Complete Summary

GUIDELINE TITLE

Screening for visual impairment in children younger than age 5 years: recommendation statement.

BIBLIOGRAPHIC SOURCE(S)

Screening for visual impairment in children younger than age 5 years: recommendation statement. Ann Fam Med 2004 May-Jun;2(3):263-6. PubMed

Screening for visual impairment in children younger than five years: recommendation statement. Am Fam Physician 2005 Jan 15;71(2):333-6. PubMed

GUIDELINE STATUS

This is the current release of the guideline.

This release updates a previously published guideline: U.S. Preventive Services Task Force. Guide to clinical preventive services. 2nd ed. Baltimore (MD): Williams & Wilkins; 1996. Chapter 33, Screening for visual impairment. p. 373-82.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Visual impairment including:

- Amblyopia
- Refractive errors not associated with amblyopia (e.g., strabismus, defects in visual acuity)

Note: These recommendations do not address screening for other anatomic or pathologic entities, such as macro cornea, cataracts, retinal abnormalities, or neonatal neuroblastoma

GUIDELINE CATEGORY

Prevention
Screening

CLINICAL SPECIALTY

Family Practice
Ophthalmology
Pediatrics
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To summarize the U.S. Preventive Services Task Force (USPSTF) recommendation on screening for visual impairment in children younger than age 5 years and the supporting evidence
- To update 1996 recommendations contained in the *Guide to Clinical Preventive Services*, Second Edition: Periodic Updates.

TARGET POPULATION

Children age 0 to 5 years seen in primary care settings

INTERVENTIONS AND PRACTICES CONSIDERED

1. Screening for visual impairment using testing procedures such as:
    - Cover test
    - Hirschberg light reflex test
    - Photoscreening
    - Random Dot E test
    - Titmus Fly Stereotest
    - HOTV chart
    - Lea symbols
    - Tumbling E test
2. Treatment options discussed but not specifically recommended include:
    - Visual training
    - Eye patch
    - Atropine
    - Surgery for cataracts and strabismus

- Glasses or contact lenses
- Refractive surgery treatments

MAJOR OUTCOMES CONSIDERED

- **Key Question No 1**: What is the prevalence of visual impairment in children through 5 years of age?
- **Key Question No. 2**: Do reliable, accurate, and feasible screening tests exist that can be used to detect visual disorders in children less than 3 years of age or in children between the ages of 3 and 5 years?
- **Key Question No. 3**: Do detection and treatment of conditions associated with amblyopia before amblyopia has developed lead to better treatment outcomes (primary prevention)?
- **Key Question No. 4**: Under what conditions is the treatment of amblyopia successful?
- **Key Question No. 5**: Under what conditions is the treatment of refractive errors not associated with amblyopia successful?
- **Key Question No. 6**: Does improving vision result in improved health outcomes?
- **Key Question No. 7**: What are the adverse effects of screening?
- **Key Question No. 8**: What are the adverse effects of treatment?
- **Key Question No. 9**: Does screening for amblyopia and associated conditions in children age 0 to 5 years lead to better vision outcomes?

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 evidence review (SER) for Key Questions 1 to 8 was prepared by the Research Triangle Institute/ University of North Carolina Evidence-based Practice Center (EPC). A subsequent update and literature review to address Key Question 9 was prepared by the Oregon Health & Science University EPC. Both the original SER and the update were produced for the Agency for Healthcare Research and Quality (AHRQ) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Companion Documents" field).

Key Questions 1 to 8

Search Strategy

EPC staff systematically searched MEDLINE from 1966 through 1999 to identify studies regarding the prevalence of visual impairment, the effectiveness of treatment, the diagnostic accuracy of the screening tests, and the consequences of treated and untreated visual impairment. They also conducted hand-checks of

bibliographies and extensive peer review to identify articles not captured through the main search strategy.

Study Selection

Prevalence studies were included if they reflected the general population and evaluated subjects systematically for those conditions for which screening could be useful. Diagnostic accuracy studies were retained if they evaluated commercially available tests and reported sensitivity and specificity results based on evaluation against a criterion standard. Treatment outcome studies were included if they involved subjects 5 years of age or younger and had a standard measure of visual acuity as an outcome measure. Studies of the consequences of treated or untreated visual impairment were used if the visual impairment was present by at least 5 years of age.

Data Extraction

A single reviewer examined titles and abstracts of articles and excluded those that clearly did not meet inclusion criteria. This reviewer then examined the full articles of the remaining studies to determine final eligibility.

Key Question 9

Methods

The literature review was updated through June 2003, focusing on the randomized controlled trial (RCT) evidence that served as the basis for the draft recommendations.

Search Strategy

References suggested by experts or professional organizations following the review of the 2001 report (see Companion Documents field) were reviewed for inclusion. In addition, the research team used the search strategies from the 2001 report, and developed appropriate update search strategies for MEDLINE (1999–June 2003) and the Cochrane systematic review and RCT registry databases (1999–June 2003).

Inclusion and Exclusion Criteria

Captured titles and/or abstracts were downloaded and imported into the EndNote program to create a vision screening update library. Titles and/or abstracts were reviewed using specific inclusion and exclusion criteria (see Appendix in Companion Documents field). Full text papers were retrieved for RCTs of screening for amblyopia that included children aged 5 years and younger, and included a follow-up assessment with appropriate vision outcomes. Studies were excluded if they were not randomized controlled trials, did not include children aged 5 years or younger, or included only high-risk populations (i.e., those with low birth weight). Eligibility criteria were reapplied to the full-text articles.

NUMBER OF SOURCE DOCUMENTS

Key Question No. 1: 6 studies
Key Question No. 2: 5 studies
Key Question No. 3: 3 studies
Key Question No. 4: 13 studies
Key Question No. 5: 1 study
Key Question No. 6: 3 studies
Key Question No. 7: 0 studies
Key Question No. 8: 2 studies
Key Question No. 9: 2 studies

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 (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.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): A systematic evidence review (SER) for Key Questions 1 to 8 was prepared by the Research Triangle Institute/ University of North Carolina Evidence-based Practice Center (EPC). A subsequent update and literature review to address Key Question 9 was prepared by the Oregon Health & Science University EPC. Both the original SER and the update were produced for the Agency for Healthcare Research and Quality

(AHRQ) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Companion Documents" field).

Key Questions 1 to 8

A single reviewer abstracted the relevant data from the included articles and entered them into a Microsoft Excel spreadsheet. EPC staff then entered study design and outcomes data from the articles that had met inclusion criteria into seven evidence tables, organized by key question; no literature about harms of screening was identified. Quality grades were assigned according to criteria established by the USPSTF Methods Work Group.

Key Question 9

Criteria developed by the USPSTF were used to rate study quality. Information on randomization, maintenance of comparable groups, attrition, and analysis was dually reviewed by research team members. Disagreements on quality ratings were discussed until consensus was reached.

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 a 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 and published cost analyses were not reviewed.

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 (USPSTF) makes its final determinations about recommendations on a given preventive service, the Evidence-based Practice Center (EPC) and the Agency for Healthcare Research and Quality (AHRQ) 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. These comments are discussed before the whole U.S. Preventive Services Task Force before final recommendations are confirmed.

Recommendations of Others. Recommendations regarding screening for visual impairment were considered from the following groups: the American Academy of Family Physicians; the American Academy of Pediatrics, the American Association

for Pediatric Ophthalmology and Strabismus, the American Academy of Ophthalmology; the American Optometric Association, and the Canadian Task Force on Preventive Health Care

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

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.

The USPSTF recommends screening to detect amblyopia, strabismus, and defects in visual acuity in children younger than age 5 years. **B recommendation.**

The USPSTF found no direct evidence that screening for visual impairment in children leads to improved visual acuity. However, the USPSTF found fair evidence that screening tests have reasonable accuracy in identifying strabismus, amblyopia, and refractive error in children with these conditions; that more intensive screening compared with usual screening leads to improved visual acuity; and that treatment of strabismus and amblyopia can improve visual acuity and reduce long-term amblyopia. The USPSTF found no evidence of harms for screening, judged the potential for harms to be small, and concluded that the benefits of screening are likely to outweigh any potential harms.

Clinical Considerations

- The most common causes of visual impairment in children are: (1) amblyopia and its risk factors and (2) refractive error not associated with amblyopia. Amblyopia refers to reduced visual acuity without a detectable organic lesion of the eye and is usually associated with amblyogenic risk factors that interfere with normal binocular vision, such as strabismus (ocular misalignment), anisometropia (a large difference in refractive power between the 2 eyes), cataract (lens opacity), and ptosis (eyelid drooping). Refractive error not associated with amblyopia principally includes myopia (nearsightedness) and hyperopia (farsightedness); both remain correctable regardless of the age at detection.
- Various tests are used widely in the United States to identify visual defects in children, and the choice of tests is influenced by the child's age. During the first year of life, strabismus can be assessed by the cover test and the Hirschberg light reflex test. Screening children younger than age 3 years for visual acuity is more challenging than screening older children and typically requires testing by specially trained personnel. Newer automated techniques can be used to test these children. Photoscreening can detect amblyogenic risk factors such as strabismus, significant refractive error, and media opacities; however, photoscreening cannot detect amblyopia.
- Traditional vision testing requires a cooperative, verbal child and cannot be performed reliably until ages 3 to 4 years. In children older than age 3 years, stereopsis (the ability of both eyes to function together) can be assessed with the Random Dot E test or Titmus Fly Stereotest; visual acuity can be assessed

by tests such as the HOTV chart, Lea symbols, or the tumbling E. Some of these tests have better test characteristics than others.

- Based on their review of current evidence, the USPSTF was unable to determine the optimal screening tests, periodicity of screening, or technical proficiency required of the screening clinician. Based on expert opinion, the American Academy of Pediatrics (AAP) recommends the following vision screening be performed at all well-child visits for children starting in the newborn period to 3 years: ocular history, vision assessment, external inspection of the eyes and lids, ocular motility assessment, pupil examination, and red reflex examination. For children aged 3 to 5 years, the AAP recommends the aforementioned screening in addition to age-appropriate visual acuity measurement (using HOTV or tumbling E tests) and ophthalmoscopy.
- The USPSTF found that early detection and treatment of amblyopia and amblyogenic risk factors can improve visual acuity. These treatments include surgery for strabismus and cataracts; use of glasses, contact lenses, or refractive surgery treatments to correct refractive error; and visual training, patching, or atropine therapy of the nonamblyopic eye to treat amblyopia.
- These recommendations do not address screening for other anatomic or pathologic entities, such as macro cornea, cataracts, retinal abnormalities, or neonatal neuroblastoma, nor do they address newer screening technologies currently under investigation.

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.

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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 provided

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

The U.S. Preventive Services Task Force (USPSTF) found fair evidence that screening tests have reasonable accuracy in identifying strabismus, amblyopia, and refractive error in children with these conditions; that more intensive screening compared with usual screening leads to improved visual acuity; and that treatment of strabismus and amblyopia can improve visual acuity and reduce long-term amblyopia. The USPSTF found no evidence of harms for screening, judged the potential for harms to be small, and concluded that the benefits of screening are likely to outweigh any potential harms.

POTENTIAL HARMS

The U.S. Preventive Services Task Force (USPSTF) found no studies detailing permanent harms resulting from screening or data regarding the harms of false-positive screening. However, potential harms of screening may include "labeling" and the costs associated with the further evaluation of children with false-positive screening results. Potential harms of interventions include disruption of normal eye development and temporary loss of visual acuity of the nonamblyopic eye, which resolves weeks after completion of therapy.

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

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)

Screening for visual impairment in children younger than age 5 years: recommendation statement. Ann Fam Med 2004 May-Jun;2(3):263-6. PubMed

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ADAPTATION

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

DATE RELEASED

1996 (revised 2004 May)

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)

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

The U.S. Preventive Services Task Force (USPSTF) has an explicit policy concerning conflict of interest. All members and Evidence-based Practice Center (EPC) staff 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.

This release updates a previously published guideline: U.S. Preventive Services Task Force. Guide to clinical preventive services. 2nd ed. Baltimore (MD): Williams & Wilkins; 1996. Chapter 33, Screening for visual impairment. p. 373-82.

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:

- Kemper A, Harris R, Lieu TA, Homer CJ, Whitener BL. Screening for visual impairment in children younger than age 5 years: systematic evidence review for the U.S. Preventive Services Task Force. Rockville (MD); Agency for Healthcare Research and Quality; 2004 May. 58 p. (Systematic Evidence Review No. 27).

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

- Kemper A, Harris R, Lieu TA, Homer CJ, Whitener BL. Screening for visual impairment in children 0 to 5 years. Summary of the evidence. Rockville (MD); Agency for Healthcare Research and Quality; 2001 Feb 7. 59 p.
- Nelson HD, Nygren P, Huffman L, Wheller D, Hamilton A, Teutsch S, Klein J. Screening for visual impairment in children 0 to 5 years. Brief update. Rockville (MD); Agency for Healthcare Research and Quality; 8 p.

  Electronic copies: Available from the USPSTF Web site.

Background Articles:

- Woolf SH, Atkins D. The evolving role of prevention in health care: contributions of the U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):13-20.
- 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.
- Saha S, Hoerger TJ, Pignone MP, Teutsch SM, Helfand M, Mandelblatt JS. The art and science of incorporating cost effectiveness into evidence-based recommendations for clinical preventive services. Cost Work Group of the Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):36-43.

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

The following are 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), 2006. 228 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.

- Screening for visual impairment in children younger than age 5 years: What´s new: overview of recommendations. Rockville (MD): Agency for Healthcare Research and Quality; 2004 May. Electronic copies: Available from USPSTF 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 adults. 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.

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This summary was completed by ECRI on June 30, 1998. The information was verified by the guideline developer on December 1, 1998. This summary was updated by ECRI on May 25, 2004.

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Date Modified: 10/20/2008