Complete Summary

GUIDELINE TITLE

Screening for lipid disorders in children.

BIBLIOGRAPHIC SOURCE(S)

US Preventive Services Task Force. Screening for lipid disorders in children: US Preventive Services Task Force recommendation statement. Pediatrics 2007 Jul;120(1):e215-9. PubMed

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE
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RECOMMENDATIONS
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SCOPE

DISEASE/CONDITION(S)

Lipid disorders (dyslipidemia)

GUIDELINE CATEGORY

Prevention
Screening

CLINICAL SPECIALTY

Family Practice
Nursing
Nutrition

Pediatrics
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Dietitians
Health Care Providers
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To summarize the U.S. Preventive Services Task Force recommendations for screening for lipid disorders in children

TARGET POPULATION

Asymptomatic infants, children, adolescents, and young adults up to age 20 years

INTERVENTIONS AND PRACTICES CONSIDERED

Note: The following was considered but not recommended:

Routine screening for lipid disorders using blood tests (total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol) and family history

MAJOR OUTCOMES CONSIDERED

Key Question 1: Is screening for dyslipidemia in children/adolescents effective in delaying the onset and reducing the incidence of coronary heart disease (CHD)-related events?

Key Question 2: What is the accuracy of screening for dyslipidemia in identifying children/adolescents at increased risk of CHD-related events and other outcomes?

> **Key Question 2a:** What are abnormal lipid values in children/adolescents?
>
> **Key Question 2b**: What are the appropriate tests? How well do screening tests (nonfasting total cholesterol, fasting total cholesterol, fasting lipoprotein analysis) identify children and adolescents with dyslipidemia?
>
> **Key Question 2c**: How well do lipid levels track from childhood to adulthood?
>
> **Key Question 2d**: What is the accuracy of family history in determining risk?

Key Question 2e: What are other important risk factors?

Key Question 2f: What are effective screening strategies for children/adolescents (including frequency of testing, optimal age for testing)?

Key Question 3: What are the adverse effects of screening (including false positives, false negatives, labeling)?

Key Question 4: In children/adolescents, what is the effectiveness of drug, diet, exercise, and combination therapy in reducing the incidence of adult dyslipidemia, and delaying the onset and reducing the incidence of CHD-related events (including optimal age for initiation of treatment)?

Key Questions 5 – 8: What is the effectiveness of drug, diet, exercise, and combination therapy for treating dyslipidemia in children/adolescents?

Key Question 9: What are the adverse effects of drug, diet, exercise, and combination therapy in children/adolescents?

Key Question 10: Does improving dyslipidemia in childhood reduce the risk of dyslipidemia in adulthood?

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

Note from the National Guideline Clearinghouse (NGC): A systematic review of the literature was prepared by the Oregon Evidence-based Practice Center (EPC) and Oregon Health & Science University for the Agency for Healthcare Research and Quality (AHRQ) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Availability of Companion Documents" field).

Literature Search and Strategy

Relevant studies were identified from multiple searches of MEDLINE (1966 through September 2005). EPC staff obtained additional articles from recent systematic reviews, reference lists of related studies, reviews, editorials, and Web sites, and from consulting experts. Retrieved abstracts were entered into an electronic database (EndNote®).

Inclusion/Exclusion Criteria

Investigators reviewed all identified abstracts and determined eligibility by applying inclusion and exclusion criteria specific to each key question. Full-text

articles of included abstracts were reviewed for relevance. Eligible studies were English-language, applicable to U.S. clinical practice, and provided primary data relevant to key questions. Studies of risk factors were included only if they provided multivariate adjusted analyses.

For treatment studies, full text randomized controlled trials (RCTs), noncontrolled clinical trials, and non-controlled prospective studies providing data on the treatment of children and adolescents with diet, drug therapy, exercise, or combinations of these were initially reviewed. Subsequently, only RCTs and meta-analyses of RCTs that reported serum lipid outcomes were included. Crossover trials were included if they reported data prior to crossover. For Key Question 10, outcomes included either adult lipid levels or adult CHD. Information about adverse effects of treatment was obtained from RCTs and additional sources, such as non-randomized controlled treatment trials and non-comparative studies of treatment.

NUMBER OF SOURCE DOCUMENTS

Included were 160 papers about screening for dyslipidemia (Key Question 2); 68 about interventions and tracking of lipid values over time (Key Questions 4-8 and 10); 8 about the adverse effects of screening (Key Question 3); and 81 about adverse effects of treatment (Key Question 9). Seven papers discussed the costs of screening, but none evaluated cost effectiveness in the U.S. population (Key Question 11).

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 U.S. Preventive Services Task Force grades the **quality of the overall evidence** for a service on a 3-point scale (good, fair, poor):

Good

Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.

Fair

Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies, generalizability to routine practice, or indirect nature of the evidence on health outcomes.

Poor

Evidence is insufficient to assess the effects on health outcomes because of limited number or power of studies, important flaws in their design or conduct,

gaps in the chain of evidence, or lack of information on important health outcomes.

METHODS USED TO ANALYZE THE EVIDENCE

Meta-Analysis
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): A systematic review of the literature was prepared by the Oregon Evidence-based Practice Center (EPC) and Oregon Health & Science University for the Agency for Healthcare Research and Quality (AHRQ) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Availability of Companion Documents" field).

Data Extraction and Synthesis

All eligible studies were reviewed and a "best evidence" approach was applied, in which studies with the highest quality and most rigorous design are emphasized. Data were extracted from each study, entered directly into evidence tables, and summarized. Benefits and adverse effects of therapies were considered equally important and both types of outcomes were abstracted. Trials of therapy for children and adolescents with dyslipidemia were categorized by population and intervention.

Two reviewers independently rated the quality of randomized controlled trials using criteria specific to different study designs developed by the U.S. Preventive Services Task Force (see Appendix 5 in the evidence synthesis [see "Availability of Companion Documents" field). The overall rating is a combination of internal and external validity scores. When reviewers disagreed, a final rating was reached through consensus.

Randomized controlled trials of similar treatments that met additional eligibility criteria were considered for meta-analysis. Meta-analyses were performed to provide estimates of the effectiveness of statins on improving lipid levels in children and adolescents with familial hypercholesterolemia (FH), and of the effectiveness of exercise on improving lipid levels in children and adolescents without FH who were normal or overweight. For each trial, the difference in mean percent change of lipid levels between treatment and control groups and its standard error were obtained and pooled using a random effects model. When the percentage change and its standard error or 95% confidence interval were not reported, they were calculated from the mean and standard error of lipid levels from treatment and control groups at baseline and the endpoint (see Appendix 6 in the evidence synthesis [see "Availability of Companion Documents" field). A study was excluded when no information on dispersion was reported.

Effects of study level covariates, such as duration, mean age, percentage male/female, and dosage were checked by using random-effects meta regressions. Specifically, drug dose for each statin study was analyzed using an equivalent dose of simvastatin according to published equivalency tables.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Balance Sheets
Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

When the overall quality of the evidence is judged to be good or fair, the U.S. Preventive Services Task Force (USPSTF) proceeds to consider the magnitude of net benefit to be expected from implementation of the preventive service. Determining net benefit requires assessing both the magnitude of benefits and the magnitude of harms and weighing the two.

The USPSTF classifies benefits, harms, and net benefits on a 4-point scale: "substantial," "moderate," "small," and "zero/negative."

"Outcomes tables" (similar to "balance sheets") are the USPSTF's standard resource for estimating the magnitude of benefit. These tables, prepared by the topic teams for use at USPSTF meetings, compare the condition specific outcomes expected for a hypothetical primary care population with and without use of the preventive service. These comparisons may be extended to consider only people of specified age or risk groups or other aspects of implementation. Thus, outcomes tables allow the USPSTF to examine directly how the preventive service affects benefits for various groups.

When evidence on harms is available, the topic teams assess its quality in a manner like that for benefits and include adverse events in the outcomes tables. When few harms data are available, the USPSTF does not assume that harms are small or nonexistent. It recognizes a responsibility to consider which harms are likely and judge their potential frequency and the severity that might ensue from implementing the service. It uses whatever evidence exists to construct a general confidence interval on the 4-point scale (e.g., substantial, moderate, small, and zero/negative).

Value judgments are involved in using the information in an outcomes table to rate either benefits or harms on the USPSTF's 4-point scale. Value judgments are also needed to weigh benefits against harms to arrive at a rating of net benefit.

In making its determinations of net benefit, the USPSTF strives to consider what it believes are the general values of most people. It does this with greater confidence for certain outcomes (e.g., death) about which there is little disagreement about undesirability, but it recognizes that the degree of risk people are willing to accept to avert other outcomes (e.g., cataracts) can vary considerably. When the USPSTF perceives that preferences among individuals vary greatly, and that these variations are sufficient to make the trade-off of benefits and harms a "close-call," then it will often assign a C recommendation (see the "Recommendation Rating Scheme" field). This recommendation indicates the decision is likely to be sensitive to individual patient preferences.

The USPSTF uses its assessment of the evidence and magnitude of net benefit to make recommendations. The general principles the USPSTF follows in making recommendations are outlined in Table 5 of the companion document cited below. The USPSTF liaisons on the topic team compose the first drafts of the recommendations and rationale statements, which the full panel then reviews and edits. Recommendations are based on formal voting procedures that include explicit rules for determining the views of the majority.

From: Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

The U.S. Preventive Services Task Force (USPSTF) grades its **recommendations** according to one of five classifications (A, B, C, D, I) reflecting the strength of evidence and magnitude of net benefit (benefits minus harms):

A

The USPSTF strongly recommends that clinicians provide [the service] to eligible patients. The USPSTF found good evidence that [the service] improves important health outcomes and concludes that benefits substantially outweigh harms.

B

The USPSTF recommends that clinicians provide [this service] to eligible patients. The USPSTF found at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms.

C

The USPSTF makes no recommendation for or against routine provision of [the service]. The USPSTF found at least fair evidence that [the service] can improve health outcomes but concludes that the balance of benefits and harms is too close to justify a general recommendation.

D

The USPSTF recommends against routinely providing [the service] to asymptomatic patients. The USPSTF found at least fair evidence that [the service] is ineffective or that harms outweigh benefits.

I

The USPSTF concludes that the evidence is insufficient to recommend for or against routinely providing [the service]. Evidence that the [service] is effective is lacking, of poor quality, or conflicting and the balance of benefits and harms cannot be determined.

COST ANALYSIS

A formal cost analysis was not performed. Seven papers discussed the costs of screening but did not evaluate cost effectiveness in the U.S. population.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Peer Review. Before the U.S. Preventive Services Task Force makes its final determinations about recommendations on a given preventive service, the Evidence-based Practice Center and the Agency for Healthcare Research and Quality send a draft systematic evidence review to 4 to 6 external experts and to federal agencies and professional and disease-based health organizations with interests in the topic. They ask the experts to examine the review critically for accuracy and completeness and to respond to a series of specific questions about the document. After assembling these external review comments and documenting the proposed response to key comments, the topic team presents this information to the Task Force in memo form. In this way, the Task Force can consider these external comments and a final version of the systematic review before it votes on its recommendations about the service. Draft recommendations are then circulated for comment from reviewers representing professional societies, voluntary organizations, and Federal agencies.

Recommendations of Others. No professional organization recommends universal screening for dyslipidemia in children or adolescents. Recommendations regarding targeted screening for children and adolescents from the following groups were discussed: The National Cholesterol Education Program (NCEP) Report of the Expert Panel on Blood Cholesterol Levels in Children and Adolescents, the American Academy of Pediatrics (AAP), the American College of Obstetricians and Gynecologists (ACOG), and the American Heart Association (AHA).

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the U.S. Preventive Services Task Force (USPSTF): The USPSTF is redesigning its recommendation statement in response to feedback from primary care clinicians. The USPSTF released, in July 2007, a new, updated recommendation statement format that is easier to read and incorporates advances in USPSTF methodology. The recommendation statement below is in an interim format that combines existing with new language and elements. Although the definitions of grades remain the same, other elements have been revised.

The U.S. Preventive Services Task Force (USPSTF) grades its recommendations (A, B, C, D, or I) and the quality of the overall evidence for a service (good, fair,

poor). The definitions of these grades can be found at the end of the "Major Recommendations" field.

Summary of Recommendations

The USPSTF concludes that the evidence is insufficient to recommend for or against routine screening for lipid disorders in infants, children, adolescents, or young adults (up to age 20). (**I recommendation**)

Clinical Considerations

- Dyslipidemias are abnormalities of lipoprotein metabolism and include elevations in total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), or triglycerides or deficiencies of high-density lipoprotein cholesterol (HDL-C). These disorders can be acquired or familial; monogenic dyslipidemias are related to genetic conditions such as familial hypercholesterolemia in some individuals. Multifactorial dyslipidemias are due to risk factors including environmental factors (obesity, diet) or currently unidentified genetic factors. This recommendation applies to all asymptomatic individuals from birth to age 20.
- Because abnormal lipid levels have been strongly associated with the risk of coronary heart disease (CHD) events in adulthood, and early identification and lipid-lowering intervention in certain populations of adults can prevent CHD events, much attention has been directed at screening individuals for dyslipidemia at young ages (e.g., childhood). Among children and adolescents, 3 groups may be identified through screening: (1) children with undiagnosed monogenic dyslipidemias such as familial hypercholesterolemia; (2) those with undiagnosed secondary causes of dyslipidemia; and (3) those with multi-factorial dyslipidemia (polygenetic or related to risk-factors). However, the clinical health benefits shown in adults identified and treated for dyslipidemia have not been studied in children, making the role of screening children uncertain.
- Children and adolescents with diabetes may be at especially high risk for dyslipidemia and cardiovascular events. Screening children and adolescents with diabetes for dyslipidemia has been recommended by other groups as a part of appropriate care for these children.
- The use of family history as a screening tool for dyslipidemia has variable accuracy largely because definitions of a positive family history and lipid threshold values vary substantially. Screening using family history as defined by the National Cholesterol Education Program (NCEP) and the American Academy of Pediatrics (AAP) has been shown to have high rates of false negative results.
- If clinicians choose to screen for dyslipidemia, the preferred screening tests are TC and HDL-C on nonfasting or fasting samples; calculating LDL-C requires fasting samples.

Other Considerations

- Effectiveness of treatment interventions (diet, exercise, lipid lowering agents) in children with dyslipidemia (including multifactorial dyslipidemia) in improving health outcomes remains a critical research gap. Population-based screening studies or randomized controlled trials (RCTs) following children

and adolescents into adulthood after treatment interventions will be necessary to assess universal lipid screening in childhood or adolescence.
- Rising rates of childhood overweight may lead to a higher prevalence of dyslipidemia in childhood and adulthood. Continued tracking of dyslipidemia in all age groups will be important as the epidemiology of obesity evolves.

Definitions:

Strength of Recommendations

The USPSTF grades its **recommendations** according to one of five classifications (A, B, C, D, I) reflecting the strength of evidence and magnitude of net benefit (benefits minus harms):

A

The USPSTF strongly recommends that clinicians provide [the service] to eligible patients. The USPSTF found good evidence that [the service] improves important health outcomes and concludes that benefits substantially outweigh harms.

B

The USPSTF recommends that clinicians provide [this service] to eligible patients. The USPSTF found at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms.

C

The USPSTF makes no recommendation for or against routine provision of [the service]. The USPSTF found at least fair evidence that [the service] can improve health outcomes but concludes that the balance of benefits and harms is too close to justify a general recommendation.

D

The USPSTF recommends against routinely providing [the service] to asymptomatic patients. The USPSTF found at least fair evidence that [the service] is ineffective or that harms outweigh benefits.

I

The USPSTF concludes that the evidence is insufficient to recommend for or against routinely providing [the service]. Evidence that the [service] is effective is lacking, of poor quality, or conflicting and the balance of benefits and harms cannot be determined.

Strength of Evidence

The USPSTF grades the **quality of the overall evidence** for a service on a 3-point scale (good, fair, poor):

Good

Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.

Fair

Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies, generalizability to routine practice, or indirect nature of the evidence on health outcomes.

Poor

Evidence is insufficient to assess the effects on health outcomes because of limited number or power of studies, important flaws in their design or conduct, gaps in the chain of evidence, or lack of information on important health outcomes.

CLINICAL ALGORITHM(S)

None available

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is identified in the "Major Recommendations" field.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Benefits of Detection and Early Treatment

Trials of statin drugs in children with monogenic dyslipidemia (defined in Clinical Considerations [see "Major Recommendations" field) indicate improved total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), and high-density lipoprotein cholesterol (HDL-C) measures. For children with multifactorial types of dyslipidemia, there is no evidence that diet or exercise interventions in childhood lead to improved lipid profiles or better health outcomes in adulthood.

POTENTIAL HARMS

Harms of Detection and Early Treatment

Potential harms of screening may include labeling of children whose dyslipidemia would not persist into adulthood or cause health problems, although evidence is

lacking. Adverse effects from lipid-lowering medications and low-fat diets, including potential long-term harms, have been inadequately evaluated in children.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

The U.S. Preventive Services Task Force recommendations are independent of the U.S. government. They do not represent the views of the Agency for Healthcare Research and Quality (AHRQ), the U.S. Department of Health and Human Services, or the U.S. Public Health Service.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The experiences of the first and second U.S. Preventive Services Task Force (USPSTF), as well as that of other evidence-based guideline efforts, have highlighted the importance of identifying effective ways to implement clinical recommendations. Practice guidelines are relatively weak tools for changing clinical practice when used in isolation. To effect change, guidelines must be coupled with strategies to improve their acceptance and feasibility. Such strategies include enlisting the support of local opinion leaders, using reminder systems for clinicians and patients, adopting standing orders, and audit and feedback of information to clinicians about their compliance with recommended practice.

In the case of preventive services guidelines, implementation needs to go beyond traditional dissemination and promotion efforts to recognize the added patient and clinician barriers that affect preventive care. These include clinicians' ambivalence about whether preventive medicine is part of their job, the psychological and practical challenges that patients face in changing behaviors, lack of access to health care or of insurance coverage for preventive services for some patients, competing pressures within the context of shorter office visits, and the lack of organized systems in most practices to ensure the delivery of recommended preventive care.

Dissemination strategies have changed dramatically in this age of electronic information. While recognizing the continuing value of journals and other print formats for dissemination, the Agency for Healthcare Research and Quality will make all U.S. Preventive Services Task Force (USPSTF) products available through its Web site. The combination of electronic access and extensive material in the public domain should make it easier for a broad audience of users to access U.S. Preventive Services Task Force materials and adapt them for their local needs. Online access to U.S. Preventive Services Task Force products also opens up new possibilities for the appearance of the annual, pocket-size *Guide to Clinical Preventive Services*.

To be successful, approaches for implementing prevention have to be tailored to the local level and deal with the specific barriers at a given site, typically requiring

the redesign of systems of care. Such a systems approach to prevention has had notable success in established staff-model health maintenance organizations, by addressing organization of care, emphasizing a philosophy of prevention, and altering the training and incentives for clinicians. Staff-model plans also benefit from integrated information systems that can track the use of needed services and generate automatic reminders aimed at patients and clinicians, some of the most consistently successful interventions. Information systems remain a major challenge for individual clinicians' offices, however, as well as for looser affiliations of practices in network-model managed care and independent practice associations, where data on patient visits, referrals, and test results are not always centralized.

IMPLEMENTATION TOOLS

Foreign Language Translations
Patient Resources
Personal Digital Assistant (PDA) Downloads
Pocket Guide/Reference Cards
Tool Kits
Wall Poster

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

US Preventive Services Task Force. Screening for lipid disorders in children: US Preventive Services Task Force recommendation statement. Pediatrics 2007 Jul;120(1):e215-9. PubMed

ADAPTATION

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

DATE RELEASED

2007 Jul 9

GUIDELINE DEVELOPER(S)

United States Preventive Services Task Force - Independent Expert Panel

GUIDELINE DEVELOPER COMMENT

The U.S. Preventive Services Task Force (USPSTF) is a federally-appointed panel of independent experts. Conclusions of the U.S. Preventive Services Task Force do not necessarily reflect policy of the U.S. Department of Health and Human Services (DHHS) or its agencies.

SOURCE(S) OF FUNDING

United States Government

GUIDELINE COMMITTEE

U.S. Preventive Services Task Force (USPSTF)

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Teutsch, MD, MPH (Executive Director, Outcomes Research and Management, Merck & Company, Inc., West Point, PA)**; and Barbara P. Yawn, MD, MSc (Director of Research, Olmstead Research Center, Rochester, MN)

**Members of the Task Force at the time this recommendation was finalized. For a list of current Task Force members, go to* www.ahrq.gov/clinic/uspstfab.htm.

***Dr. Teutsch was recused from the discussion and voting on this issue.*

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

The U.S. Preventive Services Task Force has an explicit policy concerning conflict of interest. All members disclose at each meeting if they have an important financial conflict for each topic being discussed. Task Force members and EPC staff with conflicts can participate in discussions about evidence, but members abstain from voting on recommendations about the topic in question.

From: Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

Evidence Reviews:

- Haney E, Huffman L, Bougatsos C, Freeman M, Steiner R, Nelson H. Screening and treatment for hypercholesterolemia in children and adolescents: systematic evidence review for the U.S. Preventive Services Task Force. Pediatrics 2007;120(1): e180-e214. Electronic copies: Available in Portable Document Format (PDF) from the U.S. Preventive Services Task Force (USPSTF) Web site.
- Screening for lipid disorders in children and adolescents: systematic evidence review for the U.S. Preventive Services Task Force. Electronic copies: Available in Portable Document Format (PDF) from the U.S. Preventive Services Task Force (USPSTF) Web site.

Background Articles:

- Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35. Electronic copies: Available from U.S. Preventive Services Task Force (USPSTF) Web site.

The following is also available:

- The guide to clinical preventive services, 2006. Recommendations of the U.S. Preventive Services Task Force. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ), 2007. 239 p. Electronic copies available from the AHRQ Web site.
- A step-by-step guide to delivering clinical preventive services: a systems approach. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ), 2002 May. 189 p. Electronic copies available from the AHRQ Web site. See the related QualityTool summary on the Health Care Innovations Exchange Web site.

Print copies: Available from the Agency for Healthcare Research and Quality Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

The Electronic Preventive Services Selector (ePSS), available as a PDA application and a web-based tool, is a quick hands-on tool designed to help primary care clinicians identify the screening, counseling, and preventive medication services that are appropriate for their patients. It is based on current recommendations of the USPSTF and can be searched by specific patient characteristics such as age, sex, and selected behavioral risk factors.

PATIENT RESOURCES

The following is available:

- The pocket guide to good health for children. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2003.

Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site. Copies also available in Spanish from the USPSTF Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the

authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI Institute on September 18, 2007. The information was verified by the guideline developer on October 2, 2007.

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