Complete Summary

GUIDELINE TITLE

Antithrombotic agents in coronary artery disease. In: Sixth ACCP Consensus Conference on Antithrombotic Therapy.

BIBLIOGRAPHIC SOURCE(S)

Cairns JA, Theroux P, Lewis HD Jr, Ezekowitz M, Meade TW. Antithrombotic agents in coronary artery disease. Chest 2001 Jan;119(1 Suppl):228S-252S. [154 references]

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SCOPE

DISEASE/CONDITION(S)

Coronary artery disease, including:

- Acute myocardial infarction
- Unstable angina
- Chronic coronary artery disease

GUIDELINE CATEGORY

Management
Prevention
Treatment

CLINICAL SPECIALTY

Cardiology
Emergency Medicine
Family Practice

Internal Medicine
Pulmonary Medicine

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To make evidence-based recommendations for the use of antithrombotic agents in the prevention and management of coronary artery disease

TARGET POPULATION

- Adults with coronary artery disease (management and treatment)
- Adults who have not been diagnosed with coronary artery disease (primary prevention)

INTERVENTIONS AND PRACTICES CONSIDERED

Management/Treatment

1. Pharmacomanagement
    a. Anticoagulant therapy (heparin therapy, warfarin therapy)
    b. Antiplatelet therapy: aspirin therapy, clopidogrel, ticlopidine, triflusal
    c. Aspirin therapy in combination with anticoagulants (heparin or warfarin)
    d. Direct thrombin inhibitor: Hirudin
    e. Platelet glycoprotein IIb/IIIa receptor inhibitors: abciximab
    f. Tirofiban or eptifibatide in addition to aspirin and heparin

    Note: Sulfinpyrazone was considered for survivors of acute myocardial infarction and patients with unstable angina, but not recommended; Dipyridamole was considered alone or in combination with aspirin for survivors of acute myocardial infarction but not recommended.

2. Laboratory testing and monitoring
    a. Activated partial thromboplastin time
    b. International normalized ratio levels
    c. Troponin T or troponin I

Prevention of Coronary Artery Disease

1. Aspirin therapy
2. Warfarin therapy
3. Aspirin therapy in combination with warfarin therapy

MAJOR OUTCOMES CONSIDERED

Efficacy and safety of antithrombotic agents in the prevention and management of coronary artery disease, as defined by:

- Health outcomes (such as death, reinfarction, stroke, pulmonary embolus, major bleeding) of patients treated with antithrombotic agents to prevent or manage coronary artery disease
- Relative risk reduction of adverse outcomes in patients treated with various antithrombotic agents for coronary artery disease

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

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

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The participants reviewed information from an exhaustive review of the literature.

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

The rating scheme framework captures the trade-off between benefits and risks (1 or 2) (see "Rating Scheme for the Strength of the Recommendations") and the methodologic quality of the underlying evidence (A, B, C+, or C).

Grades of evidence for antithrombotic agents:

1A
Methodological strength of supporting evidence: randomized controlled trials without important limitations

1B
Methodological strength of supporting evidence: randomized controlled trials with important limitations (inconsistent results, methodologic flaws*)

1C+
Methodological strength of supporting evidence: no randomized controlled trials, but randomized controlled trial results can be unequivocally extrapolated; or, overwhelming evidence from observational studies

1C
Methodological strength of supporting evidence: observation studies

2A
Methodological strength of supporting evidence: randomized controlled trials without important limitations

2B
Methodological strength of supporting evidence: randomized controlled trials with important limitations (inconsistent results, methodologic flaws*)

2C
Methodological strength of supporting evidence: observational studies

* Such situations include randomized controlled trials with lack of blinding, and subjective outcomes, in which the risk of bias in measurement of outcomes is high; and randomized controlled trials with large loss to follow-up.

METHODS USED TO ANALYZE THE EVIDENCE

Meta-Analysis of Randomized Controlled Trials
Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus (Consensus Development Conference)

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The strength of any recommendation depends on two factors: the trade-off between benefits and risks, and the strength of the methodology that leads to estimates of the treatment effect. The rating scheme used for this guideline captures these factors. The guideline developers grade the trade-off between benefits and risks in two categories: (1) the trade-off is clear enough that most patients, despite differences in values, would make the same choice; and (2) the trade-off is less clear, and each patient's values will likely lead to different choices.

When randomized trials provide precise estimates suggesting large treatment effects, and risks and costs of therapy are small, treatment for average patients with compatible values and preferences can be confidently recommended.

If the balance between benefits and risks is uncertain, methodologically rigorous studies providing grade A evidence and recommendations may still be weak (grade 2). Uncertainty may come from less precise estimates of benefit, harm, or costs, or from small effect sizes.

There is an independent impact of validity/consistency and the balance of positive and negative impacts of treatment on the strength of recommendations. In situations when there is doubt about the value of the trade-off, any recommendation will be weaker, moving from grade 1 to grade 2.

Grade 1 recommendations can only be made when there are precise estimates of both benefit and harm, and the balance between the two clearly favors recommending or not recommending the intervention for the average patient with compatible values and preferences. Table 2 of the original guideline document summarizes how a number of factors can reduce the strength of a recommendation, moving it from grade 1 to grade 2. Uncertainty about a recommendation to treat may be introduced if the target event that is trying to be prevented is less important (confident recommendations are more likely to be made to prevent death or stroke than asymptomatic deep venous thrombosis); if the magnitude of risk reduction in the overall group is small; if the risk is low in a particular subgroup of patients; if the estimate of the treatment effect, reflected in a wide confidence interval (CI) around the effect, is imprecise; if there is substantial potential harm associated with therapy; or if there is an expectation for a wide divergence in values even among average or typical patients. Higher costs would also lead to weaker recommendations to treat.

The more balanced the trade-off between benefits and risks, the greater the influence of individual patient values in decision making. If they understand the benefits and risks, virtually all patients will take aspirin after myocardial infarction or will comply with prophylaxis to reduce thromboembolism after hip replacement. Thus, one way of thinking about a grade 1 recommendation is that variability in patient values or individual physician values is unlikely to influence treatment choice in average or typical patients.

When the trade-off between benefits and risks is less clear, individual patient values will influence treatment decisions even among patients with average or typical preferences.

Grade 2 recommendations are those in which variation in patient values or individual physician values will often mandate different treatment choices, even among average or typical patients.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

The rating scheme framework captures the trade-off between benefits and risks (1 or 2) and the methodologic quality of the underlying evidence (A, B, C+, or C) (see "Rating Scheme for the Strength of the Evidence").

<u>Grades of recommendation for antithrombotic agents</u>:

1A
Clarity of risk/benefit: risk/benefit clear
Implications: strong recommendation; can apply to most circumstances, without reservation

1B
Clarity of risk/benefit: risk/benefit clear
Implications: strong recommendation; likely to apply to most patients

1C+
Clarity of risk/benefit: risk/benefit clear
Implications: strong recommendation; can apply to most patients in most circumstances

1C
Clarity of risk/benefit: risk/benefit clear
Implications: intermediate-strength recommendation; may change when stronger evidence available

2A
Clarity of risk/benefit: risk/benefit unclear
Implications: intermediate strength recommendation; best action may differ, depending on circumstances or patients' societal values

2B
Clarity of risk/benefit: risk/benefit unclear
Implications: weak recommendation; alternative approaches likely to be better for some patients under some circumstances

2C
Clarity of risk/benefit: risk/benefit unclear
Implications: very weak recommendation; other alternatives may be equally reasonable

COST ANALYSIS

Unstable Angina- Antiplatelet Agents

An economic assessment of the impact of using tirofiban in the practice pattern in Switzerland revealed a significant cost saving.

Anticoagulant-Aspirin Combination Therapy

The Enoxaparin in Unstable Angina and Non-Q-wave Myocardial Infarction (ESSENCE) trial randomized 3,171 patients to treatment with enoxaparin at doses of 1 mg/kg subcutaneous (SC) bid or to an intravenous (IV) infusion of unfractionated heparin for a minimum of 48 hours and a maximum of 8 days. An economic assessment of the ESSENCE results showed significant cost saving in United States hospitals, but not across those in other countries, with the cost saving mainly attributable to fewer cardiac catheterization procedures.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The initial guidelines were prepared by the chapter committee (the primary authors) and then reviewed separately by the Committee Co-Chairs and methodology experts and finally by the entire group of Consensus Guideline participants.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary. The recommendations that follow are based on the previous version of the guideline.

Excerpted by the National Guideline Clearinghouse (NGC):

The grading scheme is defined at the end of the Major Recommendations.

Myocardial Infarction

Anticoagulant Therapy When Thrombolytic Therapy Has Been Administered:

For all patients who have received recombinant tissue-type plasminogen activator or reteplase, the guideline developers recommend administration of heparin according to the following regimen: (1) a bolus of about 60 U/kg intravenous to a maximum dose of 4,000 U at the initiation of recombinant tissue-type plasminogen activator infusion or a first bolus of rPA or Tenecteplase with an initial maintenance dose of 12 U/kg/hour to a maximum dose of 1,000 U, with activated partial thromboplastin time at 1.5 to 2 times control, maintained for 48 hours; and (2) a maintenance of the activated partial thromboplastin time at 1.5 to 2 times control beyond 48 hours should be undertaken only in the presence of determinants of high risk of systemic or venous thromboembolism (for example, anterior Q-wave infarction, severe left ventricular dysfunction, congestive heart failure, history of systemic or pulmonary embolus, 2D echocardiographic evidence of mural thrombosis, or atrial fibrillation). In such cases, the intravenous regimen may be sustained, or consideration may be given to subcutaneous administration (an initial dose of approximately 17,500 U every 12 hours to maintain activated partial thromboplastin time at 1.5 to 2 times control), low-molecular-weight heparin subcutaneous, or to conversion to warfarin therapy (target international normalized ratio, 2.5; international normalized ratio range, 2.0 to 3.0) for up to 3 months (grade 2A). For patients with atrial fibrillation, the guideline developers recommend warfarin therapy (target international normalized ratio, 2.5; international normalized ratio range, 2.0 to 3.0) indefinitely (grade 1A).

For all patients who have received streptokinase or anistreplase, the guideline developers recommend the administration of intravenous heparin only in the presence of determinants for a high risk of systemic or venous thromboembolism (for example, anterior acute myocardial infarction, congestive heart failure, previous embolus, or atrial fibrillation) and then according to the following regimen: (1) measure activated partial thromboplastin time when the indication emerges but not <4 hours after beginning streptokinase or anistreplase infusion;

if more than two times control, repeat activated partial thromboplastin time as appropriate, and commence infusion of heparin when activated partial thromboplastin time is less than two times control and maintain activated partial thromboplastin time at 1.5 to 2 times control as long as the risk of thromboembolism is considered to be high; (2) after 48 hours, consideration may be given to subcutaneous administration (initial dose approximately 17,500 U every 12 hours to maintain activated partial thromboplastin time at 1.5 to 2 times control), low-molecular-weight heparin subcutaneous, or for conversion to warfarin therapy (target international normalized ratio, 2.5; international normalized ratio range, 2.0 to 3.0) for up to 3 months (grade 2A). For patients with atrial fibrillation, the guideline developers recommend warfarin therapy (target international normalized ratio, 2.5; international normalized ratio range, 2.0 to 3.0) indefinitely (grade 1A).

Anticoagulant Therapy When No Thrombolytic Therapy Has Been Given:

For patients at increased risk for systemic or pulmonary embolism because of anterior Q-wave infarction, severe left ventricular dysfunction, congestive heart failure, history of systemic or pulmonary embolism on 2D echocardiographic evidence of mural thrombosis, the guideline developers recommend the administration of heparin (about 75-U/kg bolus intravenous; initial maintenance dose, 1,000 to 1,200 U/hour intravenous; activated partial thromboplastin time, 1.5 to 2 times control), followed by warfarin (target international normalized ratio, 2.5; international normalized ratio range, 2.0 to 3.0) for up to 3 months (grade 2A). For patients with atrial fibrillation, the guideline developers recommend warfarin therapy (target international normalized ratio, 2.5; international normalized ratio range, 2.0 to 3.0) indefinitely (grade 1A).

The guideline developers recommend that clinicians use not less than low-dose heparin therapy (i.e., 7,500 U subcutaneous every 12 hours) or low-molecular-weight heparin until the patient is ambulatory for the prevention of venous thrombosis, unless there is a specific contraindication, in every patient with acute myocardial infarction (grade 1A).

Antiplatelet Therapy

1. Aspirin doses of 75 to 162.5 mg have been shown to be effective in all indications, and this dose range is recommended. Since the onset of full antiplatelet activity is delayed with low doses, if a rapid response is required (i.e., in patients with myocardial infarction or stroke), a dose of 162.5 mg should be used.
2. The guideline developers recommend that all patients with acute myocardial infarction receive non-enteric-coated aspirin to chew and swallow as soon as possible after the clinical impression of evolving acute myocardial infarction is formed, and whether or not thrombolytic therapy is to be given. Daily aspirin administered orally should be continued indefinitely (grade 1A).
3. If the patient is to receive heparin, the guideline developers recommend administering aspirin conjointly (grade 2A).
4. If warfarin therapy is commenced, the guideline developers recommend discontinuing aspirin therapy until the planned course of warfarin is complete. Aspirin therapy then should be restarted and maintained indefinitely. The guideline developers recommend that clinicians not administer aspirin

concurrently with warfarin, except in situations of very high embolic risk or previous failure of either therapy alone (grade 2C).

5. When embolic risk is low, the guideline developers recommend long-term aspirin therapy in preference to warfarin because of its simplicity, safety, and low cost (grade 2A).
6. The guideline developers recommend the use of long-term warfarin therapy in clinical settings of increased embolic risk for a duration of 1 to 3 months following anterior acute myocardial infarction, or acute myocardial infarction complicated by severe left ventricular dysfunction, congestive heart failure, previous emboli, or 2D echocardiographic evidence of mural thrombosis atrial fibrillation (grade 2A). For patients with atrial fibrillation, the guideline developers recommend warfarin therapy (target international normalized ratio, 2.5; international normalized ratio range, 2.0 to 3.0) indefinitely (grade 1A).
7. The guideline developers recommend that patients who have contraindications to aspirin should receive clopidogrel (75 mg/day) indefinitely (grade 1A).
8. A further alternative for patients who have contraindications to aspirin is that clinicians give warfarin (target international normalized ratio, 2.5). The increased complexity, risk, and cost of such therapy are concerns (grade 2A).
9. Some patients with recurrent ischemic episodes following acute myocardial infarction may benefit from a combination of warfarin and aspirin. The guideline developers recommend that clinicians offer treatment with low-dose aspirin (75 to 80 mg) and low-intensity warfarin to these patients (target international normalized ratio, 1.5) (grade 2C).
10. The guideline developers recommend the use of aspirin rather than sulfinpyrazone for survivors of acute myocardial infarction because of the evidence for a benefit from aspirin, which is a less expensive agent with a simpler dose regimen, and because of more extensive evidence supporting its efficacy (grade 1C).
11. The guideline developers do not recommend that clinicians use dipyridamole alone (grade 2C) or in combination with aspirin (grade 2B) in survivors of acute myocardial infarction.

Unstable Angina

Antiplatelet Agents:

Aspirin doses of 75 to 162.5 mg have been shown to be effective in all indications.

In patients with unstable angina, the guideline developers recommend the administration of non-enteric-coated aspirin to chew and swallow as soon as possible after the clinical impression of unstable angina is formed. Aspirin administered orally should be continued indefinitely (all grade 1A).

Alternatives:

The guideline developers recommend that patients with unstable angina, who have aspirin allergy or intolerance, receive clopidogrel (75 mg daily) (grade 1C), ticlopidine (250 mg twice per day) (grade 1A), triflusal (in countries where it is

available) (grade 1A), or warfarin (target international normalized ratio, 2.5) for several months (grade 2C).

The guideline developers recommend that clinicians not administer sulfinpyrazone to patients with unstable angina (grade 1C).

The guideline developers recommend the administration of intravenous tirofiban or eptifibatide, in addition to aspirin and heparin, to patients with continuing ischemia or other high-risk features. The indication is strengthened by the detection of elevated levels of troponin T or troponin I. The infusion should continue for 48 to 72 hours, or until percutaneous intervention (grade 1A).

The guideline developers recommend the administration of abciximab for 12 to 24 hours in patients who will undergo percutaneous intervention within the following 24 hours (grade 1A).

Anticoagulant Aspirin Combination Therapy:

In patients hospitalized with unstable angina, the guideline developers recommend, in addition to aspirin therapy, commencement of therapy with intravenous heparin (about 75 U/kg intravenous bolus, initial maintenance 1,250 U/hour intravenous, activated partial thromboplastin time 1.5 to 2 times control) or low-molecular-weight heparin (dose regimens from trials). The therapy should be maintained for at least 48 hours, or until the unstable pain pattern resolves with the present or more definitive therapy (grade 1A).

Direct Thrombin Inhibitors:

Although therapy with hirudin plus aspirin offers benefit over unfractionated heparin plus aspirin, in view of cost, hemorrhagic risk, and availability of competing agents, the guideline developers recommend heparin as the agent of choice (grade 2A). The guideline developers recommend hirudin over heparin for patients with a history of heparin-induced thrombocytopenia (grade 1C).

Primary Prevention

The guideline developers do not recommend the routine use of aspirin for the primary prevention of coronary artery disease outcomes in individuals free of a history of acute myocardial infarction, stroke, or transient cerebral ischemic attack who are <50 years of age (grade 2B).

For individuals free of a history of prior myocardial infarction, stroke, or transient cerebral ischemic attack but with increasing levels of risk, there are data available for the efficacy of aspirin, warfarin, and the combination. Because of the increased complexity and costs of treatment with warfarin, and because of the greater likelihood of cerebral hemorrhage with the combination of aspirin and warfarin, the following recommendations are made for individuals at increasing risk of cardiovascular events.

1. The guideline developers recommend that aspirin be considered for men >50 years of age who have at least one major risk factor for coronary artery disease and who are free of contraindications to aspirin (grade 2A).
2. The guideline developers recommend that aspirin be considered for women >50 years of age who have at least one major risk factor for coronary artery disease (i.e., cigarette smoking, hypertension, diabetes mellitus, high cholesterol level, and history of parental infarction) and who are free of contraindications to aspirin (grade 2C).
3. The guideline developers recommend that low-intensity warfarin therapy (target international normalized ratio, 1.5) be considered as an alternate to aspirin for men at high risk of cardiovascular events in the prevention of those events and for reduction of all-cause mortality (grade 2A).
4. The guideline developers recommend that a combination of low-dose aspirin therapy (i.e., 75 to 80 mg/day) and low-intensity warfarin therapy (target international normalized ratio, 1.5) be considered as an alternative to aspirin or warfarin alone for men who are at very high risk of cardiovascular events for the prevention of these events and the reduction of all-cause mortality (grade 2A).
5. Whenever antithrombotic therapy is prescribed for primary prevention, the guideline developers recommend aggressive blood pressure control (target diastolic blood pressure, <85 mm Hg) (grade 1C).

Chronic Coronary Artery Disease

1. The guideline developers recommend administering oral aspirin to all patients with stable angina indefinitely (grade 1A).
2. The guideline developers recommend that all patients with clinical or laboratory evidence of coronary artery disease receive oral aspirin indefinitely (grade 2C).

The rating scheme framework captures the trade-off between benefits and risks (1 or 2) and the methodologic quality of the underlying evidence (A, B, C+, or C).

Definitions:

Grades of recommendations:

1A

Clarity of risk/benefit: risk/benefit clear
Methodological strength of supporting evidence: randomized controlled trials without important limitations
Implications: strong recommendation; can apply to most circumstances, without reservation

1B

Clarity of risk/benefit: risk/benefit clear
Methodological strength of supporting evidence: randomized controlled trials with important limitations (inconsistent results, methodologic flaws*)
Implications: strong recommendation; likely to apply to most patients

1C+

Clarity of risk/benefit: risk/benefit clear
Methodological strength of supporting evidence: no randomized controlled trials, but randomized controlled trial results can be unequivocally extrapolated; or, overwhelming evidence from observational studies
Implications: strong recommendation; can apply to most patients in most circumstances

1C

Clarity of risk/benefit: risk/benefit clear
Methodological strength of supporting evidence: observation studies
Implications: intermediate-strength recommendation; may change when stronger evidence available

2A

Clarity of risk/benefit: risk/benefit unclear
Methodological strength of supporting evidence: randomized controlled trials without important limitations
Implications: intermediate strength recommendation; best action may differ, depending on circumstances or patients' societal values

2B

Clarity of risk/benefit: risk/benefit unclear
Methodological strength of supporting evidence: randomized controlled trials with important limitations (inconsistent results, methodologic flaws*)
Implications: weak recommendation; alternative approaches likely to be better for some patients under some circumstances

2C

Clarity of risk/benefit: risk/benefit unclear
Methodological strength of supporting evidence: observational studies
Implications: very weak recommendation; other alternatives may be equally reasonable

* Such situations include randomized controlled trials with lack of blinding, and subjective outcomes, in which the risk of bias in measurement of outcomes is high; and randomized controlled trials with large loss to follow-up.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified for each recommendation (refer to "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate selection and management of antithrombotic agents may help reduce the incidence of coronary artery disease and cardiovascular related events, such as death, reinfarction, stroke, pulmonary embolus, and major bleeding.

Several tables are presented in the original guideline document summarizing the results of trials (health outcomes; relative risk reduction) on various antithrombotic agents in the treatment of coronary artery disease. One table summarizes the results of trials of aspirin administration in the prevention of coronary artery disease.

POTENTIAL HARMS

Antithrombotic medications have the potential for adverse events and side effects.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Interpreting the Recommendations

The authors of these guidelines offer recommendations that should not be construed as dictates by the readers, including clinicians, third-party payers, institutional review committees, and courts. In general, anything other than a 1A recommendation indicates that the chapter authors acknowledge that other interpretations of the evidence and other clinical policies may be reasonable and appropriate. Even grade 1A recommendations will not apply to all circumstances and all patients. For instance, the guideline developers have been conservative in their considerations of cost, and have seldom downgraded recommendations from 1 to 2 on the basis of expense. As a result, in jurisdictions in which resource constraints are severe, alternative allocations may serve the health of the public far more than some of the interventions that the developers designate grade 1A. This will likely be true for all less-industrialized countries. However, a weak recommendation (2C) that reduces resource consumption may be more strongly indicated in less-industrialized countries.

Similarly, following grade 1A recommendations will at times not serve the best interests of patients with atypical values or preferences. For instance, consider patients who find anticoagulant therapy extremely aversive, either because it interferes with their lifestyle (prevents participation in contact sports, for instance) or because of the need for monitoring. For such patients, clinicians may reasonably conclude that following some grade 1A recommendations for anticoagulation will be a mistake. The same may be true for patients with particular comorbidities (such as a recent gastrointestinal bleed or a balance

disorder with repeated falls) or other special circumstances (such as very advanced age).

The guideline developers trust that these observations convey their acknowledgment that no guidelines or recommendations can take into account the often compelling idiosyncrasies of individual clinical circumstances. No clinician and no one charged with evaluating the actions of a clinician should attempt to apply their recommendations in a rote or blanket fashion.

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

Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Cairns JA, Theroux P, Lewis HD Jr, Ezekowitz M, Meade TW. Antithrombotic agents in coronary artery disease. Chest 2001 Jan;119(1 Suppl):228S-252S. [154 references]

ADAPTATION

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

DATE RELEASED

2001 Jan

GUIDELINE DEVELOPER(S)

American College of Chest Physicians - Medical Specialty Society

SOURCE(S) OF FUNDING

Funding was supplied by DuPont Pharmaceuticals.

GUIDELINE COMMITTEE

American College of Chest Physicians Consensus Panel on Antithrombotic Therapy

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

GUIDELINE AVAILABILITY

Electronic copies of the updated guideline: Available from the Chest - The Cardiopulmonary and Critical Care Journal Web site.

Print copies: Available from the American College of Chest Physicians, Products and Registration Division, 3300 Dundee Road, Northbrook IL 60062-2348.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Sixth ACCP Consensus Conference on Antithrombotic Therapy (2001): quick reference guide for clinicians. Northbrook, IL: ACCP, 2001.

Electronic copies: Available in from the American College of Chest Physicians Web site. (Downloadable files intended for use with Palm OS compatible devices are available.)

Print copies: Available from the American College of Chest Physicians, Products and Registration Division, 3300 Dundee Road, Northbrook IL 60062-2348, or by calling 1 (800) 343-2227.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on July 30, 2001. The information was verified by the guideline developer on September 27, 2001.

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