology
Emergency Medicine
Family Practice
Internal Medicine

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To address the following three critical questions:

- What history and physical examination data help to risk-stratify patients with syncope?
- What diagnostic testing data help to risk-stratify patients with syncope?
- Who should be admitted after an episode of syncope of unclear cause?

TARGET POPULATION

Adult patients presenting with syncope in the emergency department (ED)

These guidelines are *not* intended for children or for patients in whom the episode of syncope is thought to be secondary to another disease process. Among the clinical conditions specifically excluded are patients with seizures, chest pain, headache, abdominal pain, dyspnea, hemorrhage, hypotension, or a new neurologic deficit.

INTERVENTIONS AND PRACTICES CONSIDERED

1. Risk assessment, including assessment of historical data, physical examination data (vital signs, cardiopulmonary examination, head [tongue], abdominal pain or tenderness), and diagnostic testing (electrocardiogram [ECG], cardiac monitoring, laboratory blood testing, advanced tests and imaging)
2. Hospital admission after syncopal event

MAJOR OUTCOMES CONSIDERED

- Diagnostic rate
- Predictive factors (historical data, physical examination data, and diagnostic testing data) for risk of adverse outcomes in patients with syncope
- Morbidity and mortality rates in patients with syncope

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

MEDLINE searches for articles published between March 1998 and May 2005 were performed using a combination of key words, including "syncope" and variations of "risk," "risk stratification," "admission," "outcomes," "emergency department," "prognosis," "differential diagnosis," "physical examination," and "diagnostic evaluation." Searches were limited to English-language sources. Additional articles were reviewed from the bibliographies of studies cited. Subcommittee members also supplied articles from their own knowledge and files.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Strength of Evidence

Literature Classification Schema^

Design/ Class	Therapy*	Diagnosis**	Prognosis***
1	Randomized, controlled trial or meta-analyses of randomized trials	Prospective cohort using a criterion standard	Population prospective cohort
2	Nonrandomized trial	Retrospective observational	Retrospective cohort Case control
3	Case series Case report Other (e.g., consensus, review)	Case series Case report Other (e.g., consensus, review)	Case series Case report Other (e.g., consensus, review)

^ Some designs (e.g., surveys) will not fit this schema and should be assessed individually.

*Objective is to measure therapeutic efficacy comparing ≥2 interventions.

**Objective is to determine the sensitivity and specificity of diagnostic tests.

*** Objective is to predict outcome including mortality and morbidity.

Approach to Downgrading Strength of Evidence*

	Design/Class		
Downgrading	**1**	**2**	**3**
None	I	II	III
1 level	II	III	X
2 levels	III	X	X
Fatally flawed	X	X	X

*See "Description of Methods Used to Analyze the Evidence" field for more information.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

This clinical policy was created after careful review and critical analysis of the medical literature.

All articles used in the formulation of this clinical policy were graded by at least 2 subcommittee members for strength of evidence and classified by the subcommittee members into 3 classes of evidence on the basis of the design of the study, with design 1 representing the strongest evidence and design 3 representing the weakest evidence for therapeutic, diagnostic, and prognostic clinical reports respectively (see Appendix A in the original guideline document and the "Rating Scheme for the Strength of the Evidence" field). Articles were then graded on 6 dimensions thought to be most relevant to the development of a clinical guideline: blinded versus nonblinded outcome assessment, blinded or randomized allocation, direct or indirect outcome measures (reliability and validity), biases (e.g., selection, detection, transfer), external validity (i.e., generalizability), and sufficient sample size. Articles received a final grade (Class I, II, III) on the basis of a predetermined formula taking into account design and quality of study (see Appendix B in the original guideline document and the "Rating Scheme for the Strength of the Evidence" field). Articles with fatal flaws were given an "X" grade and not used in formulating recommendations in this policy. Evidence grading was done with respect to the specific data being extracted, and the specific critical question being reviewed. Thus, the level of evidence for any one study may vary according to the question, and it is possible for a single article to receive different levels of grading as different critical questions are answered. Question-specific level of evidence grading may be found in the Evidentiary Table included at the end of the original guideline document.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

This policy is a product of the American College of Emergency Physicians (ACEP) clinical policy development process, including expert review, and is based on the existing literature; where literature was not available, consensus of emergency physicians was used.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Clinical findings and strength of recommendations regarding patient management were made according to the following criteria:

Strength of Recommendations

Level A recommendations. Generally accepted principles for patient management that reflect a high degree of clinical certainty (i.e., based on strength of evidence Class I or overwhelming evidence from strength of evidence Class II studies that directly address all of the issues)

Level B recommendations. Recommendations for patient management that may identify a particular strategy or range of management strategies that reflect moderate clinical certainty (i.e., based on strength of evidence Class II studies that directly address the issue, decision analysis that directly addresses the issue, or strong consensus of strength of evidence Class III studies)

Level C recommendations. Other strategies for patient management that are based on preliminary, inconclusive, or conflicting evidence, or, in the absence of any published literature, based on panel consensus

There are certain circumstances in which the recommendations stemming from a body of evidence should not be rated as highly as the individual studies on which they are based. Factors such as heterogeneity of results, uncertainty about effect magnitude and consequences, strength of prior beliefs, and publication bias, among others, might lead to such a downgrading of recommendations.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Expert review comments were received from individual emergency physicians, individual members of the American College of Cardiology, members of the American College of Emergency Physicians Observation Section, Geriatric Section,

and Quality and Performance Committee. Their responses were used to further refine and enhance this policy.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the strength of evidence (Class I-III) and strength of recommendations (Level A-C) are repeated at the end of the Major Recommendations.

1. **What history and physical examination data help to risk-stratify patients with syncope?**

   Level A recommendations. Use history or physical examination findings consistent with heart failure to help identify patients at higher risk of an adverse outcome.

   Level B recommendations.

   1. Consider older age, structural heart disease, or a history of coronary artery disease as risk factors for adverse outcome.
   2. Consider younger patients with syncope that is nonexertional, without history or signs of cardiovascular disease, a family history of sudden death, and without comorbidities to be at low risk of adverse events.

   Level C recommendations. None specified

2. **What diagnostic testing data help to risk-stratify patients with syncope?**

   Level A recommendations. Obtain a standard 12-lead electrocardiogram (ECG) in patients with syncope.

   Level B recommendations. None specified.

   Level C recommendations. Laboratory testing and advanced investigative testing such as echocardiography or cranial computed tomography (CT) scanning need not be routinely performed unless guided by specific findings in the history or physical examination.

3. **Who should be admitted after an episode of syncope of unclear cause?**

   Level A recommendations. None specified.

   Level B recommendations.

   1. Admit patients with syncope and evidence of heart failure or structural heart disease.

2. Admit patients with syncope and other factors that lead to stratification as high-risk for adverse outcome:

   Factors that lead to stratification as high-risk for adverse outcomes:

   - Older age and associated comorbidities (Different studies use different ages as threshold for decisionmaking. Age is likely a continuous variable that reflects the cardiovascular health of the individual rather than an arbitrary value.)
   - Abnormal ECG (ECG abnormalities, including acute ischemia, dysrhythmias, or significant conduction abnormalities.)
   - Hematocrit (Hct) <30 (if obtained)
   - History or presence of heart failure, coronary artery disease, or structural heart disease

Level C recommendations. None specified.

Definitions:

Strength of Evidence

Literature Classification Schema^

Design/ Class	Therapy*	Diagnosis**	Prognosis***
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Approach to Downgrading Strength of Evidence*

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None	I	II	III
1 level	II	III	X
2 levels	III	X	X
Fatally flawed	X	X	X

*See "Description of Methods Used to Analyze the Evidence" field for more information.

Strength of Recommendations

Level A recommendations. Generally accepted principles for patient management that reflect a high degree of clinical certainty (i.e., based on strength of evidence Class I or overwhelming evidence from strength of evidence Class II studies that directly address all of the issues)

Level B recommendations. Recommendations for patient management that may identify a particular strategy or range of management strategies that reflect moderate clinical certainty (i.e., based on strength of evidence Class II studies that directly address the issue, decision analysis that directly addresses the issue, or strong consensus of strength of evidence Class III studies)

Level C recommendations. Other strategies for patient management that are based on preliminary, inconclusive, or conflicting evidence, or, in the absence of any published literature, based on panel consensus

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CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate evaluation, risk-stratification, and management of patients with syncope

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Recommendations offered in this policy are not intended to represent the only diagnostic and management options that the emergency physician should consider. The American College of Emergency Physicians (ACEP) clearly recognizes the importance of the individual physician's judgment. Rather, this guideline defines for the physician those strategies for which medical literature exists to provide support for answers to the crucial questions addressed in this policy.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2001 (revised 2007 Apr)

GUIDELINE DEVELOPER(S)

American College of Emergency Physicians - Medical Specialty Society

GUIDELINE DEVELOPER COMMENT

Supported by the Emergency Nurses Association, February 21, 2007.

SOURCE(S) OF FUNDING

American College of Emergency Physicians

GUIDELINE COMMITTEE

American College of Emergency Physicians (ACEP) Clinical Policies Subcommittee on Syncope

ACEP Clinical Policies Committee

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

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This is the current release of the guideline.

This guideline updates a previous version: American College of Emergency Physicians (ACEP). Clinical policy: critical issues in the evaluation and management of patients presenting with syncope. Ann Emerg Med 2001 Jun;37(6):771-6.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the American College of Emergency Physicians Web site.

Print copies: Available from the American College of Emergency Physicians, P.O. Box 619911, Dallas, TX 75261-9911, or call toll free: (800) 798-1822.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on January 29, 2003. The information was verified by the guideline developer on March 13, 2003. This NGC summary was updated by ECRI Institute on April 23, 2007. The updated information was verified by the guideline developer on April 24, 2007.

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