HIGH-PRIORITY EVIDENCE GAPS
FOR CLINICAL PREVENTIVE SERVICES

Fourth Annual REPORT TO CONGRESS
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U.S. PREVENTIVE SERVICES
TASK FORCE

U.S. Preventive Services
TASK FORCE

EXECUTIVE SUMMARY

The U.S. Preventive Services Task Force (USPSTF or Task Force) is an independent, volunteer panel of national experts in prevention and evidence-based medicine. The Task Force works to improve the health of all Americans by making evidence-based recommendations about clinical preventive services and health promotion. The Task Force comprehensively assesses evidence and makes recommendations about the effectiveness of screening tests, counseling about healthful behaviors, and preventive medications for infants, children, adolescents, adults, older adults, and pregnant women.

The Patient Protection and Affordable Care Act of 2010 charges the USPSTF with making an annual report to Congress that identifies gaps in the evidence base and recommends priority areas that deserve further examination. In its previous three reports to Congress, the Task Force identified screening tests, behavioral interventions, and preventive medications with significant evidence gaps deserving further research. Given the expected pace of research, it is too soon to expect that many of the gaps identified in the Task Force's previous annual reports would have been addressed by clinical researchers. The Task Force therefore encourages Congress to continue promoting research to address these gaps.

In this annual report, the USPSTF has prioritized evidence gaps related to the care of children and adolescents. More research in these areas would likely result in important new recommendations that will help improve the health and health care of young Americans, with lasting benefits through adulthood.

Priorities for Improving the Health of Children and Adolescents Through Research on Clinical Preventive Services:

1. Mental Health Conditions and Substance Abuse
2. Obesity and Cardiovascular Health
3. Behavior and Development
4. Infectious Diseases
5. Cancer Prevention
6. Injury and Child Maltreatment
7. Vision Disorders

The USPSTF will continue to independently evaluate the evidence on clinical preventive services to empower health care professionals, health care systems, and the American people to make informed decisions about their health and health care.

The USPSTF believes that identifying evidence gaps and highlighting them as priority areas for research will inspire public and private researchers to collaborate and target their efforts to generate new knowledge and address important health priorities.

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"Representing more than 62,000 pediatricians and pediatric specialists, the American Academy of Pediatrics shares the Task Force's goal of providing actionable information to physicians caring for children, adolescents, and young adults. As the most vulnerable members of our society, children and adolescents' unique health needs require more attention than ever before. We look forward to a renewed interest in research stemming from this report from the U.S. Preventive Services Task Force."

– American Academy of Pediatrics (AAP)
James M. Perrin, MD, FAAP, President

I. INTRODUCTION

The U.S. Preventive Services Task Force (USPSTF or Task Force) is an independent body of national experts in prevention and evidence-based medicine. Since its inception more than 25 years ago, the Task Force has worked to improve the health of all Americans by making evidence-based recommendations about clinical preventive services and health promotion. These recommendations include screening tests, counseling about healthful behaviors, and preventive medications. The Patient Protection and Affordable Care Act, Sec. 4003 (F), describes the duties of the USPSTF, which include:

> *"The submission of yearly reports to Congress and related agencies identifying gaps in research such as preventive services that receive an insufficient evidence statement, and recommending priority areas that deserve further examination, including areas related to populations and age groups not adequately addressed by current recommendations."*

The USPSTF has prepared this report in response to this requirement to update Congress and the research community about key evidence gaps in clinical preventive services.

The mission of the USPSTF is to improve the health of all Americans by making evidence-based recommendations about clinical preventive services and health promotion.

II. BACKGROUND

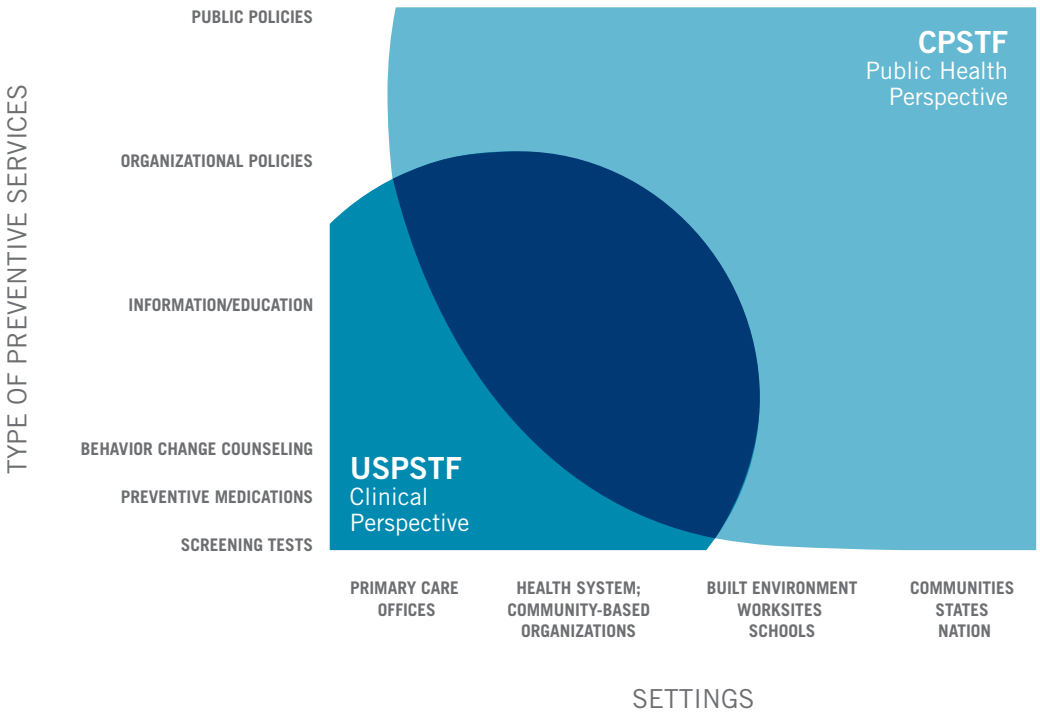
Clinical preventive services can have tremendous value in improving the health of the Nation. When provided appropriately, they can identify diseases at earlier stages when they are more treatable or reduce a person's risk for developing a disease altogether. However, some clinical preventive services can fail to provide the expected benefit or can even cause harm. To make informed decisions, health care professionals, patients, and families need access to trustworthy, objective information about the benefits and harms of clinical preventive services.

Task Force recommendations focus on interventions to prevent or decrease the severity of disease, and they apply only to people without signs or symptoms of the disease or health condition under consideration. USPSTF recommendations address services offered in the primary care setting or services to which patients can be referred by primary care professionals. The Task Force makes recommendations to help primary care clinicians, patients, and families decide together whether a particular preventive service is right for an individual's needs.

Since 1998, the Agency for Healthcare Research and Quality has been authorized by Congress to convene the Task Force and to provide ongoing scientific, administrative, and dissemination support.

Complementing the work of the USPSTF, preventive services at the community level are addressed by the Community Preventive Services Task Force (CPSTF), which was established in 1996 by the U.S. Department of Health and Human Services. The CPSTF assists agencies, organizations, and individuals at all levels (national, state, community, school, worksite, and health care system) by providing evidence-based recommendations about community prevention programs and policies that are effective in increasing longevity and improving the quality of life of all Americans. The work of the CPSTF is supported by the Centers for Disease Control and Prevention. A diagram outlining the complementary domains of the USPSTF and the CPSTF is shown in **Figure 1.**

Figure 1. Complementary Work of the U.S. Preventive Services Task Force and the Community Preventive Services Task Force



Who Serves on the Task Force?

The Task Force is made up of 16 independent, nonfederal members who serve 4-year terms, led by a chair and two vice chairs (see **Appendix D** for current members). Members are nationally recognized experts in prevention and evidence-based medicine and represent the diverse disciplines of primary care, including behavioral health, family medicine, geriatrics, internal medicine, nursing, obstetrics and gynecology, and pediatrics. These prevention specialists provide important insights because Task Force recommendations are addressed to primary care clinicians and apply to individuals who visit them. All members volunteer their time to serve on the USPSTF. Most Task Force members are active clinicians who see patients regularly; many are respected researchers and distinguished professors, and all are dedicated to improving the health of Americans.

USPSTF members are appointed by the Director of the Agency for Healthcare Research and Quality. Members are screened to ensure that they have no substantial conflicts of interest that could impair the scientific integrity of the work of the Task Force. For each preventive service under review and consideration, the financial, professional, and intellectual activities of Task Force members are evaluated to identify any real or potential conflicts of interest. In the unusual case where a conflict is identified for a member regarding a specific topic, the member is recused from participating in the development of the recommendation for that topic.

How the Task Force Makes Recommendations

The Task Force makes recommendations based on a rigorous review of existing peer-reviewed evidence. It does not conduct research studies, but rather reviews and assesses published research. The USPSTF follows a multistep process when developing each of its recommendations (see **Figure 2**).

Figure 2. Steps the USPSTF Takes to Make a Recommendation

The process starts with the USPSTF and researchers from an Evidence-based Practice Center (EPC) developing a research plan for the topic. The research plan includes key questions to be answered and target populations to be considered. The draft research plan is posted on the USPSTF Web site for public comment for 4 weeks, during which time anyone can comment on the plan, including stakeholders and members of the general public. The USPSTF and the EPC review all comments and consider them in revising the research plan.

Using the final research plan as a guide, EPC researchers gather, review, and analyze evidence on the topic from studies published in peer-reviewed scientific journals. The EPC summarizes this evidence in a comprehensive evidence report, which is then reviewed by external subject matter experts. In 2013, the Task Force began posting draft evidence reports for public comment for 4 weeks, during which time scientists, researchers, health care professionals, and members of the general public are able to comment. All comments related to the draft evidence report are reviewed by the researchers at the EPC, and the evidence report is revised as necessary.

Task Force members use the evidence report as the basis for their assessment of the effectiveness of the preventive service under consideration. They balance both the potential benefits and harms in making their recommendations.

Potential benefits of clinical preventive services include reduction of risk factors to prevent disease, early identification of disease leading to earlier treatment, and, ultimately, improved health outcomes such as quality of life and length of life. Harms of preventive services can include adverse effects of the service itself, as well as the harms of inaccurate test results that may lead to a cascade of additional followup tests (some of which are invasive and could cause harm) and unnecessary treatments. Potential harms also include side effects or complications of treatments. When appropriate and when evidence exists, the Task Force evaluates the benefits and harms based on age, sex, and risk factors for the disease.

The Task Force makes its recommendations based on its assessment of the effectiveness of each clinical preventive service. The Task Force does not consider costs in its appraisal of the effectiveness of a service. The USPSTF also recognizes that insurance coverage decisions involve additional considerations beyond a scientific assessment of the clinical benefits and harms.

The Task Force assigns each of its recommendations a letter grade (A, B, C, or D) or issues an "I" statement based on the certainty of the evidence and the balance of benefits and harms of the preventive service (see **Table 1**). Clinical preventive services assigned a grade of "A" or "B" are those for which the USPSTF has determined that the benefits of the service substantially outweigh its harms. The Task Force recommends that clinicians offer and patients consider taking advantage of these services. For services assigned a "C" grade, the net benefit is small. The USPSTF recommends that health care professionals selectively offer these services to patients based on professional judgment and patient preferences. Services assigned a "D" grade are those for which there is no overall benefit, or the harms outweigh the benefits. The Task Force recommends that clinicians not promote these services and that patients avoid them. The Task Force issues an "I" statement when the evidence is insufficient to determine the balance of benefits and harms.

Table 1. Meaning of USPSTF Grades

Grade	Definition
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.
C	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

After carefully considering the evidence presented in the draft evidence report, the USPSTF develops a draft recommendation statement based upon the potential benefits and harms of the clinical preventive service. The Task Force posts the draft recommendation statement along with the draft evidence report for public comment for 4 weeks. The Task Force requests feedback on the completeness of the evidence, its interpretation of the evidence, and the clarity and usefulness of the draft recommendation statement. Members of the Task Force review all comments received on the draft recommendation statement and then revise the recommendation statement. The final recommendation statement is posted on the USPSTF Web site along with the final evidence report and supporting materials. The recommendation statement and a manuscript based on the full evidence review are often published in a peer-reviewed medical journal. To ensure that stakeholders and the public are informed about the recommendations and understand them, the Task Force also develops plain language fact sheets on each draft and final recommendation statement and works with partner organizations on dissemination and implementation activities.

III. MAJOR ACTIVITIES OF THE USPSTF IN 2013–2014

Over the past 4 years, the Task Force has focused on making its work as transparent as possible so that stakeholders and the public better understand and have more confidence in the approach of the Task Force. This also ensures that its work is open, credible, independent, and unbiased, and is recognized as such. By expanding opportunities for the public and stakeholders to engage in the process, the Task Force believes that its recommendations are more accurate and relevant.

As a result of these efforts, stakeholders and the public can:

- Nominate new members to serve on the Task Force
- Nominate new topics for Task Force consideration or request an update of an existing topic
- Provide comments on all draft research plans
- Provide comments on all draft evidence reports
- Provide comments on all draft recommendation statements

Over the past year, the members of the Task Force continued working on a full portfolio of topics. The current USPSTF library includes 150 specific recommendations (see **Appendix G** for a complete listing of all current USPSTF recommendations). Between October 2013 and September 2014, the Task Force:

- Received 17 nominations for new topics and 5 nominations to reconsider or update existing topics
- Posted 15 draft research plans for public comment
- Posted 11 draft recommendation statements and draft evidence reports for public comment
- Published 17 final recommendation statements in peer-reviewed journals (see **Table 2**)

Table 2. Final Recommendation Statements Published by the USPSTF, October 2013 to September 2014

Topic	Recommendation
Abdominal Aortic Aneurysm: Screening	The USPSTF recommends one-time screening for abdominal aortic aneurysm (AAA) by ultrasonography in men ages 65 to 75 years who have ever smoked. (Grade B) The USPSTF recommends that clinicians selectively offer screening for AAA in men ages 65 to 75 years who have never smoked rather than routinely screening all men in this group. (Grade C) The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for AAA in women ages 65 to 75 years who have ever smoked. (I Statement) The USPSTF recommends against routine screening for AAA in women who have never smoked. (Grade D)
BRCA-Related Cancer in Women: Risk Assessment, Genetic Counseling, and Genetic Testing	The USPSTF recommends that primary care providers screen women who have family members with breast, ovarian, tubal, or peritoneal cancer with one of several screening tools designed to identify a family history that may be associated with an increased risk for potentially harmful mutations in breast cancer susceptibility genes (*BRCA1* or *BRCA2*). Women with positive screening results should receive genetic counseling and, if indicated after counseling, BRCA testing. (Grade B) The UPSTF recommends against routine genetic counseling or BRCA testing for women whose family history is not associated with an increased risk for potentially harmful mutations in the *BRCA1* or *BRCA2* genes. (Grade D)
Cardiovascular Disease and Cancer: Preventive Medication	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the use of multivitamins for the prevention of cardiovascular disease or cancer. (I Statement) The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the use of single- or paired-nutrient supplements (except ß-carotene and vitamin E) for the prevention of cardiovascular disease or cancer. (I Statement) The USPSTF recommends against the use of ß-carotene or vitamin E supplements for the prevention of cardiovascular disease or cancer. (Grade D)
Carotid Artery Stenosis: Screening	The USPSTF recommends against screening for asymptomatic carotid artery stenosis in the general adult population. (Grade D)

Table 2. Final Recommendation Statements Published by the USPSTF, October 2013 to September 2014 (con't)

Topic	Recommendation
Chlamydia and Gonorrhea: Screening	The USPSTF recommends screening for chlamydia in sexually active women age 24 years or younger and in older women who are at increased risk for infection. (Grade B) The USPSTF recommends screening for gonorrhea in sexually active women age 24 years or younger and in older women who are at increased risk for infection. (Grade B) The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for chlamydia and gonorrhea in men. (I Statement)
Cognitive Impairment in Older Adults: Screening	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for cognitive impairment. (I Statement)
Dental Caries in Children From Birth Through Age 5 Years: Screening and Preventive Medication	The USPSTF recommends that primary care clinicians prescribe oral fluoride supplementation starting at age 6 months for children whose water supply is deficient in fluoride. (Grade B) The USPSTF recommends that primary care clinicians apply fluoride varnish to the primary teeth of all infants and children starting at the age of primary tooth eruption. (Grade B) The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of routine screening examinations for dental caries performed by primary care clinicians in children from birth to age 5 years. (I Statement)
Illicit Drug and Nonmedical Pharmaceutical Use in Children and Adolescents: Behavioral Interventions	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of primary care-based behavioral interventions to prevent or reduce illicit drug or nonmedical pharmaceutical use in children and adolescents. This recommendation applies to children and adolescents who have not already been diagnosed with a substance use disorder. (I Statement)
Gestational Diabetes: Screening	The USPSTF recommends screening for gestational diabetes mellitus in asymptomatic pregnant women after 24 weeks of gestation. (Grade B) The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for gestational diabetes mellitus in asymptomatic pregnant women before 24 weeks of gestation. (I Statement)
Healthful Diet and Physical Activity for Cardiovascular Disease Prevention in Adults With Cardiovascular Risk Factors: Behavioral Counseling	The USPSTF recommends offering or referring adults who are overweight or obese and have additional cardiovascular disease (CVD) risk factors to intensive behavioral counseling interventions to promote a healthful diet and physical activity for CVD prevention. (Grade B)
Hepatitis B Virus Infection in Nonpregnant Adolescents and Adults: Screening	The USPSTF recommends screening for hepatitis B virus infection in persons at high risk for infection. (Grade B)

Table 2. Final Recommendation Statements Published by the USPSTF, October 2013 to September 2014 (con't)

Topic	Recommendation
Hypertension in Children and Adolescents: Screening	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for primary hypertension in asymptomatic children and adolescents to prevent subsequent cardiovascular disease in childhood or adulthood. (I Statement)
Lung Cancer: Screening	The USPSTF recommends annual screening for lung cancer with low-dose computed tomography in adults ages 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery. (Grade B)
Oral Cancer: Screening	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for oral cancer in asymptomatic adults. (I Statement)
Preeclampsia: Preventive Medication	The USPSTF recommends the use of low-dose aspirin (81 mg/day) as preventive medication after 12 weeks of gestation in women who are at high risk for preeclampsia. (Grade B)
Sexually Transmitted Infections: Behavioral Counseling	The USPSTF recommends intensive behavioral counseling for all sexually active adolescents and for adults who are at increased risk for sexually transmitted infections. (Grade B)
Suicide Risk in Adolescents, Adults, and Older Adults: Screening	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for suicide risk in adolescents, adults, and older adults in primary care. (I Statement)

The Task Force continued efforts to disseminate its recommendations by working with a group of partner organizations (see **Appendix E**) representing primary care clinicians, consumer organizations, and other stakeholders involved in delivering primary care. These partners help ensure that Task Force recommendations are meaningful to the groups they represent. Partners are also a powerful vehicle for ensuring that America's primary care workforce remains up to date on USPSTF recommendations.

In addition, through liaisons with Federal agencies (see **Appendix F**), the Task Force has access to a wide range of experts in prevention and disease. This helps ensure that its recommendations are comprehensive and reflect the best available science.

In order to help the public understand what Task Force recommendations mean, the Task Force continued to produce plain language fact sheets for each of its recommendations at the draft and final stage. The fact sheets also highlight that evidence-based recommendations are only one part of informed decisionmaking, and they encourage people to consider Task Force recommendations within the context of their health status, their values and preferences for health and health care, and advice from a trusted health care professional. The fact sheets contain links to resources for learning more about each topic and encourage people to have informed discussions about clinical preventive services with their doctor or nurse. The fact sheets are available on the USPSTF Web site.

In addition, this year, the Task Force worked to enhance the design and functionality of its Web site. The redesigned Web site will feature easier access to information for health professionals and consumers, as well as enhanced searching capability.

IV. FOCUSING ON THE HEALTH OF CHILDREN AND ADOLESCENTS

Prevention is essential to children and adolescents' health care. Starting with pediatrician Abraham Jacobi in the 19th century and physicians and public health pioneers such as S. Josephine Baker in the early 20th century, prevention has become a fundamental part of child health care. When founded in 1912, the Federal Children's Bureau was charged with investigating causes of infant mortality, accidents, and childhood diseases (Kotch, 2005). A century later, pediatric health care providers now address a much broader array of conditions that can benefit from preventive services, including developmental disorders, depression, violence, drug and alcohol abuse, and obesity (American Academy of Pediatrics, 2001). With advances in understanding disease risk and causation, pediatric health care providers can also focus on risk factors associated with diseases such as diabetes, heart disease, cancer, and stroke.

Children and adolescents have unique health care needs. The spectrum of health conditions that affect children is different from adults and changes with age. Developmental disorders, such as speech and language delay, intellectual disability, and autism, first appear in early childhood. In addition, many of the health conditions that are prevalent in adults develop in childhood, potentially providing an early window for prevention of many common chronic diseases.

Developing age-appropriate recommendations for preventive services for children and adolescents is especially important because children depend on adults for decisionmaking and the delivery of health care services. Likewise, because children depend on others, poor health in children can impair family functioning. Children differ from adults in other ways. For example, young children are more vulnerable to some toxins than adults, and adolescents are still developing the skills needed to avoid risky behaviors. With more years of life ahead, children have greater potential for environmental exposures and lifestyle behaviors that will affect their future mental and physical functioning. Children and adolescents are also remarkably resilient, even when they experience health problems.

The Task Force supports a broad perspective on the health of children and adolescents, as proposed in the 2004 Institute of Medicine report "Children's Health, Nation's Wealth":

> "*[Children's health has] three distinct but related domains: 1.) health conditions, a domain that deals with disorders or illnesses of body systems; 2.) functioning, which focuses on the manifestations of individual health in daily life; and 3.) health potential, which captures the development of health assets … competence, capacity, and developmental potential." (34-35)*

> "*Indicators of a healthy 6-week-old, 6-month-old, and 6-year-old will be different. Given these dynamic elements, in general, it is necessary to look at changes over time, rather than a point assessment to distinguish among different levels of health." (22-23)*

Measuring the health experience of children is challenging. Young children are unable to respond to questions about their health, and older children may not have the memory or cognitive skills to answer complex questions. Thus, health care providers must often rely on parent report, physical examination, or laboratory measures. Another challenge is that many health-related issues faced by children do not lead to a serious threat to their health until several years later. Therefore, assessment of the benefit of preventive services often relies on surrogate outcomes (e.g., tobacco use may lead to cancer, alcohol use to motor vehicle collisions, and dental caries to tooth loss). In addition, mental health disorders and substance use starting in adolescence can continue for decades. The lack of data from intervention studies and the difficulty of measuring the current or future health of children and adolescents has resulted in many I statements from the Task Force, which can be frustrating for pediatric practitioners and families seeking concrete advice for common clinical issues (Melnyk, Grossman, Chou et al., 2012).

This report summarizes evidence gaps for high-priority prevention issues in childhood and adolescence, for which many of the Task Force's most current assessment is an I statement (see **Table 3**). Filling these gaps in knowledge will allow the Task Force to revisit some of these recommendations, with the expectation that more definitive recommendations will follow. For example, new evidence on intervention effectiveness allowed the Task Force to change its recommendations for two topics from an I (insufficient evidence) to a B (recommended) (screening for childhood obesity and screening for newborn hearing loss). Implementation of these recommendations in practice are anticipated to improve both quality and length of life.

Table 3. USPSTF Recommendations for Children and Adolescents

Topic	Recommendation
Alcohol Misuse: Screening and Behavioral Counseling	I statement for adolescents
Cervical Cancer: Screening	D for adolescent females
Child Maltreatment: Behavioral Interventions	I statement for children
Chlamydia and Gonorrhea: Screening	B for sexually active adolescent females I statement for adolescent males
Dental Caries: Preventive Medication	B for infants and children (age ≤ 5 years)
Dental Caries: Screening	I statement for infants and children (age ≤ 5 years)
Depression: Screening	I statement for children B for adolescents
Developmental Dysplasia of the Hip: Screening	I statement for infants
Drug Use, Illicit or Nonmedical: Behavioral Counseling	I statement for children and adolescents
Genital Herpes Simplex: Screening	D for adolescents
Gonococcal Ophthalmia Neonatorum: Preventive Medication	A for newborns
Hearing Loss: Screening	B for newborns
Hepatitis B: Screening	B for high-risk adolescents
HIV: Screening	A for adolescents (age ≥ 15 years) A for high-risk adolescents (age <15 years)

Table 3. USPSTF Recommendations for Children and Adolescents (con't)

Topic	Recommendation
Hyperbilirubinemia: Screening	I statement for infants
Hypertension, Primary: Screening	I statement for children and adolescents
Hypothyroidism, Congenital: Screening	A for newborns
Iron Deficiency Anemia: Screening	I statement for infants
Iron Deficiency Anemia: Preventive Medication	B for high-risk infants I statement for average-risk infants
Lead: Screening	D for average-risk children I statement for high-risk children
Lipid Disorders: Screening	I statement for children and adolescents
Obesity: Screening	B for children and adolescents (age ≥ 6 years)
Phenylketonuria: Screening	A for newborns
Sexually Transmitted Infections: Behavioral Counseling	B for sexually active adolescents
Scoliosis, Idiopathic: Screening	D for adolescents
Sickle Cell Disease: Screening	A for newborns
Skin Cancer: Behavioral Counseling	B for children and adolescents (age ≥ 10 years)
Speech and Language Delay and Disorders: Screening	I statement for children
Suicide Risk: Screening	I statement for adolescents
Testicular Cancer: Screening	D for adolescent males
Tobacco Use: Behavioral Interventions	B for children and adolescents
Visual Impairment: Screening	B for children (ages 3–5 years) I statement for children (age <3 years)

The Task Force has published three articles on issues related to prevention in children and adolescents (see **Table 4**). The first article describes the lack of evidence on preventive services for children and how the USPSTF addresses these gaps in the evidence when making a recommendation for this population. The second article describes how the USPSTF evaluated lipid screening in children and adolescents and why the USPSTF's recommendation differed from that of other professional bodies. The third article briefly describes the purpose and processes of the USPSTF in creating recommendations for children and adolescents.

Table 4. Task Force Papers on the Health and Health Care of Children and Adolescents

Title	Overview
Melnyk BM, Grossman DC, Chou R, Mabry-Hernandez I, Nicholson W, DeWitt TG, Cantu AG, Flores G; U.S. Preventive Services Task Force. USPSTF perspective on evidence-based preventive recommendations for children. *Pediatrics*. 2012;130:e399-407.	Commentary that describes the lack of evidence on preventive services for children and how the USPSTF addresses these gaps in the evidence when making a recommendation for this population.
Grossman DC, Moyer VA, Melnyk BM, Chou R, DeWitt TG; U.S. Preventive Services Task Force. The anatomy of a U.S. Preventive Services Task Force recommendation: lipid screening for children and adolescents. *Arch Pediatr Adolesc Med*. 2011;165:205-10.	Commentary that describes how the USPSTF evaluated lipid screening in children and adolescents and why the USPSTF's recommendation differed from that of other professional bodies.
Moyer VA, Nelson D; U.S. Preventive Services Task Force. Pediatricians and the U.S. Preventive Services Task Force: a natural partnership to enhance the health of children. *Pediatrics*. 2008;122:174-6.	Commentary that briefly describes the purpose and processes of the USPSTF in creating recommendations for children and adolescents.

Although important gaps in evidence exist across all age groups, there are notable gaps regarding the benefit of preventive services for adolescents, such as screening for illegal drug use, suicide risk, and alcohol misuse. Adolescents can be a difficult population to study because they have a wide range of physical, behavioral, and cognitive development and differ in the degree to which they are responsible for their own health. Health findings from adults are often generalized to adolescents; however, such generalizations can be wrong.

"As pediatric nurse practitioners, our 7,700 members have made it their life's mission to care for children and adolescents. We thank the U.S. Preventive Services Task Force for undertaking the difficult yet necessary task of examining the high-priority evidence gaps in the research, and appreciate its consistent efforts to make evidence-based recommendations that benefit children and adolescents across the United States."

– National Association of Pediatric Nurse Practitioners (NAPNAP)
Mary Chesney, PhD, RN, CPNP, President

V. HIGH-PRIORITY EVIDENCE GAPS FOR CLINICAL PREVENTIVE SERVICES: FOCUS ON CHILDREN AND ADOLESCENTS

The Task Force issues evidence-based recommendations about clinical preventive services in order to improve the health of all Americans. When implemented appropriately and effectively, Task Force recommendations can improve the health of the Nation. However, significant gaps in key areas of knowledge limit the full realization of these population health benefits.

By requesting this annual report, Congress has recognized the opportunity for new research to provide the necessary evidence base upon which the USPSTF can build more extensive recommendations. Congress has specifically charged the Task Force with identifying and reporting each year on areas where current evidence is insufficient to make a recommendation on the use of a clinical preventive service, with special attention to those areas where evidence is needed to make recommendations for specific populations and age groups.

Since 2011, the Task Force has prepared for Congress reports on critical evidence gaps in the field of clinical preventive services (see **Appendices A, B, and C**). The Task Force encourages Congress to continue promoting research in these areas. In 2013, the report focused on prevention in older adults. In this annual report, the USPSTF has prioritized evidence gaps related to the care of children and adolescents (see **Table 5**). Targeted research in the following areas will likely result in important new medical knowledge and recommendations about clinical preventive services that will improve the health of children and adolescents.

Table 5. Key Evidence Gaps for Clinical Preventive Services in Children and Adolescents

Condition	Key Evidence Gaps
Mental health conditions and substance abuse	
Major depressive disorder	1. Screening for and treatment of major depressive disorder in children age <11 years. 2. Prevalence of major depressive disorder in children. 3. Effects of screening for and treatment of major depressive disorder on long-term health outcomes.
Suicide risk	1. Accuracy and effectiveness of screening tests. 2. Effect of treatment on health outcomes in screen-detected patients. 3. Screening in high-risk ethnic groups and populations.
Tobacco use	1. Interventions to prevent use of other tobacco products, such as smokeless or dissolvable tobacco. 2. Effectiveness of interventions among diverse populations of children and adolescents.
Alcohol use	1. Effectiveness of screening and behavioral counseling in adolescents. 2. Effectiveness of primary care-based interventions, such as tailored counseling or social media-based messages. 3. Effectiveness of interventions for children and adolescents with different risk factors and from diverse populations.

Table 5. Key Evidence Gaps for Clinical Preventive Services in Children and Adolescents (con't)

Condition	Key Evidence Gaps
Illicit drug use	1. Role of primary care professionals in preventing and reducing drug use in children and adolescents. 2. Effectiveness of primary care-based interventions, including tailored counseling and behavioral counseling with and without parental involvement. 3. Interventions that use social media, cell phones, and the Internet.
Obesity and Cardiovascular Health	
Obesity	1. Effectiveness of specific components of behavioral interventions. 2. Long-term weight loss maintenance and possible harms of treatment. 3. Weight management in diverse populations of children and adolescents. 4. Behavioral interventions in younger children (age ≤ 5 years) and overweight children.
Lipid disorders	1. Effects of treatment on health outcomes in childhood or adulthood. 2. Long-term harms of lipid-lowering medications in children and adolescents.
High blood pressure	1. Accuracy and reliability of blood pressure screening tools among children and adolescents of different ages and characteristics. 2. Relationship between elevated blood pressure in childhood and hypertension in adulthood. 3. Effectiveness of drug and lifestyle interventions and effects of treatment on future adult hypertension and cardiovascular disease. 4. Medication harms.
Behavior and Development	
Speech and language delay and disorders	1. Prevalence of speech and language delays and disorders. 2. Effects of screening on outcomes.
Infectious Diseases	
Dental caries	1. Accuracy of risk assessment tools to identify children who are most likely to benefit from preventive interventions. 2. Benefits and harms of preventive interventions in high-risk children. 3. Effectiveness of family education about best oral health practices.

Table 5. Key Evidence Gaps for Clinical Preventive Services in Children and Adolescents (con't)

Condition	Key Evidence Gaps
Sexually transmitted infections	1. Long-term harms of HIV antiretroviral therapy. 2. Interventions to prevent sexually transmitted infections in low-risk adolescents and high-risk adolescent males. 3. Effectiveness of screening strategies to identify high-risk adolescents.
Cancer Prevention	
Skin cancer	1. Effective interventions in primary care for young children age <10 years and their families. 2. Development of tools to encourage behavior change.
Cervical cancer	1. Overall effect of human papillomavirus vaccination on cervical cancer.
Injury and Child Maltreatment	
Child maltreatment and neglect	1. Screening strategies to identify children who are at risk or currently experiencing abuse or neglect. 2. Prevention of abuse in older children.
Vision Disorders	
Visual impairment	1. Benefits and harms of vision screening in children age <3 years. 2. Validity and reliability of screening tests for amblyopia or its risk factors throughout childhood.

Mental Health Conditions and Substance Abuse

Depression is a leading cause of disability in the United States. Children and adolescents with major depressive disorder (MDD) can have impaired academic performance and interpersonal relationships, and it is strongly associated with adult depression; other mental disorders; and increased risk for suicidal ideation, suicide attempts, and suicide death. MDD is common; approximately 8% of adolescents report having symptoms of MDD in the past year. In its recommendation, the USPSTF identified several critical research gaps, including the need for MDD screening and treatment studies in children younger than age 11 years and high-quality, long-term studies in adolescents on treatment efficacy, safety, and acceptability. Large, good-quality trials are needed to better understand the effects of MDD screening on intermediate and long-term health outcomes. Studies on whether screening increases the number of children and adolescents with a depression diagnosis who are treated or referred to treatment, as well as their willingness to get treatment, would be useful. Studies are needed that include psychotherapy and combined treatments and focus on MDD alone, as well as the benefits and harms of other treatments (e.g., medications other than selective serotonin reuptake inhibitors and complementary or alternative treatments).

Suicide is the third leading cause of death among youth ages 10 to 24 years. The greatest risk factor for suicide is having a mental health disorder, such as depression, schizophrenia, posttraumatic stress disorder, or drug or alcohol abuse. Other risk factors include childhood trauma; family history of suicide; being discriminated against for being lesbian, gay, bisexual, or transgender; and having access to the means of killing oneself. A history of being bullied or having a chronic health condition may also increase a young person's risk for suicide. More research is needed on the effectiveness of currently available screening tests, particularly for adolescents at average risk for suicide. Research comparing the benefits of screening all adolescents versus just screening specific populations is also needed. Studies are needed to understand the effects of treatment on people of all ages who have been identified through screening. Because some ethnic groups, such as Native Americans and Hispanics, may be at higher risk than others, additional research is needed to understand whether screening and treatment designed just for these groups improves its effectiveness. Investigating ways to link clinical and community resources may also lead to other ways of helping people at risk for suicide.

Tobacco use is the main cause of preventable illness and death in the United States, resulting in 443,000 deaths each year. Nearly all tobacco use begins during youth and young adulthood. There are few high-quality studies on primary care behavioral interventions to prevent or stop tobacco use in youth. More research that replicates promising interventions, looks at the effectiveness and feasibility of specific components of interventions in primary care practice, and includes longer-term outcomes are needed. More research is needed on interventions to prevent use of other tobacco products, especially e-cigarettes, smokeless tobacco, and dissolvable tobacco. Research is also needed on how interventions can be more effective among more diverse groups of children and adolescents, both in terms of demographic characteristics and the various stages of initiation or readiness to quit. Research is needed on the effectiveness of clinician referrals to tailored, computer-based or electronic media channels that deliver messages about not starting or quitting smoking.

Alcohol misuse among adolescents is a leading public health problem in the United States and is associated with more than 85,000 preventable deaths each year. It also contributes significantly to injury, disability, and death from falls, drowning, fires, motor vehicle crashes, murders, and suicides. Alcohol misuse often starts in adolescence and can have a significant impact on life and productivity and lead to serious lifelong mental and physical conditions. Because of the limited evidence, the Task Force is unable to recommend whether or not to screen and counsel adolescents on alcohol misuse. There is a critical need for high-quality studies that address the effectiveness of screening and behavioral counseling for alcohol misuse in this population. Needed research includes determining the effectiveness of primary care-based interventions, such as tailored counseling and interventions that use social media. Studies that address the effectiveness of interventions for children and adolescents with different risk factors and from diverse populations would also be valuable.

About one in 10 adolescents ages 12 to 17 years use illegal drugs or prescription drugs for nonmedical reasons. The use of illegal and prescription drugs is associated with poor school performance, dropping out of school, and other risky behaviors (e.g., driving under the influence, unsafe sex, and violence), and puts children and adolescents at increased risk for developing a substance abuse disorder. Illegal drug use also contributes to three of the leading causes of death in adolescents—motor vehicle crashes, murders, and suicide. However, evidence on the effects of behavioral interventions on illegal drug use in adolescents is limited. High-quality studies that focus on the role of primary care professionals in preventing children and adolescents from starting to use drugs and reducing use among those who are already using are needed. Research is needed on brief, primary care-based interventions, including tailored counseling based on screening results. Evidence is also needed on interventions that use social media, cell phones, and the Internet. Additional needed areas of research include determining the effectiveness of interventions for children and adolescents with different risk factors and from diverse populations, as well as evaluating the effectiveness of behavioral counseling interventions with and without parental involvement. Interventions that address illegal or prescription drug use in the context of other substances, such as tobacco and alcohol, would be valuable. Research to develop and validate tools to measure current and past substance use is needed.

Obesity and Cardiovascular Health

Obesity rates have risen dramatically in recent decades, and currently 12% to 18% of children and adolescents ages 2 to 19 years are obese. These children and adolescents have an increased risk for type 2 diabetes, asthma, and nonalcoholic fatty liver disease and are more likely to have cardiovascular risk factors. They may also experience more mental health and psychological issues, such as depression and low self-esteem, than other children. The USPSTF recommends screening for obesity in children age 6 years or older and offering or referring those who are obese to comprehensive behavioral interventions. However, several important areas for further research remain. Though there is some evidence that behavioral interventions work, more research is needed to determine which specific components of these interventions are effective. Longer-term studies are needed to look at maintaining weight loss and possible harms of treatment. More studies are needed that address weight management in minority children and adolescents, behavioral interventions in younger children (age 5 years or younger), and behavioral interventions in children who are overweight but not obese.

Abnormal lipid levels in childhood and adolescence have been strongly associated with coronary heart disease in adulthood, and early diagnosis and treatment in certain populations of adults can prevent the disease. As a result, much attention has been given to screening for lipid disorders (such as dyslipidemia) at young ages. There is good evidence that children with dyslipidemia are at risk for developing lipid disorders as adults. However, the clinical health benefits seen in adults who are treated for dyslipidemia have not been studied in children, making the role of screening in children uncertain. The USPSTF found important gaps in the evidence on screening for lipid disorders in children and adolescents. Establishing the benefits of treatment (diet, exercise, and medications) on clinical health outcomes in childhood or into adulthood is a critical research gap. There is also a need to study the long-term harms of lipid-lowering medications in children and adolescents. In addition, there may be merit in distinguishing genetic lipid disorders, such as familial hypercholesterolemia, from the more common conditions associated with moderately elevated low-density lipoprotein cholesterol.

The prevalence of high blood pressure (primary hypertension) in children and adolescents has increased over the past several decades, probably due to the increase in childhood obesity. The Task Force did not find enough evidence to recommend whether or not children and adolescents should be screened for high blood pressure to prevent cardiovascular disease in childhood or adulthood. There are several critical evidence gaps that need to be addressed in order to better understand the potential benefits of screening in childhood and adolescence. More evidence is needed on the accuracy and reliability of blood pressure screening tools among children and adolescents of different ages and characteristics (e.g., children who are obese), as well as the effectiveness of different types of devices to measure blood pressure. More information is needed on the relationship between childhood blood pressure and adult hypertension.

Research is critically needed on the effectiveness of drug and lifestyle interventions to reduce blood pressure in children with primary hypertension and the effects of treatment on future adult hypertension and cardiovascular disease. Research on medication harms, measures of long-term compliance with treatment, and the effectiveness of individual components of multifactorial interventions is also important.

Behavior and Development

Childhood speech and language delay includes a broad set of disorders. There is some evidence that young children with speech and language delay may be at increased risk for learning disabilities. In its recommendation, the USPSTF identified several evidence gaps, including a critical need for studies on whether routine screening for speech and language delay or disorders in young children in primary care leads to improved speech, language, or other outcomes. Research is needed to determine the feasibility of speech- and language-specific screening as part of routine developmental screening, as well as the potential harms of screening and intervention. More information is needed about the prevalence of speech and language delay and disorders in young children in the United States. Although some risk factors for speech and language delay and disorders have been reported, there is little information about which patient characteristics can be used for risk stratification or assessment. More information is also needed about specific factors associated with intervention effectiveness.

Infectious Diseases

Dental caries, or tooth decay, is an infectious process involving the breakdown of tooth enamel. It is the most common chronic disease in children in the United States and is increasing in prevalence among young children ages 2 to 5 years. Almost half of children ages 2 to 11 years have dental caries in their primary (baby) teeth. Many children with caries do not receive timely treatment. If left untreated, it can lead to pain and loss of teeth and negatively affect a child's growth, speech, and appearance. Many young children do not visit the dentist, but often see primary care clinicians. Studies are needed to evaluate risk assessment tools that will help clinicians more accurately identify those children who are most likely to benefit from preventive oral health interventions. A better understanding of the benefits and harms of preventive oral health interventions in racial and ethnic minority children is needed, since they are at higher risk for tooth decay than white children. More research is also needed to determine the effectiveness of clinicians' efforts to educate parents and caregivers about keeping their children's teeth healthy at home.

HIV is a critical public health problem and, despite recent medical advances, remains a devastating disease for the 50,000 people who contract it each year in the United States. Young people ages 15 to 24 years account for 42% of new HIV infections among people age 15 years or older. Although there is no cure for HIV infection, treatment is vitally important to reducing transmission of the disease and to helping people who are already infected live healthier and longer lives. More research is needed on the long-term harms of HIV antiretroviral therapy, including risks for cardiovascular and kidney disease. Studies on the effectiveness of antiretroviral therapy, adherence to treatment, and behavioral counseling in reducing transmission of HIV among high-risk groups, including young people, could help guide prevention and treatment strategies. More research is needed to evaluate the benefits and harms of different HIV screening strategies and ideal intervals for testing different populations. Ways to increase access to HIV testing for young people is needed. Research is also needed on how well patients accept and use different screening strategies and how different testing methods affect whether people are linked to and receive appropriate care.

Since many studies on counseling interventions are in sexually active girls, research is needed on interventions to prevent other types of sexually transmitted infections (STI) in sexually active boys and in adolescents who are not yet sexually active. More research is needed on the effectiveness of low-intensity interventions that are more practical for the typical primary care setting. In addition, research is also needed to understand the effectiveness of screening sexually active adolescent males in reducing the spread of chlamydia and gonorrhea, as well as cotesting for other STIs and different screening intervals. Studies providing data about the potential harms of screening would also be valuable.

Cancer Prevention

Although childhood cancer is relatively rare, some cancer risks in adulthood may be prevented if addressed during childhood and adolescence. Skin cancer is the most common cancer in the United States and more than 2 million Americans are diagnosed with it each year. Sun exposure during childhood and adolescence can lead to an increased risk for skin cancer later in life. There is limited research on effective interventions in primary care for children younger than age 10 years and their families. Research is also needed to continue developing tools to encourage behavior change.

Deaths from cervical cancer have decreased dramatically in the United States since the implementation of widespread cervical cancer screening. Infection with the human papillomavirus (HPV) is associated with nearly all cases of cervical cancer. Many adolescents now receive the HPV vaccination as part of their well-child care. The overall effect of HPV vaccination on cervical cancer is not yet known and is a key evidence gap that should be addressed.

Injury and Child Maltreatment

Child maltreatment includes physical, sexual, and emotional abuse, as well as neglect. It is a serious problem that can result in lifelong negative consequences for victims. Most child maltreatment is in the form of neglect (approximately 78%), and most deaths occur in children younger than age 4 years (approximately 80%). In 2011, approximately 680,000 children were victims of maltreatment and approximately 1,570 children died of such treatment. The USPSTF recognizes the importance of this grave health problem and has identified a number of areas that should be prioritized for research. Additional research is needed to determine effective ways for clinicians to identify children who are at risk or currently experiencing abuse or neglect. There is a lack of research on the prevention of abuse of older children. The relationship between harsh punishment (such as spanking) and abuse needs to be further explored, as does the relationship between intimate partner violence and child maltreatment. There is a lack of research to confirm that the benefits reported in some intervention studies are effective and can be expanded. Finally, it is important to understand whether there are unintended harms that result from screening, risk assessment, and interventions. More information is needed on how best to measure health outcomes related to child abuse and neglect.

Vision Disorders

Amblyopia is the most common cause of visual impairment in children. Approximately 2% to 4% of preschool-aged children have amblyopia (also known as lazy eye), a change in the visual neural pathway in the developing brain that can lead to permanent vision loss in the affected eye. Identification of vision impairment before school entry could help identify children who may benefit from early interventions to correct or improve vision. However, the Task Force is unable to make a recommendation for vision screening in children younger than age 3 years because of several gaps in the evidence. Well-designed studies are needed to identify the optimal age at which to start screening, as well as optimal screening methods and frequency. Longitudinal studies that link screening tests to the identification of children with visual impairments are needed. More studies are needed to determine the most favorable combinations of screening tests, as well as the most effective treatment for amblyopia, including treatment duration. There is also a need for studies that examine the benefits and harms of vision screening in children younger than age 3 years and the long-term benefits and harms of preschool vision screening on other outcomes, such as quality of life, school performance, and labeling or anxiety.

"At the NICHQ (National Institute of Children's Health Quality), we have worked for more than a decade to help health care organizations and professionals improve the health and well-being of children and adolescents. Starting and staying healthy throughout childhood and establishing and maintaining healthy lifestyles from a young age are particularly important as we learn how instrumental childhood and adolescence is in shaping long-term health outcomes. Before founding NICHQ, I was a proud member of the U.S. Preventive Services Task Force. Its dedicated scientific analyses and commitment to ethical practices help organizations like NICHQ promote system-level health improvements for all Americans."

– National Institute for Children's Health Quality (NICHQ)
Charles J. Homer, MD, MPH, Chief Executive Officer and President

VI. NEXT STEPS FOR THE USPSTF IN 2015

In the coming 12 months, it is expected that the USPSTF will:

- Continue its work on more than 30 topics that are in progress
- Begin work on two new topics nominated for consideration through the public topic nomination process
- Launch its new, redesigned Web site
- Post 12 draft research plans and 14 draft recommendation statements and evidence reports for public comment
- Publish 10 final recommendation statements
- Continue to coordinate closely with the CPSTF to improve the Nation's ability to benefit from the full spectrum of prevention
- Prepare a fifth annual report for Congress on high-priority evidence gaps in the field of clinical preventive services for women

VII. CONCLUSION

Preventive services can improve health outcomes during childhood and have lasting impact throughout adulthood. Weighing the benefits and harms of specific preventive services can be difficult because of the lack of data from clinical research trials and the challenges of assessing health benefits in children and adolescents, especially for those outcomes that might not occur for years. The USPSTF has identified certain preventive services that can benefit all children, including fluoride varnish, vision screening in preschool-aged children, and education and counseling on the dangers of tobacco use. The USPSTF has also identified preventive services for which the balance of benefits and harms is unclear. Future work to resolve these evidence gaps will improve the quality and effectiveness of preventive services for children and adolescents. Topics needing further research include screening and counseling for alcohol misuse, screening for suicide risk, screening for speech and language delay or disorders, and interventions to prevent child maltreatment. The Task Force has also identified opportunities for expanding knowledge on preventive services for adolescents.

The USPSTF appreciates the opportunity to report on its activities, to highlight critical evidence gaps related to children and adolescents, and to recommend important new areas for research in clinical preventive services. The volunteer members of the Task Force look forward to their ongoing work to improve the health of all Americans.

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APPENDICES

APPENDIX A: SUMMARY OF THIRD ANNUAL REPORT TO CONGRESS ON HIGH-PRIORITY EVIDENCE GAPS FOR CLINICAL PREVENTIVE SERVICES

The Patient Protection and Affordable Care Act of 2010 charged the USPSTF with making an annual report to Congress that identifies gaps in the evidence base and recommends priority areas that deserve further examination.

In its first and second annual reports to Congress, the Task Force identified screening tests, behavioral interventions, and preventive medications with significant evidence gaps deserving further research. Given the expected pace of research, it is too soon to expect that many of the gaps identified in the USPSTF's first two annual reports would have been addressed. The USPSTF, therefore, encourages Congress to continue promoting research to address these gaps.

In the third annual report, issued in November 2013, the USPSTF prioritized evidence gaps related to the care of older adults. More research in these areas would likely result in important new recommendations that will help improve the health and health care of older Americans.

High-Priority Evidence Gaps for Clinical Preventive Services: Focus on Older Adults

1. Screening for Cognitive Impairment and Dementia
2. Screening for Physical and Mental Well-Being of Older Adults
3. Preventing Falls and Fractures
4. Screening for Vision and Hearing Problems
5. Avoiding the Unintended Harms of Medical Procedures and Testing in Older Adults

The USPSTF will continue to independently evaluate the evidence on clinical preventive services to empower health care professionals, health care systems, and the American people to make informed decisions about their health and health care.

The USPSTF believes that identifying these evidence gaps and prioritizing these areas for research will inspire public and private researchers to collaborate and target their efforts to generate new knowledge and fill current evidence gaps.

To view the full report, visit: **http://www.uspreventiveservicestaskforce.org/Page/Name/third-annual-report-to-congress-on-high-priority-evidence-gaps-for-clinical-preventive-services**.

APPENDIX B: SUMMARY OF SECOND ANNUAL REPORT TO CONGRESS ON HIGH-PRIORITY EVIDENCE GAPS FOR CLINICAL PREVENTIVE SERVICES

The Patient Protection and Affordable Care Act of 2010 charged the USPSTF with making an annual report to Congress that identifies gaps in the evidence base and recommends priority areas that deserve further examination. In its second annual report, issued November 2012, the USPSTF identified specific topics from its previous year of work as having important evidence gaps that may be addressed through research. More research in these areas would likely result in important new recommendations that will help to improve the health of Americans.

Clinical Preventive Services That Deserve Further Research:

1. Screening for Chronic Kidney Disease
2. Screening for Cervical Cancer With Human Papillomavirus (HPV) Tests
3. Screening for Prostate Cancer

In the Affordable Care Act, Congress also requested that the USPSTF identify evidence gaps that prevent it from making recommendations for specific populations or age groups. In this report, the USPSTF highlighted three key areas.

Evidence Gaps Relating to Specific Populations and Age Groups That Deserve Further Research:

1. Screening for Chronic Kidney Disease in African American Adults
2. Screening for Prostate Cancer in African American Men
3. Counseling About Sun-Protective Behaviors in Families With Children Under Age 10 to Reduce the Risk for Skin Cancer

The USPSTF believes that identifying these evidence gaps and prioritizing these areas for research will inspire public and private researchers to collaborate and target their efforts to generate new knowledge and fill current evidence gaps.

To view the full report, visit: **http://www.uspreventiveservicestaskforce.org/Page/Name/second-annual-report-to-congress-on-high-priority-evidence-gaps-for-clinical-preventive-services.**

APPENDIX C: SUMMARY OF FIRST ANNUAL REPORT TO CONGRESS ON HIGH-PRIORITY EVIDENCE GAPS FOR CLINICAL PREVENTIVE SERVICES

The Patient Protection and Affordable Care Act of 2010 charged the USPSTF with making an annual report to Congress to identify gaps in the evidence base and recommend priority areas that deserve further examination. The first annual report from the USPSTF was delivered to Congress in October 2011. In this report, the USPSTF identified the following high-priority evidence gaps that can be addressed through targeted research:

Screening Tests That Deserve Further Research:

1. Screening for Coronary Heart Disease With New and Old Technologies
2. Screening for Colorectal Cancer With New Modalities
3. Screening for Hepatitis C
4. Screening for Hip Dysplasia in Newborns

Behavioral Intervention Research Topics That Deserve Further Research:

1. Moderate- to Low-Intensity Counseling for Obesity
2. Interventions in Primary Care to Prevent Child Abuse and Neglect
3. Screening for Illicit Drug Use in Primary Care

In the Affordable Care Act, Congress also requested that the USPSTF identify evidence gaps that prevent it from making recommendations that target specific populations or age groups. In its 2011 report, the USPSTF highlighted the following key areas.

Evidence Gaps Relating to Specific Population and Age Groups That Deserve Further Research:

1. Screening for Osteoporosis in Men
2. Screening and Treatment for Depression in Children
3. Screening and Counseling for Alcohol Misuse in Adolescents
4. Aspirin Use to Prevent Heart Attacks and Strokes in Adults Age 80 and Older

By identifying these evidence gaps and prioritizing these areas for research, the USPSTF hopes to have inspired public and private researchers to focus their efforts in these areas so that the USPSTF can develop definitive recommendations on these important topics in the near future.

To view the full report, visit: **http://www.uspreventiveservicestaskforce.org/Page/Name/first-annual-report-to-congress-on-high-priority-evidence-gaps-for-clinical-preventive-services.**

APPENDIX D: 2014 MEMBERS OF THE USPSTF

Michael L. LeFevre, M.D., M.S.P.H. (Chair)

Dr. LeFevre is vice chair in the Department of Family and Community Medicine at the University of Missouri School of Medicine, Columbia, Missouri. He is the director of clinical activities for the department and a practicing family physician. He was the chief medical information officer at University of Missouri Health Care during the decade-long system-wide implementation of an inpatient and outpatient electronic health record. He has served on the Commission on Clinical Policies and Research of the American Academy of Family Physicians and was a member of the JNC 8 panel charged with developing national guidelines for treatment of hypertension. Dr. LeFevre is a researcher, a published author, and consultant, and has been invited to give many presentations across the country.

Albert L. Siu, M.D., M.S.P.H. (Co-Vice Chair)

Dr. Siu is the Ellen and Howard C. Katz Mount Sinai Health System chair and professor of the Brookdale Department of Geriatrics and Palliative Medicine at the Icahn School of Medicine at Mount Sinai. He is also director of the Geriatric Research, Education, and Clinical Center at the James J. Peters Veterans Affairs (VA) Medical Center, and has served as deputy commissioner of the New York State Department of Health. Dr. Siu serves as a senior associate editor of *Health Services Research*. His research focuses on the measurement and improvement of functional outcomes in the elderly.

Kirsten Bibbins-Domingo, Ph.D., M.D. (Co-Vice Chair)

Dr. Bibbins-Domingo is the Lee Goldman, MD, endowed chair in medicine and professor of medicine and of epidemiology and biostatistics at the University of California, San Francisco (UCSF). She is a general internist and attending physician at San Francisco General Hospital and the director of the UCSF Center for Vulnerable Populations at San Francisco General Hospital. Dr. Bibbins-Domingo's research has focused on the epidemiology of cardiovascular diseases; race, ethnic, and income disparities in health; and clinical and public health interventions aimed at chronic disease prevention.

Linda Ciofu Baumann, Ph.D., R.N., A.P.R.N.

Dr. Baumann is professor emerita at the University of Wisconsin-Madison School of Nursing, affiliate faculty at the University of Wisconsin School of Medicine and Public Health, and a past president of the Society of Behavioral Medicine. A certified adult nurse practitioner, Dr. Baumann is an experienced researcher and consultant, and has spoken at medical conferences across the country and around the world. She is also a widely-published author, and has co-authored two books, one of which—"Advanced Assessment and Clinical Diagnosis in Primary Care"—received the *American Journal of Nursing's* Book of the Year award in advanced practice nursing in 2003. The book is now in its 5th edition. Dr. Baumann's areas of expertise are global public health, chronic disease management, and behavioral health promotion.

Susan J. Curry, Ph.D.

Dr. Curry is the dean of the College of Public Health and Distinguished professor of health management and policy at the University of Iowa. Dr. Curry's many professional activities include past service as vice chair of the Board of Directors of the American Legacy Foundation, member of the National Cancer Institute's board of scientific advisors, and associate editor for clinical practice for the *American Journal of Preventive Medicine*. Dr. Curry's research focuses on disease prevention and behavioral risk factor modification with a primary focus on tobacco use. Dr. Curry's research in tobacco includes studies of motivation to quit smoking, randomized trials of promising smoking cessation and prevention interventions, evaluations of the use and cost effectiveness of tobacco cessation treatments under different health insurance plans, and health care costs and utilization associated with tobacco cessation.

Karina W. Davidson, Ph.D., M.A.Sc.

Dr. Davidson is a professor of medicine and psychiatry and the director of the Center for Behavioral Cardiovascular Health at Columbia University Medical Center. She is also a psychologist in the Department of Psychiatry at New York Presbyterian Hospital/Columbia University Medical Center. Dr. Davidson's research focuses on behavioral and biopsychosocial influences on cardiovascular disease.

Mark Ebell, M.D., M.S.

Dr. Ebell is a professor of epidemiology and biostatistics at The University of Georgia with a background in family medicine. An author of more than 300 peer-reviewed publications and author and co-editor of seven books, Dr. Ebell is currently editor-in-chief of *Essential Evidence* and the deputy editor of *American Family Physician*. His expertise and research interests include primary care research, point-of-care decision support, health information technology for the primary care setting, evidence-based medicine, and systematic reviews of screening and diagnostic tests.

Francisco A.R. García, M.D., M.P.H.

Dr. García is the director and chief medical officer of the Pima County Department of Health in Tucson, Arizona. He is a fellow of the American Congress of Obstetricians and Gynecologists and a diplomat of the American Board of Obstetrics and Gynecology. He is also the distinguished outreach professor of public health at the University of Arizona. Dr. García is a member of the Institute of Medicine Roundtable on Health Equity and the Elimination of Health Disparities. Prior to joining the Pima County Department of Health, Dr. García served in a variety of roles at the University of Arizona, including director of the University of Arizona Center of Excellence in Women's Health, the Arizona Hispanic Center of Excellence, and the Cancer Disparities Institute of the Arizona Cancer Center. He was also chair of the Section of Family and Child Health and director of the Division of Gynecology and Obstetrics.

Matthew W. Gillman, M.D., S.M.

Dr. Gillman is a professor and director of the Obesity Prevention Program in the Department of Population Medicine at Harvard Medical School and Harvard Pilgrim Health Care Institute. He is also a professor in the Harvard School of Public Health Department of Nutrition. His research interests include early-life prevention of childhood and adult diseases, particularly obesity, diabetes, asthma, and cardiovascular disease; individual and policy-level interventions to prevent obesity and its consequences; and childhood cardiovascular risk factors. Formerly an internal medicine and pediatrics primary care physician, Dr. Gillman's current clinical work is in preventive cardiology in children at Boston Children's Hospital.

Jessica Herzstein, M.D., M.P.H.

Dr. Herzstein, a board-certified specialist in preventive and internal medicine, is currently an independent consultant in occupational, environmental, and preventive health. She also teaches and conducts research in clinical preventive services, with a focus on addressing behavior change in the context of chronic disease prevention. She recently became an advisor to a major public-private partnership in Mexico that aims to reduce obesity and prevent noncommunicable diseases. Dr. Herzstein has more than 20 years of experience in teaching, research, patient care, and health care program design and evaluation.

Alex R. Kemper, M.D., M.P.H., M.S.

Dr. Kemper is a board-certified pediatrician and professor of pediatrics at Duke University Medical School. He serves as the associate division chief for research in the Division of Children's Primary Care at Duke University. His clinical and research interests include improving the quality of care that children receive by strengthening the linkages between primary care, specialty care, and public health services. Dr. Kemper is also the deputy editor of *Pediatrics*.

Ann E. Kurth, Ph.D., R.N., M.S.N., M.P.H.

Dr. Kurth is a professor in the New York University College of Nursing and the School of Medicine, Department of Population Health, as well as associate dean for Research in the Global Institute of Public Health. She is an affiliate faculty member in the University of Washington's Department of Global Health and School of Nursing. Dr. Kurth is a fellow of the American Academy of Nursing and the New York Academy of Medicine and an elected member of the Institute of Medicine. Dr. Kurth is a clinically-trained epidemiologist who studies approaches to improving HIV and sexually transmitted infection prevention, screening, and care; reproductive health; and global health workforce/system strengthening efforts.

Douglas K. Owens, M.D., M.S.

Dr. Owens is a general internist at the Veterans Affairs (VA) Palo Alto Health Care System. He is the Henry J. Kaiser, Jr., professor at Stanford University, where he is also a professor of medicine, health research and policy (by courtesy), and management science and engineering (by courtesy), as well as senior fellow at the Freeman Spogli Institute for International Studies. Dr. Owens is director of the Center for Primary Care and Outcomes Research in the Stanford University School of Medicine and the Center for Health Policy in the Freeman Spogli Institute for International Studies. Dr. Owens' research focuses on guideline development, technology assessment, cost-effectiveness analysis, evidence synthesis, and methods for clinical decisionmaking.

William R. Phillips, M.D., M.P.H.

Dr. William Phillips is the Theodore J. Phillips endowed professor in family medicine and clinical professor of health services at the University of Washington (UW), Seattle. Dr. Phillips directs the UW Primary Care Research Fellowship and is senior associate editor of the *Annals of Family Medicine*. He is past president of the North American Primary Care Research Group and past chair of the American Academy of Family Physicians Commission on Clinical Policies and Research. His work focuses on care, communication, and clinical preventive services.

Maureen G. Phipps, M.D., M.P.H.

Dr. Phipps is chair of the Department of Obstetrics and Gynecology and assistant dean for teaching and research on women's health at the Warren Alpert Medical School of Brown University. She is also a professor of obstetrics and gynecology and epidemiology at Brown University. In addition, she is the chief of obstetrics and gynecology at Women & Infants Hospital of Rhode Island and the executive chief of obstetrics and gynecology at Care New England. Her research focuses on improving health for vulnerable populations and her research interests include adolescent pregnancy, pregnancy outcomes, postpartum depression, prenatal care, contraception, and reducing disparities.

Michael P. Pignone, M.D., M.P.H.

Dr. Michael Pignone is a professor of medicine at the University of North Carolina Department of Medicine and chief of the university's Division of General Internal Medicine. He also serves as director of the university's Institute for Healthcare Quality Improvement, a member of the Lineberger Cancer Center, senior research fellow at the Cecil Sheps Center for Health Services Research, and a lecturer at the University of North Carolina's Gillings School of Global Public Health. Dr. Pignone's research expertise is in chronic disease prevention and treatment, as well as in physician-patient communication and decisionmaking in primary care settings. His primary clinical areas of interest include heart disease prevention, colorectal cancer screening, and management of common chronic conditions, such as diabetes and heart failure.

APPENDIX E: 2014 USPSTF DISSEMINATION AND IMPLEMENTATION PARTNER ORGANIZATIONS

AARP

America's Health Insurance Plans

American Academy of Family Physicians

American Academy of Nurse Practitioners

American Academy of Pediatrics

American Academy of Physician Assistants

American College of Obstetricians and Gynecologists

American College of Physicians

American College of Preventive Medicine

American Osteopathic Association

Canadian Task Force on Preventive Health Care

Community Preventive Services Task Force

National Association of Pediatric Nurse Practitioners

National Business Group on Health

National Committee for Quality Assurance

APPENDIX F: 2014 FEDERAL LIAISONS TO THE USPSTF

Centers for Disease Control and Prevention

Centers for Medicare & Medicaid Services

Department of Defense/Military Health System

Food and Drug Administration

Health Resources and Services Administration

Indian Health Service

National Cancer Institute

National Institutes of Health

Office of Disease Prevention and Health Promotion

Office of the Surgeon General

Substance Abuse and Mental Health Services Administration

Veterans Health Administration

APPENDIX G: COMPLETE LISTING OF ALL USPSTF RECOMMENDATIONS AS OF OCTOBER 2014

Grade	Title
A	**Aspirin to Prevent Ischemic Stroke: Preventive Medication for Women Ages 55 to 79 Years** The USPSTF recommends the use of aspirin for women ages 55 to 79 years when the potential benefit of a reduction in ischemic strokes outweighs the potential harm of an increase in gastrointestinal hemorrhage.
A	**Aspirin to Prevent Myocardial Infarction: Preventive Medication for Men Ages 45 to 79 Years** The USPSTF recommends the use of aspirin for men ages 45 to 79 years when the potential benefit of a reduction in myocardial infarctions outweighs the potential harm of an increase in gastrointestinal hemorrhage.
A	**Bacteriuria: Screening in Pregnant Women** The USPSTF recommends screening for asymptomatic bacteriuria with urine culture in pregnant women at 12 to 16 weeks of gestation or at the first prenatal visit, if later.
A	**Cervical Cancer: Screening in Women Ages 21 to 65 (Cytology) or 30 to 65 (Cytology With HPV Testing) Years** The USPSTF recommends screening for cervical cancer in women ages 21 to 65 years with cytology (Pap smear) every 3 years or, for women ages 30 to 65 years who want to lengthen the screening interval, screening with a combination of cytology and human papillomavirus (HPV) testing every 5 years.
A	**Colorectal Cancer: Screening in Adults Ages 50 to 75 Years** The USPSTF recommends screening for colorectal cancer with fecal occult blood testing, sigmoidoscopy, or colonoscopy in adults, beginning at age 50 years and continuing until age 75 years. The risks and benefits of these screening methods vary.
A	**Folic Acid: Supplementation in Women Planning or Capable of Pregnancy** The USPSTF recommends that all women planning or capable of pregnancy take a daily supplement containing 0.4 to 0.8 mg (400 to 800 µg) of folic acid.
A	**Gonococcal Ophthalmia Neonatorum: Preventive Medication for Newborns** The USPSTF recommends prophylactic ocular topical medication for all newborns for the prevention of gonococcal ophthalmia neonatorum.
A	**HIV: Screening in Adolescents and Adults Ages 15 to 65 Years** The USPSTF recommends screening for HIV infection in adolescents and adults ages 15 to 65 years. Younger adolescents and older adults who are at increased risk should also be screened.
A	**HIV: Screening in Pregnant Women** The USPSTF recommends screening all pregnant women for HIV, including those in labor who are untested and whose HIV status is unknown.
A	**Hepatitis B Virus: Screening in Pregnant Women** The USPSTF recommends screening for hepatitis B virus infection in all pregnant women at their first prenatal visit.

Grade	Title
A	**Hypertension: Screening in Adults** The USPSTF recommends screening for high blood pressure in adults age 18 years and older.
A	**Hypothyroidism: Screening in Newborns** The USPSTF recommends screening for congenital hypothyroidism in newborns.
A	**Lipid Disorders: Screening in Men Age 35 Years and Older** The USPSTF recommends screening for lipid disorders in men age 35 years and older.
A	**Lipid Disorders: Screening in Women Age 45 Years and Older at Increased Risk for Coronary Heart Disease** The USPSTF recommends screening for lipid disorders in women age 45 years and older who are at increased risk for coronary heart disease.
A	**Phenylketonuria: Screening in Newborns** The USPSTF recommends screening for phenylketonuria in newborns.
A	**Rh(D) Blood Typing: Screening in Pregnant Women** The USPSTF recommends Rh(D) blood typing and antibody testing for all pregnant women during their first prenatal visit.
A	**Sickle Cell Disease: Screening in Newborns** The USPSTF recommends screening for sickle cell disease in newborns.
A	**Syphilis: Screening in Adults at Increased Risk** The USPSTF recommends screening for syphilis infection in adults who are at increased risk.
A	**Syphilis: Screening in Pregnant Women** The USPSTF recommends screening for syphilis infection in all pregnant women.
A	**Tobacco Use: Counseling and Interventions for Adults** The USPSTF recommends that clinicians ask all adults about tobacco use and provide tobacco cessation interventions for those who use tobacco products.
A	**Tobacco Use: Counseling and Interventions for Pregnant Women** The USPSTF recommends that clinicians ask all pregnant women about tobacco use and provide augmented, pregnancy-tailored counseling for those who smoke.
B	**Abdominal Aortic Aneurysm: Screening in Men Ages 65 to 75 Years Who Smoke** The USPSTF recommends one-time screening for abdominal aortic aneurysm by ultrasonography in men ages 65 to 75 years who have ever smoked.

Grade	Title
B	**Alcohol Misuse: Screening and Counseling for Adults** The USPSTF recommends screening in adults age 18 years and older for alcohol misuse and providing persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce alcohol misuse.
B	**Aspirin to Prevent Preeclampsia: Preventive Medication for Pregnant Women** The USPSTF recommends the use of low-dose aspirin (81 mg/day) as preventive medication after 12 weeks of gestation in pregnant women who are at high risk for preeclampsia.
B	**BRCA-Related Cancer: Risk Assessment, Genetic Counseling, and Genetic Testing in Women at Increased Risk** The USPSTF recommends screening in women who have family members with breast, ovarian, tubal, or peritoneal cancer with one of several screening tools designed to identify a family history that may be associated with an increased risk for potentially harmful mutations in breast cancer susceptibility genes (*BRCA1* or *BRCA2*). Women with positive screening results should receive genetic counseling and, if indicated after counseling, BRCA testing.
B	**Breast Cancer: Preventive Medication for Women at Increased Risk** The USPSTF recommends that clinicians engage in shared, informed decisionmaking with women who are at increased risk for breast cancer about medications to reduce their risk. For women who are at increased risk for breast cancer and at low risk for adverse medication effects, clinicians should offer to prescribe risk-reducing medications, such as tamoxifen or raloxifene.
B	**Breast Cancer: Screening With Mammography in Women Ages 50 to 74 Years*** The USPSTF recommends biennial screening mammography for women ages 50 to 74 years. **The Department of Health and Human Services, in implementing the Affordable Care Act under the standard it sets out in revised Section 2713(a)(5) of the Public Health Service Act, utilizes the 2002 USPSTF recommendation on breast cancer screening. This recommendation states, "The USPSTF recommends screening mammography, with or without clinical breast examination, every 1–2 years for women age 40 years and older (B recommendation)."*
B	**Breastfeeding: Interventions for Pregnant Women and New Mothers** The USPSTF recommends interventions during pregnancy and after birth to promote and support breastfeeding.
B	**Chlamydia: Screening in Women Age 24 Years and Younger and Older Women at Increased Risk** The USPSTF recommends screening for chlamydia in sexually active women age 24 years and younger and in older women who are at increased risk for infection.
B	**Dental Caries: Preventive Medication for Children Age 5 Years and Younger** The USPSTF recommends that primary care clinicians prescribe oral fluoride supplementation starting at age 6 months for children whose water supply is deficient in fluoride. The USPSTF recommends that primary care clinicians apply fluoride varnish to the primary teeth of all infants and children starting at the age of primary tooth eruption.
B	**Depression: Screening in Adolescents Ages 12 to 18 Years in Clinical Practices With Systems of Care** The USPSTF recommends screening for major depressive disorder in adolescents (ages 12 to 18 years) when systems are in place to ensure accurate diagnosis, psychotherapy (cognitive behavioral or interpersonal), and followup.

Grade	Title
B	**Depression: Screening in Adults When Staff-Assisted Depression Care Supports Are in Place** The USPSTF recommends screening for depression in adults (age 18 years and older) when staff-assisted depression care supports are in place to assure accurate diagnosis, effective treatment, and followup.
B	**Falls Prevention: Interventions for Community-Dwelling Adults Age 65 Years and Older at Increased Risk** The USPSTF recommends exercise or physical therapy to prevent falls in community-dwelling adults age 65 years and older who are at increased risk for falls.
B	**Falls Prevention: Vitamin D in Community-Dwelling Adults Age 65 Years and Older at Increased Risk** The USPSTF recommends vitamin D supplementation to prevent falls in community-dwelling adults age 65 years and older who are at increased risk for falls.
B	**Gestational Diabetes Mellitus: Screening in Pregnant Women After 24 Weeks of Gestation** The USPSTF recommends screening for gestational diabetes mellitus in asymptomatic pregnant women after 24 weeks of gestation.
B	**Gonorrhea: Screening in Women Age 24 Years and Younger and Older Women at Increased Risk** The USPSTF recommends screening for gonorrhea in sexually active women age 24 years and younger and in older women who are at increased risk for infection.
B	**Healthful Diet and Physical Activity for Cardiovascular Disease Prevention: Counseling for Adults With Cardiovascular Risk Factors** The USPSTF recommends offering or referring adults who are overweight or obese and have additional cardiovascular risk factors to intensive behavioral counseling interventions to promote a healthful diet and physical activity for cardiovascular disease prevention.
B	**Hearing Loss: Screening in Newborns** The USPSTF recommends screening for hearing loss in all newborns.
B	**Hepatitis B Virus: Screening in Nonpregnant Adolescents and Adults** The USPSTF recommends screening for hepatitis B virus infection in nonpregnant adolescents and adults who are at high risk for infection.
B	**Hepatitis C Virus: Screening in Adults at High Risk and Adults Born Between 1945 and 1965** The USPSTF recommends screening for hepatitis C virus infection in adults at high risk for infection. The USPSTF also recommends offering one-time screening for hepatitis C virus infection to adults born between 1945 and 1965.
B	**Intimate Partner Violence: Screening in Women of Childbearing Age** The USPSTF recommends that clinicians screen women of childbearing age for intimate partner violence, such as domestic violence, and provide or refer women who screen positive to intervention services.
B	**Iron Deficiency Anemia: Iron Supplementation in Children Ages 6 to 12 Months at Increased Risk** The USPSTF recommends routine iron supplementation for asymptomatic children ages 6 to 12 months who are at increased risk for iron deficiency anemia.

Grade	Title
B	**Iron Deficiency Anemia: Screening in Pregnant Women** The USPSTF recommends routine screening for iron deficiency anemia in asymptomatic pregnant women.
B	**Lipid Disorders: Screening in Men Ages 20 to 35 Years at Increased Risk for Coronary Heart Disease** The USPSTF recommends screening for lipid disorders in men ages 20 to 35 years who are at increased risk for coronary heart disease.
B	**Lipid Disorders: Screening in Women Ages 20 to 45 Years at Increased Risk for Coronary Heart Disease** The USPSTF recommends screening for lipid disorders in women ages 20 to 45 years who are at increased risk for coronary heart disease.
B	**Lung Cancer: Screening in Adults** The USPSTF recommends annual screening for lung cancer with low-dose computed tomography in adults ages 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.
B	**Obesity: Screening and Management in Adults** The USPSTF recommends screening for obesity in all adults. Clinicians should offer or refer patients with a body mass index of 30 kg/m^2 or greater to intensive, multicomponent behavioral interventions.
B	**Obesity: Screening in Children and Adolescents Ages 6 to 17 Years** The USPSTF recommends that clinicians screen for obesity in children age 6 years and older and offer or refer them to comprehensive, intensive behavioral interventions to promote improvement in weight status.
B	**Osteoporosis: Screening in Women Age 65 Years and Older and Younger Women at Increased Risk** The USPSTF recommends screening for osteoporosis in women age 65 years and older and in younger women whose fracture risk is equal to or greater than that of a 65-year-old white woman who has no additional risk factors.
B	**Rh(D) Blood Typing: Screening in Unsensitized Rh(D)-Negative Pregnant Women** The USPSTF recommends repeated Rh(D) antibody testing for all unsensitized Rh(D)-negative women at 24 to 28 weeks of gestation, unless the biological father is known to be Rh(D)-negative.
B	**Sexually Transmitted Infections: Counseling for Sexually Active Adolescents and Adults at Increased Risk** The USPSTF recommends intensive behavioral counseling for all sexually active adolescents and for adults who are at increased risk for sexually transmitted infections.
B	**Skin Cancer: Counseling for Children, Adolescents, and Young Adults Ages 10 to 24 Years** The USPSTF recommends counseling children, adolescents, and young adults ages 10 to 24 years who have fair skin about minimizing their exposure to ultraviolet radiation to reduce risk for skin cancer.

Grade	Title
B	**Tobacco Use: Interventions for Children and Adolescents** The USPSTF recommends that primary care clinicians provide interventions, including education or brief counseling, to prevent initiation of tobacco use in school-aged children and adolescents.
B	**Type 2 Diabetes Mellitus: Screening in Adults With Hypertension** The USPSTF recommends screening for type 2 diabetes in asymptomatic adults with sustained blood pressure (either treated or untreated) greater than 135/80 mm Hg.
B	**Visual Impairment: Screening in Children Ages 3 to 5 Years** The USPSTF recommends screening for vision impairment in all children at least once between the ages of 3 and 5 years to detect the presence of amblyopia or its risk factors.
C	**Abdominal Aortic Aneurysm: Screening in Men Ages 65 to 75 Years Who Do Not Smoke** The USPSTF recommends selectively offering screening for abdominal aortic aneurysm in men ages 65 to 75 years who have never smoked rather than routinely screening all men in this group.
C	**Breast Cancer: Screening With Mammography in Women Ages 40 to 49 Years*** The decision to start regular, biennial screening mammography before the age of 50 years should be an individual one and take patient context into account, including the patient's values regarding specific benefits and harms. **The Department of Health and Human Services, in implementing the Affordable Care Act under the standard it sets out in revised Section 2713(a)(5) of the Public Health Service Act, utilizes the 2002 USPSTF recommendation on breast cancer screening. This recommendation states, "The USPSTF recommends screening mammography, with or without clinical breast examination, every 1–2 years for women age 40 years and older (B recommendation)."*
C	**Colorectal Cancer: Screening in Adults Ages 76 to 85 Years** The USPSTF recommends against routine screening for colorectal cancer in adults ages 76 to 85 years. There may be considerations that support colorectal cancer screening in an individual patient.
C	**Depression: Screening in Adults When Staff-Assisted Depression Care Supports Are Not in Place** The USPSTF recommends against routine screening for depression in adults (age 18 years and older) when staff-assisted depression care supports are not in place. There may be considerations that support screening for depression in an individual patient.
C	**Falls Prevention: Multifactorial Risk Assessment With Comprehensive Risk Management for Community-Dwelling Adults Age 65 Years and Older** The USPSTF does not recommend automatically performing an in-depth multifactorial risk assessment in conjunction with comprehensive management of identified risks to prevent falls in community-dwelling adults age 65 years and older because the likelihood of benefit is small. In determining whether this service is appropriate in individual cases, patients and clinicians should consider the balance of benefits and harms on the basis of the circumstances of prior falls, comorbid medical conditions, and patient values.

Grade	Title
C	**Healthful Diet and Physical Activity for Cardiovascular Disease Prevention: Counseling for Adults Without Cardiovascular Risk Factors** Although the correlation among healthful diet, physical activity, and the incidence of cardiovascular disease is strong, existing evidence indicates that the health benefit of initiating behavioral counseling in the primary care setting to promote a healthful diet and physical activity is small. Clinicians may choose to selectively counsel patients rather than incorporate counseling into the care of all adults in the general population.
C	**Lipid Disorders: Screening in Men Ages 20 to 35 Years Not at Increased Risk for Coronary Heart Disease** The USPSTF makes no recommendation for or against routine screening for lipid disorders in men ages 20 to 35 years who are not at increased risk for coronary heart disease.
C	**Lipid Disorders: Screening in Women Age 20 Years and Older Not at Increased Risk for Coronary Heart Disease** The USPSTF makes no recommendation for or against routine screening for lipid disorders in women age 20 years and older who are not at increased risk for coronary heart disease.
D	**Abdominal Aortic Aneurysm: Screening in Women Who Have Never Smoked** The USPSTF recommends against routine screening for abdominal aortic aneurysm in women who have never smoked.
D	**Aspirin or NSAIDs to Prevent Colorectal Cancer: Preventive Medication for Adults at Average Risk** The USPSTF recommends against the routine use of aspirin or nonsteroidal anti-inflammatory drugs (NSAIDs) to prevent colorectal cancer in adults who are at average risk for colorectal cancer.
D	**Aspirin to Prevent Ischemic Stroke: Preventive Medication for Women Younger Than Age 55 Years** The USPSTF recommends against the use of aspirin for stroke prevention in women younger than age 55 years.
D	**Aspirin to Prevent Myocardial Infarction: Preventive Medication for Men Younger Than Age 45 Years** The USPSTF recommends against the use of aspirin for myocardial infarction prevention in men younger than age 45 years.
D	**Bacterial Vaginosis: Screening in Pregnant Women at Low Risk for Preterm Delivery** The USPSTF recommends against screening for bacterial vaginosis in asymptomatic pregnant women who are at low risk for preterm delivery.
D	**Bacteriuria: Screening in Men and Nonpregnant Women** The USPSTF recommends against screening for asymptomatic bacteriuria in men and nonpregnant women.
D	**Beta-Carotene and Vitamin E to Prevent Cancer and Cardiovascular Disease: Supplementation in Adults** The USPSTF recommends against the use of Beta-carotene or vitamin E supplements for the prevention of cardiovascular disease or cancer.

Grade	Title
D	**BRCA-Related Cancer: Risk Assessment, Genetic Counseling, and Genetic Testing in Women at Low Risk** The UPSTF recommends against routine genetic counseling or BRCA testing for women whose family history is not associated with an increased risk for potentially harmful mutations in the *BRCA1* or *BRCA2* genes.
D	**Breast Cancer: Preventive Medication for Women Not at Increased Risk** The USPSTF recommends against the routine use of medications, such as tamoxifen or raloxifene, for risk reduction of primary breast cancer in women who are not at increased risk for breast cancer.
D	**Breast Cancer: Teaching Breast Self-Examination*** The USPSTF recommends against teaching breast self-examination. **The Department of Health and Human Services, in implementing the Affordable Care Act under the standard it sets out in revised Section 2713(a)(5) of the Public Health Service Act, utilizes the 2002 USPSTF recommendation on breast cancer screening. The full 2002 recommendation may be accessed at http://www.uspreventiveservicestaskforce.org/Page/Topic/recommendation-summary/breast-cancer-screening-2009.*
D	**Carotid Artery Stenosis: Screening in Adults** The USPSTF recommends against screening for asymptomatic carotid artery stenosis in the general adult population.
D	**Cervical Cancer: Screening in Women Older Than Age 65 Years Who Have Had Adequate Prior Screening** The USPSTF recommends against screening for cervical cancer in women older than age 65 years who have had adequate prior screening and are not otherwise at high risk for cervical cancer.
D	**Cervical Cancer: Screening in Women Who Have Had a Hysterectomy** The USPSTF recommends against screening for cervical cancer in women who have had a hysterectomy with removal of the cervix and who do not have a history of a high-grade precancerous lesion (cervical intraepithelial neoplasia grade 2 or 3) or cervical cancer.
D	**Cervical Cancer: Screening in Women Younger Than Age 21 Years** The USPSTF recommends against screening for cervical cancer in women younger than age 21 years.
D	**Cervical Cancer: Screening With HPV Testing in Women Younger Than Age 30 Years** The USPSTF recommends against screening for cervical cancer with human papillomavirus (HPV) testing, alone or in combination with cytology, in women younger than age 30 years.
D	**Chronic Obstructive Pulmonary Disease: Screening With Spirometry in Adults** The USPSTF recommends against screening for chronic obstructive pulmonary disease with spirometry in adults.
D	**Colorectal Cancer: Screening in Adults Older Than Age 85 Years** The USPSTF recommends against screening for colorectal cancer in adults older than age 85 years.

Grade	Title
D	**Coronary Heart Disease: Screening With Electrocardiography in Adults at Low Risk** The USPSTF recommends against screening with resting or exercise electrocardiography for the prediction of coronary heart disease events in asymptomatic adults at low risk for such events.
D	**Genital Herpes: Screening in Adolescents and Adults** The USPSTF recommends against routine serological screening for herpes simplex virus in asymptomatic adolescents and adults.
D	**Genital Herpes: Screening in Pregnant Women** The USPSTF recommends against routine serological screening for herpes simplex virus in asymptomatic pregnant women.
D	**Hormone Therapy With Combined Estrogen and Progestin: Preventive Medication for Postmenopausal Women** The USPSTF recommends against the use of combined estrogen and progestin for the prevention of chronic conditions in postmenopausal women.
D	**Hormone Therapy With Estrogen: Preventive Medication for Postmenopausal Women Who Have Had a Hysterectomy** The USPSTF recommends against the use of estrogen for the prevention of chronic conditions in postmenopausal women who have had a hysterectomy.
D	**Idiopathic Scoliosis: Screening in Adolescents** The USPSTF recommends against routine screening for idiopathic scoliosis in asymptomatic adolescents.
D	**Lead: Screening in Children Ages 1 to 5 Years at Average Risk** The USPSTF recommends against routine screening for elevated blood lead levels in asymptomatic children ages 1 to 5 years who are at average risk.
D	**Lead: Screening in Pregnant Women** The USPSTF recommends against routine screening for elevated blood lead levels in asymptomatic pregnant women.
D	**Ovarian Cancer: Screening in Women** The USPSTF recommends against screening for ovarian cancer in asymptomatic women. Women with known genetic mutations that increase their risk for ovarian cancer (for example, BRCA mutations) are not included in this recommendation.
D	**Pancreatic Cancer: Screening in Adults** The USPSTF recommends against routine screening for pancreatic cancer with abdominal palpation, ultrasonography, or serologic markers in asymptomatic adults.

Grade	Title
D	**Prostate Cancer: Prostate-Specific Antigen-Based Screening in Men** The USPSTF recommends against prostate-specific antigen-based screening for prostate cancer.
D	**Syphilis: Screening in Adults** The USPSTF recommends against routine screening for syphilis infection in asymptomatic men and women who are not at increased risk for infection.
D	**Testicular Cancer: Screening in Adolescents and Adults** The USPSTF recommends against screening for testicular cancer in adolescents or adults.
D	**Vitamin D and Calcium to Prevent Fractures: Low-Dose Supplementation in Postmenopausal Women** The USPSTF recommends against daily supplementation with 400 IU or less of vitamin D and 1,000 mg or less of calcium for the primary prevention of fractures in noninstitutionalized, postmenopausal women.
I	**Abdominal Aortic Aneurysm: Screening in Women Ages 65 to 75 Years Who Have Ever Smoked** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for abdominal aortic aneurysm in women ages 65 to 75 years who have ever smoked.
I	**Abuse and Neglect: Screening in Elderly or Vulnerable Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for abuse and neglect in all elderly or vulnerable (physically or mentally dysfunctional) adults.
I	**Alcohol Misuse: Screening and Counseling for Adolescents** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening and behavioral counseling interventions in primary care settings to reduce alcohol misuse in adolescents.
I	**Aspirin to Prevent Cardiovascular Disease: Preventive Medication for Adults Age 80 Years and Older** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of aspirin to prevent cardiovascular disease in adults age 80 years and older.
I	**Bacterial Vaginosis: Screening in Pregnant Women at High Risk for Preterm Delivery** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for bacterial vaginosis in asymptomatic pregnant women who are at high risk for preterm delivery.
I	**Bladder Cancer: Screening in Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for bladder cancer in asymptomatic adults.
I	**Breast Cancer: Screening With Clinical Breast Examination in Women Age 40 Years and Older*** The USPSTF concludes that the current evidence is insufficient to assess the additional benefits and harms of clinical breast examination beyond screening mammography in women age 40 years and older. **The Department of Health and Human Services, in implementing the Affordable Care Act under the standard it sets out in revised Section 2713(a)(5) of the Public Health Service Act, utilizes the 2002 USPSTF recommendation on breast cancer screening. The full 2002 recommendation may be accessed at http://www.uspreventiveservicestaskforce.org/Page/Topic/recommendation-summary/breast-cancer-screening-2009.*

Grade	Title
I	**Child Maltreatment: Interventions for Primary Care** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of primary care interventions to prevent child maltreatment. The recommendation applies to children who do not have signs or symptoms of maltreatment.
I	**Chlamydia: Screening in Men** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for chlamydia in men.
I	**Chronic Kidney Disease: Screening in Adults** The USPSTF concludes that the evidence is insufficient to assess the balance of benefits and harms of routine screening for chronic kidney disease in asymptomatic adults.
I	**Cognitive Impairment: Screening in Older Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for cognitive impairment.
I	**Colorectal Cancer: Screening With Computed Tomographic Colonography and Fecal DNA Testing** The USPSTF concludes that the evidence is insufficient to assess the benefits and harms of screening for colorectal cancer with computed tomographic colonography and fecal DNA testing.
I	**Coronary Heart Disease: Risk Assessment With Nontraditional Risk Factors in Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of using nontraditional risk factors to screen asymptomatic adults with no history of coronary heart disease to prevent such events. Nontraditional risk factors include high-sensitivity C-reactive protein, ankle-brachial index, leukocyte count, fasting blood glucose level, periodontal disease, carotid intima-media thickness, coronary artery calcification score on electron-beam computed tomography, homocysteine level, and lipoprotein(a) level.
I	**Coronary Heart Disease: Screening With Electrocardiography in Adults at Intermediate or High Risk** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening with resting or exercise electrocardiography for the prediction of coronary heart disease events in asymptomatic adults who are at intermediate or high risk for such events.
I	**Dental Caries: Screening in Children Age 5 Years and Younger** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of routine screening for dental caries performed by primary care clinicians in children age 5 years and younger.
I	**Depression: Screening in Children Ages 7 to 11 Years** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for depression in children ages 7 to 11 years.
I	**Drug Use: Interventions for Children and Adolescents** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of primary care-based behavioral interventions to prevent or reduce illicit drug or nonmedical pharmaceutical use in children and adolescents. This recommendation applies to children and adolescents who have not already been diagnosed with a substance use disorder.

Grade	Title
I	**Drug Use: Screening in Adolescents, Adults, and Pregnant Women** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for illicit drug use in adolescents, adults, and pregnant women.
I	**Gestational Diabetes Mellitus: Screening in Pregnant Women Before 24 Weeks of Gestation** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for gestational diabetes mellitus in asymptomatic pregnant women before 24 weeks of gestation.
I	**Glaucoma: Screening in Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for primary open-angle glaucoma in adults.
I	**Gonorrhea: Screening in Men** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for gonorrhea in men.
I	**Hearing Loss: Screening in Older Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for hearing loss in asymptomatic adults age 50 years and older.
I	**Hip Dysplasia: Screening in Infants** The USPSTF concludes that the evidence is insufficient to recommend routine screening for developmental dysplasia of the hip in infants.
I	**Hyperbilirubinemia: Screening in Infants** The USPSTF concludes that the evidence is insufficient to recommend screening for hyperbilirubinemia in infants to prevent chronic bilirubin encephalopathy.
I	**Hypertension: Screening in Children and Adolescents** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for primary hypertension in asymptomatic children and adolescents to prevent subsequent cardiovascular disease in childhood or adulthood.
I	**Iron Deficiency Anemia: Iron Supplementation in Children Ages 6 to 12 Months at Average Risk** The USPSTF concludes that the evidence is insufficient to recommend for or against routine iron supplementation in asymptomatic children ages 6 to 12 months who are at average risk for iron deficiency anemia.
I	**Iron Deficiency Anemia: Iron Supplementation in Nonanemic Pregnant Women** The USPSTF concludes that the evidence is insufficient to recommend for or against routine iron supplementation in nonanemic pregnant women.
I	**Iron Deficiency Anemia: Screening in Children Ages 6 to 12 Months** The USPSTF concludes that the evidence is insufficient to recommend for or against routine screening for iron deficiency anemia in asymptomatic children ages 6 to 12 months.

Grade	Title
I	**Lead: Screening in Children Ages 1 to 5 Years at Increased Risk** The USPSTF concludes that the evidence is insufficient to recommend for or against routine screening for elevated blood lead levels in asymptomatic children ages 1 to 5 years who are at increased risk.
I	**Lipid Disorders: Screening in Children, Adolescents, and Young Adults Age 20 Years and Younger** 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 (age 20 years and younger).
I	**Multivitamins to Prevent Cardiovascular Disease and Cancer: Supplementation in Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the use of multivitamins for the prevention of cardiovascular disease or cancer.
I	**Oral Cancer: Screening in Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for oral cancer in asymptomatic adults.
I	**Osteoporosis: Screening in Men** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for osteoporosis in men.
I	**Peripheral Artery Disease and Cardiovascular Disease Risk Assessment: Screening With the Ankle-Brachial Index in Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for peripheral artery disease and cardiovascular disease risk assessment with the ankle-brachial index in adults.
I	**Skin Cancer: Counseling for Adults Older Than Age 24 Years** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of counseling adults older than age 24 years about minimizing risks to prevent skin cancer.
I	**Skin Cancer: Screening in Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of using a whole-body skin examination by a primary care clinician or patient skin self-examination for the early detection of cutaneous melanoma, basal cell cancer, or squamous cell skin cancer in the adult general population.
I	**Speech and Language Delay: Screening in Children Age 5 Years and Younger** The USPSTF concludes that the evidence is insufficient to recommend for or against the routine use of brief, formal screening instruments in primary care to detect speech and language delay in children age 5 years and younger.
I	**Suicide Risk: Screening in Adolescents, Adults, and Older Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for suicide risk in adolescents, adults, and older adults in primary care.

Grade	Title
I	**Thyroid Disease: Screening in Adults** The USPSTF concludes that the evidence is insufficient to recommend for or against routine screening for thyroid disease in adults.
I	**Type 2 Diabetes Mellitus: Screening in Adults Without Hypertension** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for type 2 diabetes in asymptomatic adults with blood pressure of 135/80 mm Hg or less.
I	**Visual Acuity: Screening in Older Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for visual acuity in older adults.
I	**Visual Impairment: Screening in Children Younger Than Age 3 Years** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for vision impairment in children younger than age 3 years.
I	**Vitamin D and Calcium to Prevent Fractures: High-Dose Supplementation in Postmenopausal Women** The USPSTF concludes that the current evidence is insufficient to assess the balance of the benefits and harms of daily supplementation with greater than 400 IU of vitamin D and greater than 1,000 mg of calcium for the primary prevention of fractures in noninstitutionalized, postmenopausal women.
I	**Vitamin D and Calcium to Prevent Fractures: Supplementation in Premenopausal Women or Men** The USPSTF concludes that the current evidence is insufficient to assess the balance of the benefits and harms of combined vitamin D and calcium supplementation for the primary prevention of fractures in premenopausal women or in men.
I	**Vitamins, Minerals, and Multivitamins to Prevent Cardiovascular Disease and Cancer: Supplementation in Adults** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the use of single- or paired-nutrient supplements (except Beta-carotene and vitamin E) for the prevention of cardiovascular disease or cancer in adults.


U.S. Preventive Services
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