Complete Summary

GUIDELINE TITLE

Clinical policy: critical issues in the evaluation and management of adult patients with asymptomatic hypertension in the emergency department.

BIBLIOGRAPHIC SOURCE(S)

Decker WW, Godwin SA, Hess EP, Lenamond CC, Jagoda AS, ACEP Clinical Policies Subcommittee (Writing Committee) on Asymptomatic Hypertension in the ED. Clinical policy: critical issues in the evaluation and management of adult patients with asymptomatic hypertension in the emergency department. Ann Emerg Med 2006 Mar;47(3):237-49. [28 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

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SCOPE

DISEASE/CONDITION(S)

Asymptomatic hypertension

GUIDELINE CATEGORY

Evaluation
Management
Screening

CLINICAL SPECIALTY

Emergency Medicine
Internal Medicine

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

- To provide recommendations for critical issues in the evaluation and management of asymptomatic hypertension in the hospital emergency department (ED)
- To address the following critical questions:
    - Are ED blood pressure readings accurate and reliable for screening asymptomatic patients for hypertension?
    - Do asymptomatic patients with elevated blood pressures benefit from rapid lowering of their blood pressure?

TARGET POPULATION

Emergency department (ED) patients older than 18 years of age with asymptomatic hypertension

The following types of patients are excluded from this policy:

- ED patients with acute hypertensive emergencies
- Individuals with acute presentation of conditions known to be caused by hypertension such as strokes, myocardial infarction, and new-onset renal dysfunction

INTERVENTIONS AND PRACTICES CONSIDERED

1. Accurate blood pressure (BP) measurement
2. Referral for follow up for patients with persistently elevated BP
3. Avoiding rapid lowering of BP in asymptomatic patients

MAJOR OUTCOMES CONSIDERED

Accuracy and reliability of blood pressure measurements and techniques in the emergency department

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

A MEDLINE search of English-language articles published between January 1992 and January 2005 was performed using combinations of the key words "hypertension" and "emergency department." Terms were then exploded as appropriate. Abstracts and articles were reviewed by subcommittee members, and pertinent articles were selected. These articles were evaluated, and those addressing the questions considered in this document were chosen for grading. Subcommittee members also supplied references from bibliographies of initially selected articles or from their own files. Expert peer reviewers supplied articles with direct bearing on this policy.

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

Class I - Interventional studies including clinical trials, observational studies including prospective cohort studies, aggregate studies including meta-analyses of randomized clinical trials only

Class II - Observational studies including retrospective cohort studies, case-controlled studies, aggregate studies including other meta-analyses

Class III - Descriptive cross-sectional studies; observational reports including case series and case reports; consensus studies including published panel consensus by acknowledged groups of experts

Strength of evidence Class I and II articles were then rated on elements subcommittee members believed were most important in creating a quality work. Class I and II articles with significant flaws or design bias were downgraded on the basis of a set formula based on a set formula (see Appendix B in the original guideline document). Strength of evidence Class III articles were downgraded if they demonstrated significant flaws or bias. Articles downgraded below strength of evidence Class III were given an "X" rating and were not used in formulating recommendations in this policy.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

All publications were graded by at least 2 of the subcommittee members into 1 of 3 categories of strength of evidence. Some articles were downgraded on the basis

of a standardized formula that considers the size of study population, methodology, validity of conclusions, and potential sources of bias (see Appendix A in 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

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 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 as well as individual members of the American College of Physicians, American Society of Hypertension, American Society of Nephrology, and Emergency Nurses Association. 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 (A-C) are repeated at the end of the "Major Recommendations" field.

Are emergency department (ED) blood pressure readings accurate and reliable for screening asymptomatic patients for hypertension?

- Level A recommendations. None specified.
- Level B recommendations. If blood pressure measurements are persistently elevated with a systolic blood pressure greater than 140 mm Hg or diastolic blood pressure greater than 90 mm Hg, the patient should be referred for follow-up of possible hypertension and blood pressure management.
- Level C recommendations. Patients with a single elevated blood pressure reading may require further screening for hypertension in the outpatient setting.

Do asymptomatic patients with elevated blood pressures benefit from rapid lowering of their blood pressure?

- Level A recommendations. None specified.
- Level B recommendations.
    1. Initiating treatment for asymptomatic hypertension in the ED is not necessary when patients have follow-up
    2. Rapidly lowering blood pressure in asymptomatic patients in the ED is unnecessary and may be harmful in some patients
    3. When ED treatment for asymptomatic hypertension is initiated, blood pressure management should attempt to gradually lower blood pressure and should not be expected to be normalized during the initial ED visit.
- Level C recommendations. None specified.

<u>Definitions</u>:

Strength of Evidence

Class I - Interventional studies including clinical trials, observational studies including prospective cohort studies, aggregate studies including meta-analyses of randomized clinical trials only

Class II - Observational studies including retrospective cohort studies, case-controlled studies, aggregate studies including other meta-analyses

Class III - Descriptive cross-sectional studies; observational reports including case series and case reports; consensus studies including published panel consensus by acknowledged groups of experts

Strength of Recommendation

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 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 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.

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 management of patients with asymptomatic hypertension in the emergency department

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 clinician'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
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

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

DATE RELEASED

2006 Mar

GUIDELINE DEVELOPER(S)

American College of Emergency Physicians - Medical Specialty Society

SOURCE(S) OF FUNDING

American College of Emergency Physicians

GUIDELINE COMMITTEE

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ACEP Clinical Policies Committee

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

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, ACEP Customer Service Department, P.O. Box 619911, Dallas, TX 75261-9911, or call toll free: (800) 798-1822, touch 6.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on April 13, 2006. The information was verified by the guideline developer on June 1, 2006.

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