12th Annual Report To Congress

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High-Priority Evidence Gaps for Clinical Preventive Services

SUBMITTED BY:

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ON BEHALF OF THE 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, primary care, and evidence-based medicine. The Task Force makes evidence-based recommendations about clinical preventive services that can be delivered or referred from primary care to improve the health of people nationwide. The Task Force assesses the strength of the evidence and the balance of benefits and harms of a preventive service in people without signs or symptoms, including screening tests, behavioral counseling, and preventive medications.

Each year, Congress charges the USPSTF to provide a report that identifies gaps in the scientific evidence base and recommends areas for future research. In some cases, clinical preventive services have been well studied, but there are important evidence gaps that prevent the USPSTF from making recommendations for specific populations. The Task Force recognizes that disparities persist in healthcare and health outcomes based on age, race and ethnicity, sexual orientation, gender identity, and social determinants of health, such as economic and social conditions. Greater inclusion of populations disproportionately affected by health conditions in research will help the USPSTF issue recommendations that improve the quality of preventive care. In turn, this will hopefully lead to improved access to and use of these preventive services, reduced disparities in healthcare, and increased health equity.

In this 12th Annual Report to Congress, the Task Force calls for more research in areas where evidence is lacking in order to improve the health of children, adolescents, adults, and pregnant people, particularly in Black, Hispanic/Latino, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander communities.

Where More Research Is Needed Related to Promoting Healthy Behaviors Across the Lifespan

In this report, the USPSTF calls attention to high-priority research gaps from its recent recommendations related to promoting healthy behaviors across the lifespan. The Task Force has a long-standing commitment to, and specific methods for, evaluating the evidence for clinical preventive services and making recommendations that promote health and prevent chronic conditions. Although chronic health conditions may affect anyone, some groups of people are at higher risk because of the sex they were assigned at birth, gender identity, race, ethnicity, income, geographic location, or other factors. The Task Force hopes to improve health equity by highlighting research gaps related to healthy behaviors, high-risk populations, and health outcomes. The Task Force recognizes that everyone can improve their health by participating in physical activity, eating a healthy diet, and eliminating unhealthy alcohol and tobacco use. Empowering people through behavioral counseling to adopt healthy lifestyle behaviors can be a way to increase the span of healthy living, reduce health disparities, and result in long-term health benefits.[1,2]

Future research in the following areas may help fill gaps and may result in new recommendations that will help improve the health of people nationwide:

1. **Behavioral Counseling Interventions for Healthy Diet and Physical Activity for Cardiovascular Disease (CVD) Prevention in Adults Without Known Risk Factors**
    a. Recruit sufficient numbers of participants from populations disproportionately affected by CVD to understand the benefit of physical activity and dietary behavioral counseling interventions in these populations.
    b. Evaluate best practices for clinicians and patients to navigate known environmental and structural barriers to healthy diet and physical activity.

c. Design and test interventions to reduce sedentary behavior. The recent increase in working from home during the COVID-19 pandemic may present an opportunity to perform research on effective interventions that reduce sedentary time.

d. Develop and evaluate culturally appropriate and tailored interventions that may reduce disparities related to cardiovascular health.

2. **Behavioral Counseling Interventions for Healthy Diet and Physical Activity for CVD Prevention in Adults With Cardiovascular Risk Factors**

   a. Encourage greater consistency and standardization of outcome measures in studies, specifically those for physical activity and diet, to better understand the range of effects and interpret the pooled effects.

   b. Examine the effects of the use of newer technologies, such as wearable activity trackers. In addition, examine the effects of internet-based resources such as daily caloric intake applications or other low-intensity approaches that may be valuable in low-resource settings.

3. **Behavioral Counseling Interventions for Healthy Weight and Weight Gain in Pregnancy**

   a. Assess the specific components of intensive behavioral interventions, including the specific content, optimal frequency, length of sessions, and number of sessions needed for an intervention to be effective.

   b. Assess whether interventions should be tailored to promote healthy weight gain in populations of pregnant people of advanced maternal age (i.e., older than age 34 years); adolescents; historically underserved populations such as Black, American Indian/Alaska Native, and Hispanic/Latino persons; and populations with increased rates of overweight and obesity.

4. **Interventions for Tobacco Smoking Cessation in Adults, Including Pregnant Persons**

   a. Examine effective components of behavioral counseling, including understanding interventions that provide the greatest benefits to high-risk populations.

   b. Examine whether e-cigarettes increase adult tobacco smoking cessation and the potential harms of e-cigarette use.

   c. Examine newer modalities and remotely delivered interventions (mobile phone apps and internet-based interventions).

5. **Screening for Prediabetes and Type 2 Diabetes in Children and Adolescents**

   a. Address the effects of lifestyle interventions, pharmacotherapy, or both for treatment of screen-detected prediabetes and diabetes on health outcomes in children and adolescents, particularly in racial and ethnic groups that have a higher prevalence of diabetes.

   b. Address the effects of screening on health outcomes in children and adolescent populations reflective of the prevalence of diabetes in the United States, particularly in racial and ethnic groups that have a higher prevalence of diabetes.

6. Screening for Prediabetes and Type 2 Diabetes in Adults

a. Evaluate data on the effects of lifestyle interventions and medical treatments for screen-detected prediabetes and diabetes on health outcomes over a longer followup period, particularly in populations that have a higher prevalence of diabetes.

b. Examine how best to increase uptake of lifestyle interventions, especially among populations at highest risk for progression to diabetes and adverse health outcomes.

c. Enroll racial and ethnic populations that experience a higher prevalence of prediabetes and diabetes to understand the effects of screening on health outcomes.

7. Screening and Interventions for the Prevention of Dental Caries in Children Younger Than Age 5 Years

a. Assess the effectiveness of oral health educational and counseling interventions for parents and caregivers/guardians of young children.

b. Enroll children from racial and ethnic populations that have historically been underrepresented (Black and Hispanic/Mexican American children) to understand the benefits and harms of risk assessment tools and preventive interventions.

c. Validate the accuracy and use of caries risk assessment tools for use in primary care settings and determine how referral to dental care by primary care clinicians affects caries outcomes.

Future research in these areas can help fill these gaps and may result in important new recommendations that will help to improve the health of children, adolescents, adults, and pregnant people, particularly in Black, Hispanic/Latino, and American Indian/Alaska Native communities. The USPSTF hopes that identifying evidence gaps and highlighting them as research priorities will inspire public and private researchers to collaborate and target their efforts to generate new knowledge, address important health issues, and reduce health inequities.

Table of Contents

"The Association of American Indian Physicians is committed to pursuing excellence in Native American healthcare by promoting education in medicine, honoring traditional healing principles, and restoring the balance of mind, body, and spirit. We are pleased to partner with the USPSTF and value its commitment to health equity and to promoting healthy behaviors among all populations across the lifespan. We support this call to close high-priority evidence gaps with new research that ultimately reduces disparities in healthcare, especially for American Indian and Alaska Native communities."

Tom Anderson
Executive Director
Association of American Indian Physicians

INTRODUCTION

The U.S. Preventive Services Task Force (USPSTF or Task Force) is an independent, volunteer group of national experts in prevention, primary care, and evidence-based medicine. Since its inception in 1984, the Task Force has made evidence-based recommendations about clinical preventive services that can be delivered or referred from primary care to improve the health of people nationwide (e.g., by improving quality of life and prolonging life). These recommendations include screening tests, behavioral counseling, and preventive medications.

The mission of the USPSTF is to improve the health of people nationwide by making evidence-based recommendations about clinical preventive services.

The purpose of this report is to update Congress and the research community about high-priority evidence gaps in clinical preventive services identified by the Task Force from 2020 to 2022 related to promoting healthy behaviors across the lifespan, particularly in high-risk groups.

BACKGROUND

Clinical preventive services 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. However, some clinical preventive services can fail to provide the expected benefit or even cause harm. To make informed decisions, healthcare professionals, patients, and families need access to trustworthy, objective information about the benefits and harms of clinical preventive services.

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. Task Force recommendations:

- Apply only to people without signs or symptoms of the disease or health condition
- Focus on screening to identify disease early and other interventions to prevent the onset of disease
- Address services offered in the primary care setting or services to which patients can be referred by primary care professionals

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. The Agency funds Evidence-based Practice Centers (EPCs), which are academic or research organizations that work with the Task Force to develop research plans and conduct the evidence reviews that the Task Force uses to inform its recommendations.

Who Serves on the Task Force?

The Task Force is an independent group of national experts in prevention and evidence-based medicine who represent the diverse disciplines of primary care, including behavioral health, family medicine, geriatrics, internal medicine, nursing, obstetrics and gynecology, and pediatrics. It is made up of 16 volunteer members who are appointed to serve 4-year terms, led by a chair and two vice chairs (see **Appendix A** for current members).

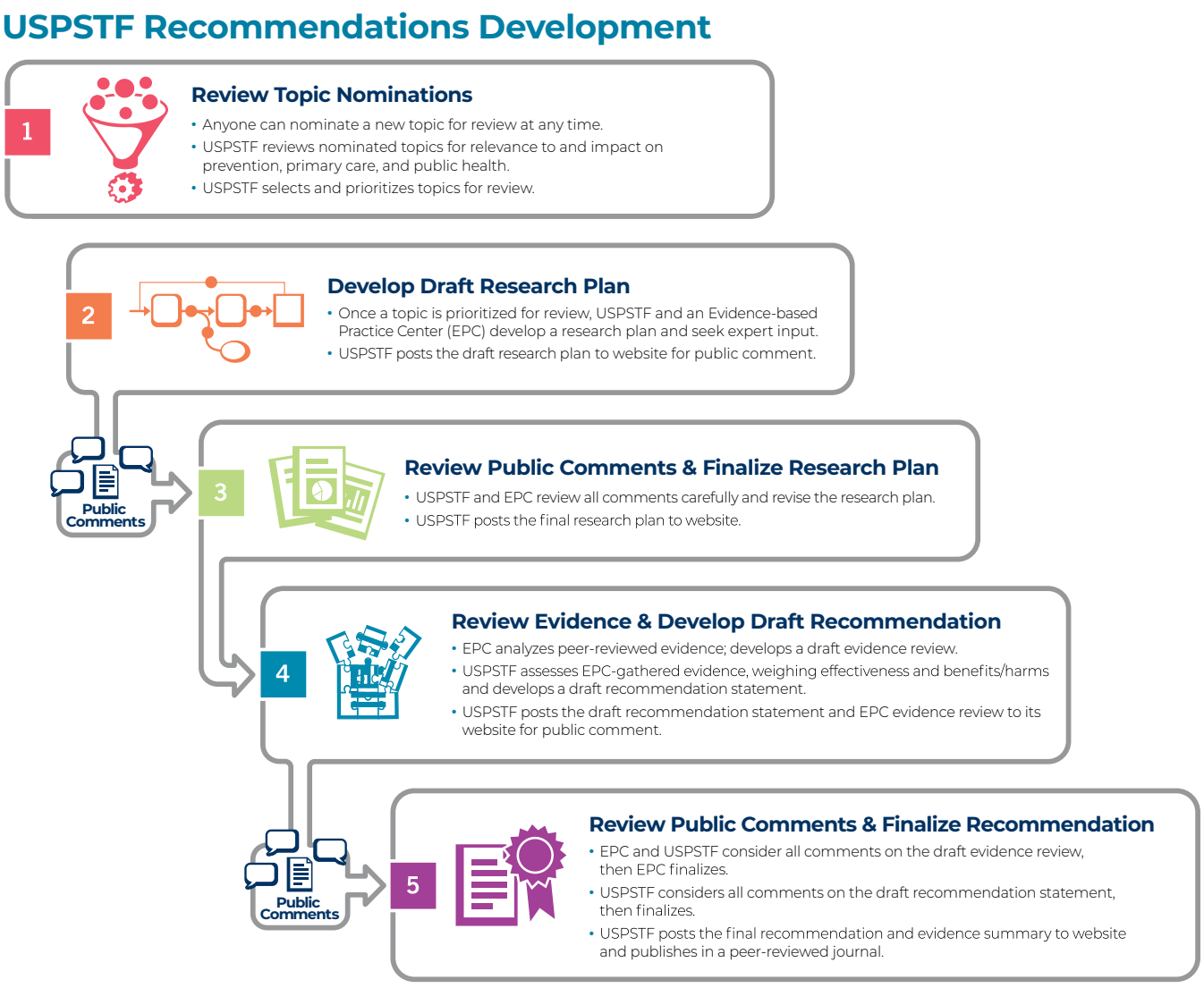
How Does the Task Force Minimize Potential Conflicts of Interest?

To ensure that USPSTF recommendations are balanced, independent, and objective, the USPSTF has a long-standing and rigorous conflict of interest assessment and disclosure process.[3] The process for each member begins prior to appointment, and potential conflicts of interest are reviewed at least three times each year for all members.

How Does the Task Force Make Recommendations?

The Task Force's recommendations are based on a review of the best available research on the potential benefits and harms of the preventive service. The Task Force does not conduct research studies, but rather reviews and assesses published research. It follows a multistep process when developing each of its recommendations and obtains public input throughout the recommendation development process (see **Figure 1**).

Figure 1. Steps the USPSTF Takes to Make a Recommendation



When the Task Force reviews the evidence, it considers the benefits and harms of the preventive service for the overall population, as well as for specific segments of the U.S. population that may be disproportionately affected by a condition or that may benefit differently from the preventive service.[4]

Potential benefits of preventive services may include helping people stay healthy throughout their lifetime, improving quality of life, preventing disease, and prolonging life. Potential harms may include inaccurate test results, harms from invasive followup tests, harms from treatment of a disease or condition, diagnosis of a condition that would never have caused symptoms or issues in a person's lifetime (also known as "overdiagnosis"), or receiving treatment when it is not needed or may not actually improve health (also known as "overtreatment").

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**).

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.

How Does the Task Force Engage the Public, Partners, Stakeholders, and Topic Experts in Developing Recommendations?

For each topic, the USPSTF actively seeks input from the public, its partners, stakeholders, and topic experts, including medical specialists—such as radiologists, oncologists, cardiologists, and surgeons. This ensures a focus on important clinical prevention topics for practicing clinicians and that the evidence relevant to each recommendation is considered.[5] At each step of the recommendation development process, the USPSTF solicits and reviews input. Anyone—the public, USPSTF partners, stakeholders, and topic experts—can nominate a new topic or an update to an existing topic, as well as submit comments on all Task Force draft materials (research plans, evidence reviews, and recommendation statements).

- **The Public.** All draft materials are posted on the Task Force website for a 4-week public comment period. The Task Force reviews and considers all comments as it finalizes the materials.
- **Partners.** The Task Force works with national organizations that represent primary care clinicians (including organizations that represent specific populations working to advance health equity), consumers, and other primary care stakeholders and health-related Federal agencies. These organizations and agencies provide input on the recommendations as they are being developed and help the Task Force disseminate the final recommendations (see **Appendices B** and **C** for a list of partners).
- **Stakeholders.** The Task Force identifies relevant stakeholder groups for each topic and contacts leadership, inviting them to comment on the drafts during the public comment periods. Stakeholder groups include national primary care, specialty, patient, advocacy, and other organizations with expertise and interest in a specific topic.
- **Topic experts.** The Task Force seeks input from different types of topic experts, including medical specialists such as radiologists, oncologists, cardiologists, and surgeons. In addition, the EPC team that conducts the evidence reviews for each topic always includes content experts, who work with the EPC during the systematic evidence review. Expert reviewers provide input on the evidence supporting the draft recommendation statement.

Where Can I Find More Information About the Task Force?

The Task Force website (www.uspreventiveservicestaskforce.org) contains more information about the Task Force and its methods for developing recommendations, including engaging with experts, partners, and the public. More details are available on the “About the USPSTF” and “Methods and Processes” pages.

"Representing the interests of more than 355,000 nurse practitioners (NPs) licensed to practice in the U.S., the American Association of Nurse Practitioners® (AANP) works to improve patient care and advance the NP role. AANP applauds the USPSTF for focusing this year's report on promoting healthy behaviors across the lifespan and for the report's attention to high-risk populations. The Task Force's dedication to providing evidence-based recommendations is critical to helping NPs across the country deliver accessible, person-centered, equitable preventive healthcare for all communities."

April N. Kapu, DNP, APRN, ACNP-BC, FAANP, FCCM, FAAN
President
American Association of Nurse Practitioners

CLINICAL PREVENTIVE SERVICES WHERE MORE RESEARCH IS NEEDED: PROMOTING HEALTHY BEHAVIORS ACROSS THE LIFESPAN AND IN HIGH-RISK POPULATIONS

The U.S. Congress has charged the Task Force with identifying gaps in research and recommending priority areas that deserve further examination each year. This includes calling attention to areas where evidence is lacking for populations that are disproportionately affected by health conditions.

There are two ways that the USPSTF highlights evidence gaps in its recommendation statements:

- **Issuing an "I statement."** The USPSTF issues "I statements" when the current evidence is lacking, of poor quality, or conflicting. When the evidence is insufficient, the USPSTF is unable to assess the balance of benefits and harms of the preventive service.
- **Describing the "Research Needs and Gaps."** In all recommendation statements, the USPSTF points out where gaps in the evidence remain in a section called "Research Needs and Gaps."

For studies to adequately address gaps in the evidence, researchers need to use methods that are consistent with the USPSTF's criteria for assessing study quality, validity, and applicability. Studies addressing these gaps should do the following:

- Examine preventive services conducted in the **primary care setting** or that are referable from primary care
- Compare outcomes for people **who do and do not receive the preventive service**
- Include populations **without signs or symptoms** of the condition
- Adopt a **rigorous study design** appropriate for the question, such as a randomized, controlled trial or a high-quality observational study
- Be **free of potential sources of bias**, such as high dropout rates among participants or biased assessment of outcomes or heterogeneity in outcome measures

To develop recommendations that improve the health of people nationwide, the USPSTF needs high-quality evidence about the benefits and harms of the preventive service and about the ways specific population groups are affected. For some preventive services and for certain populations, lack of scientific evidence limits the ability of the Task Force to make recommendations. This is because particular populations are frequently not well represented in health research. Some examples include:

- Specific age groups, including children, adolescents, and older adults
- Racial and ethnic groups historically underrepresented in research and disproportionately affected by health conditions, such as Black, Hispanic/Latino, Native American/Alaska Native, and Asian American and Pacific Islander people
- People who do not identify as heterosexual, with their birth sex, or both
- Individuals disproportionately affected by social risk factors, such as financial strain or lack of access to affordable and nutritious food

The Task Force is prioritizing topics that are likely to advance health equity and is calling for more research for some preventive services where the lack of scientific evidence limits its ability to make recommendations. In turn, this can help inform future recommendations, improve access to and use of preventive services, reduce disparities in healthcare, and increase health equity.

Focusing on Promoting Healthy Behaviors Across the Lifespan and in High-Risk Populations

For this 2022 report, the USPSTF calls attention to high-priority research gaps focusing on promoting healthy behaviors across the lifespan. Despite the United States being one of the wealthiest nations in the world, our population has a shorter life expectancy compared with other developed countries. Chronic diseases are the leading causes of death and disability in the United States, with 6 in 10 adults living with at least one chronic disease and 4 in 10 having multiple chronic conditions.[6] Engaging in healthy behaviors is linked to a longer life expectancy and a reduced risk of developing a chronic disease.[1]

Chronic diseases are conditions that last one or more years and require ongoing medical attention or limit activities of daily living and can be the costliest health conditions in the United States.[6] Chronic diseases include conditions like cancer, diabetes, hypertension, stroke, heart disease, respiratory diseases, arthritis, obesity, oral diseases, and mental health conditions like depression, which often lead to hospitalization, disability, reduced quality of life, and death.[6]

Adopting a healthy lifestyle across the lifespan—from childhood to adolescence and into adulthood—is an effective way to improve one's quality of life and prevent chronic disease, manage chronic disease, or both.[7,8] People who engage in healthier lifestyle behaviors, including physical activity, adhering to a healthy diet, and eliminating unhealthy alcohol and tobacco use, are more likely to have better long-term health outcomes.[2,9,10]

Promoting a healthier lifestyle through behavioral interventions can be an effective strategy for improving health outcomes and reducing health disparities. People who are at above average risk of developing cardiovascular disease (CVD), hypertension, diabetes, or other chronic health conditions can help reduce their risk, keep their disease under control or improve outcomes by engaging in healthy behaviors.[2]

The USPSTF has a number of recommendations related to promoting healthy behaviors, including two recommendations on behavioral counseling for healthy diet and physical activity for CVD prevention in adults (one for those with CVD risk factors and one for those without CVD risk factors); behavioral counseling interventions for healthy weight and weight gain in pregnancy; interventions for tobacco smoking cessation in adults, including pregnant people; screening for prediabetes and type 2 diabetes in children and adolescents; screening for prediabetes and type 2 diabetes in adults; and screening and interventions for the prevention of dental caries in children younger than age 5 years.

"As the leading organization dedicated to improving the physical, mental, and social health and well-being of all infants, children, adolescents, and young adults, the American Academy of Pediatrics is committed to promoting healthy lifestyles from an early age. We join the USPSTF in shining a light on important research gaps that prevent the development of evidence-based recommendations, and we recognize the importance of establishing healthy behaviors, promoting healthy development, and preventing disease in children and adolescents as it can lead to lifelong health."

Moira Szilagyi, MD, PhD, FAAP
President
American Academy of Pediatrics

Table 2. Key Research Gaps for Clinical Preventive Services—Promoting Healthy Behaviors Across the Lifespan and in High-Risk Populations

USPSTF Recommendation	Gaps Where Research Is Needed
Cardiovascular Disease	
1. Behavioral Counseling Interventions for Healthy Diet and Physical Activity for Cardiovascular Disease Prevention in Adults *Without* Known Risk Factors	• Recruit sufficient numbers participants from populations disproportionately affected by CVD to understand the benefit of physical activity and dietary behavioral counseling interventions in these populations. • Evaluate best practices for clinicians and patients to navigate known environmental and structural barriers to healthy diet and physical activity. • Design and test interventions to reduce sedentary behavior. The recent increase in working from home during the COVID-19 pandemic may present an opportunity to perform research on effective interventions that reduce sedentary time. • Develop and evaluate culturally appropriate and tailored interventions that may reduce disparities related to cardiovascular health.
2. Behavioral Counseling Interventions for Healthy Diet and Physical Activity for Cardiovascular Disease Prevention in Adults *With* Cardiovascular Risk Factors	• Encourage greater consistency and standardization of outcome measures in studies, specifically those for physical activity and diet, to better understand the range of effects and interpret the pooled effects. • Examine the effects of the use of newer technologies, such as wearable activity trackers. In addition, examine the effects of internet-based resources such as daily caloric intake applications or other low-intensity approaches that may be valuable in low-resource settings.
Healthy Weight in Pregnancy	
3. Behavioral Counseling Interventions for Healthy Weight and Weight Gain in Pregnancy	• Assess the specific components of intensive behavioral interventions, including the specific content, optimal frequency, length of sessions, and number of sessions needed for an intervention to be effective. • Assess whether interventions should be tailored to promote healthy weight gain in populations of pregnant people of advanced maternal age (i.e., older than age 34 years); adolescents; historically underserved populations such as Black, American Indian/Alaska Native, and Hispanic/Latino persons; and populations with increased rates of overweight and obesity.

USPSTF Recommendation	Gaps Where Research Is Needed
Smoking Cessation	
4. Interventions for Tobacco Smoking Cessation in Adults, Including Pregnant Persons	• Examine effective components of behavioral counseling, including understanding interventions that provide the greatest benefits to high-risk populations. • Examine whether e-cigarettes increase adult tobacco smoking cessation and the potential harms of e-cigarette use. • Examine newer modalities and remotely delivered interventions (mobile phone apps and internet-based interventions).
Diabetes	
5. Screening for Prediabetes and Type 2 Diabetes in Children and Adolescents	• Address the effects of lifestyle interventions, pharmacotherapy, or both for treatment of screen-detected prediabetes and diabetes on health outcomes in children and adolescents, particularly in racial and ethnic groups that have a higher prevalence of diabetes. • Address the effects of screening on health outcomes in child and adolescent populations reflective of the prevalence of diabetes in the United States, particularly in racial and ethnic groups that have a higher prevalence of diabetes.
6. Screening for Prediabetes and Type 2 Diabetes in Adults	• Evaluate data on the effects of lifestyle interventions and medical treatments for screen-detected prediabetes and diabetes on health outcomes over a longer followup period, particularly in populations that have a higher prevalence of diabetes. • Examine how best to increase uptake of lifestyle interventions, especially among populations at highest risk for progression to diabetes and adverse health outcomes. • Enroll racial and ethnic populations that experience a higher prevalence of prediabetes and diabetes to understand the effects of screening on health outcomes.
Oral Health	
7. Screening and Interventions for the Prevention of Dental Caries in Children Younger Than Age 5 Years	• Assess the effectiveness of oral health educational and counseling interventions for parents and caregivers/guardians of young children. • Enroll children from racial and ethnic populations that have been historically underrepresented (Black and Hispanic/Mexican American children) to understand the benefits and harms of risk assessment tools and preventive interventions. • Validate the accuracy and use of caries risk assessment tools for use in the primary care settings and determine how referral to dental care by primary care clinicians affects caries outcomes.

"The Office of Disease Prevention is the lead office at the National Institutes of Health (NIH) responsible for facilitating and stimulating disease prevention research in collaboration with NIH's Institutes and Centers. The critical evidence gaps identified by the USPSTF—especially those likely to advance health equity—directly inform our research priorities and investments. Together with the USPSTF, we are committed to highlighting important research opportunities and to finding strategies to maximize the impact of this research."

David M. Murray, PhD
Associate Director for Prevention
Director, Office of Disease Prevention
National Institutes of Health

Cardiovascular Disease

Behavioral Counseling for Healthy Diet and Physical Activity for Cardiovascular Disease Prevention in Adults With and Without Known Risk Factors

CVD, which includes heart disease and stroke, is the leading cause of death in the United States.[11] Known modifiable risk factors for CVD include smoking, overweight and obesity, diabetes, elevated blood pressure or hypertension, elevated cholesterol levels, lack of physical activity, and unhealthy diet. Adults who adhere to national guidelines for a healthy diet[12] and physical activity[13] have lower cardiovascular morbidity and mortality than those who do not. All people, regardless of their CVD risk status, can gain health benefits from healthy eating behaviors and regular physical activity.

Behavioral counseling interventions are aimed at improving diet and increasing physical activity to help prevent CVD. Promoting a healthy diet focuses on increasing consumption of fruits, vegetables, whole grains, fat-free or low-fat dairy, lean proteins, and oils; and decreasing consumption of foods with high sodium levels, saturated or trans fats, and sugar-sweetened beverages, as recommended by the U.S. Department of Agriculture and the U.S. Food and Drug Administration.[12] Physical activity counseling focuses on promoting any activity that enhances or maintains overall physical fitness. Adults age 18 years or older should engage in at least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity aerobic physical activity per week, in addition to engaging in strengthening activities at least twice per week.[13]

People who are at higher risk of developing CVD can help reduce their risk or keep their disease under control by engaging in healthy behaviors.

Some populations are at greater risk for developing CVD and its risk factors. For example, Black people are more likely to die from heart disease than other racial and ethnic groups.[14] Hypertension is more common in Black and Hispanic/Latino people.[15] Black women are at the highest risk of stroke, pulmonary edema, or heart failure.[15,16] Hispanic/Latino adults and Black adults are less likely to meet Federal physical activity guidelines.[17]

The USPSTF identified high-priority gaps related to behavioral counseling to prevent CVD. To fill these gaps, the USPSTF needs well-designed studies that do the following:

- Evaluate best practices for clinicians and patients to navigate known environmental and structural barriers to healthy diet and physical activity.
- Design and test interventions to reduce sedentary behavior. The recent increase in working from home during the COVID-19 pandemic may present an opportunity to perform research on effective interventions that reduce sedentary time.
- Recruit enough participants from populations disproportionately affected by CVD to understand the benefit of physical activity and dietary behavioral counseling interventions in these populations.
- Develop and evaluate culturally appropriate and tailored interventions that may reduce disparities related to cardiovascular health.
- Encourage greater consistency and standardization of outcome measures in studies, specifically those for physical activity and diet, to better understand the range of effects and interpret the pooled effects.
- Examine the effects of the use of newer technologies, such as wearable activity trackers. In addition, examine the effects of internet-based resources such as daily caloric intake applications or other low-intensity approaches that may be valuable in low-resource settings.

Healthy Weight in Pregnancy

Behavioral Counseling Interventions for Healthy Weight and Weight Gain in Pregnancy

The prevalence of overweight and obesity is increasing among people of childbearing age and pregnant people.[18] In 2015, almost half of all pregnant people began pregnancy with overweight (24%) or obesity (another 24%).[18,19] Excess weight at the beginning of pregnancy and excess gestational weight gain have been associated with adverse maternal and infant health outcomes such as a large for gestational age infant, emergency cesarean delivery, or preterm birth.

Effective interventions for healthy weight and weight gain in pregnancy provide behavioral counseling on healthy diet and exercise through individual or group education sessions in various settings (e.g., local community fitness center). These behavioral counseling interventions are associated with decreased risk of gestational diabetes, emergency cesarean delivery, and babies who are born weighing more than the usual.[18]

Black, American Indian/Alaskan Native, and Hispanic/Latino women have higher reported rates of overweight and obesity.[20] These people can help reduce their risks by engaging in healthy behaviors.

The USPSTF identified high-priority gaps related to behavioral counseling to promote healthy weight and weight gain in pregnancy. To fill these gaps, the USPSTF needs well-designed studies that do the following:

- Assess the specific components of intensive behavioral interventions, including the specific content, optimal frequency, length of sessions, and number of sessions needed for an intervention to be effective.
- Assess whether interventions should be tailored to promote healthy weight gain in populations of pregnant people of advanced maternal age (i.e., older than age 34 years); adolescents; historically underserved populations such as Black, American Indian/Alaska Native, and Hispanic/Latino persons; and populations with increased rates of overweight and obesity.

Smoking Cessation

Interventions for Tobacco Smoking Cessation in Adults, Including Pregnant Persons

Tobacco use is the leading preventable cause of disease, disability, and death in the United States. Cigarette smoking results in more than 480,000 premature deaths each year and accounts for about 1 in every 5 deaths.[21] In pregnant women, smoking increases the risk for congenital anomalies; perinatal complications, such as preterm birth, fetal growth restriction, and placental abruption; miscarriage and stillbirth; and neonatal/pediatric complications, such as sudden infant death syndrome (SIDS) and impaired lung function in childhood.[21-25] An estimated 42.1 million U.S. adults (almost 18% of the population) currently smoke.[26]

Behavioral counseling and treatment with medication, either individually or in combination, are effective tobacco smoking cessation interventions.[27,28] Common approaches for clinicians include recording a patient's smoking status as a vital sign or using the "5 A's": 1) ask about smoking; 2) advise to quit through clear, personalized messages; 3) assess willingness to quit; 4) assist to quit; and 5) arrange followup and support. Another approach is "Ask, Advise, Refer," which encourages clinicians to ask patients about tobacco use, advise patients to quit, and refer patients to quitlines, other evidence-based cessation interventions, or both.

Smoking prevalence is higher in males, adults ages 25 to 44 years, non-Hispanic American Indian/Alaska Native persons, people with a GED level education, people with an annual household income of less than $35,000, people who are lesbian, gay, bisexual, or transgender,[25] and people with mental health conditions.[26]

The USPSTF identified high-priority gaps related to interventions for tobacco smoking cessation in adults, including pregnant people. To fill these gaps, the USPSTF needs well-designed studies that do the following:

- Examine effective components of behavioral counseling, including understanding interventions that provide the greatest benefits to high-risk populations.
- Examine whether e-cigarettes increase adult tobacco smoking cessation and the potential harms of e-cigarette use.
- Examine newer modalities and remotely delivered interventions (mobile phone apps and internet-based interventions).

Diabetes

Screening for Prediabetes and Type 2 Diabetes in Children, Adolescents, and Adults

According to the Centers for Disease Control and Prevention (CDC) 2020 National Diabetes Statistics Report, an estimated 13% of all U.S. adults age 18 years or older have diabetes, and 34.5% meet criteria for prediabetes.[29] The CDC estimates that 21.4% of persons with diabetes were not aware of or did not report having diabetes, and only 15.3% of persons with prediabetes reported being told by a clinician that they had this condition.[29] There is a strong association between the prevalence of diabetes and social factors such as socioeconomic status, food environment, and physical environment.[30]

The CDC estimates that as of 2018, 210,000 children and adolescents younger than age 20 years (or 25 per 10,000 U.S. youths) have diabetes, of which approximately 23,000 have type 2 diabetes.[29] Youth with type 2 diabetes have an increased prevalence of associated chronic comorbid conditions, including hypertension, dyslipidemia, and nonalcoholic fatty liver disease. Approximately 20% of adolescents ages 12 to 18 years met criteria for prediabetes during 2005 to 2016.[31]

Some populations are at higher risk for prediabetes and diabetes and can help reduce their risk by engaging in healthy behaviors. These higher-risk populations include older adults who have a higher prevalence of prediabetes and diabetes; American Indian/Alaska Native, Asian, Hispanic/Latino, and Black people;[29] adolescent boys ages 12 to 18 years, who have a higher prevalence of prediabetes than girls;[32] and adolescents with obesity, who have a higher prevalence than those with normal weight.[32]

The USPSTF identified high-priority gaps related to screening for prediabetes and type 2 diabetes in children, adolescents, and adults. To fill these gaps, the USPSTF needs well-designed studies that do the following:

- Address the effects of lifestyle interventions, pharmacotherapy, or both for treatment of screen-detected prediabetes and diabetes on health outcomes in children and adolescents, particularly in racial and ethnic groups that have a higher prevalence of diabetes.
- Address the effects of screening on health outcomes in child and adolescent populations reflective of the prevalence of diabetes in the United States, particularly in racial and ethnic groups that have a higher prevalence of diabetes.
- Evaluate data on the effects of lifestyle interventions and medical treatments for screen-detected prediabetes and diabetes on health outcomes over a longer followup period, particularly in populations that have a higher prevalence of diabetes.

- Examine how best to increase uptake of lifestyle interventions, especially among populations at highest risk for progression to diabetes and adverse health outcomes.
- Enroll racial and ethnic populations that experience a higher prevalence of prediabetes and diabetes to understand the effects of screening on health outcomes.

Oral Health

Screening and Interventions for the Prevention of Dental Caries in Children Younger Than Age 5 Years

Dental caries is the most common chronic disease in children in the United States.[33-35] According to the 2011–2016 National Health and Nutrition Examination Survey, approximately 23% of children ages 2 to 5 years had dental caries in their primary teeth.[36] Dental caries in early childhood is associated with pain, loss of teeth, impaired growth, decreased weight gain, negative effects on quality of life, poor school performance, and future dental caries.[33]

Oral fluoride supplementation prevents dental caries in patients with deficient water fluoridation (<0.6 parts fluoride per million parts water [ppm F]).[37-39] Topical fluoride applied as a varnish with a small brush in young children (typically available as 5% sodium fluoride [2.26% fluoride]) is effective in preventing caries.

Mexican American children and Black children have reported a higher prevalence of dental caries.[40] Engaging in healthy oral health behaviors can help reduce their risks.

The USPSTF identified high-priority gaps related to screening and interventions for the prevention of dental caries in children younger than age 5 years. To fill these gaps, the USPSTF needs well-designed studies that do the following:

- Assess the effectiveness of oral health educational and counseling interventions for parents and caregivers/guardians of young children.
- Enroll children from racial and ethnic populations that have been historically underrepresented (Black and Hispanic/Mexican American children) to understand the benefits and harms of risk assessment tools and preventive interventions.
- Validate the accuracy and use of caries risk assessment tools for use in the primary care settings and determine how referral to dental care by primary care clinicians affects caries outcomes.

"The Community Preventive Services Task Force (CPSTF) provides evidence-based findings and recommendations about community preventive services and interventions aimed at improving population health. Like the USPSTF, the CPSTF relies on rigorous scientific studies, and we join the call to urgently fill important gaps in the evidence base, particularly those associated with historically disadvantaged racial and ethnic populations and populations with lower incomes."

Ned Calonge, MD, MPH
Chair
The Community Preventive Services Task Force

THE USPSTF IN 2022 AND OTHER HIGHLIGHTS

Over the past year, the Task Force members continued working on a full portfolio of topics. The current USPSTF library includes 88 preventive service recommendation statements, with 138 specific recommendation grades. Many recommendation statements include multiple recommendation grades for different populations. In fiscal year 2022 (October 1, 2021, to September 30, 2022), the Task Force accomplished the following:

- Received 34 nominations for new topics and 11 nominations to reconsider or update existing topics
- Posted 9 draft research plans for public comment
- Posted 16 draft recommendation statements and 15 draft evidence reports for public comment
- Published 12 final recommendation statements with 19 recommendation grades in medical journals; posted 12 final evidence reports
- For a listing of all final USPSTF recommendations released since the last report, see **Appendix B**.

Of the Task Force's portfolio of **88 topics**, the following posted or published this year.

Draft Research Plan

- Interventions for Weight Management in Children & Adolescents
- Interventions to Prevent Falls in Older Adults
- Interventions to Support Breastfeeding
- Iron Deficiency Anemia During Pregnancy
- PrEP for HIV Prevention
- Preventive Services for Food Insecurity
- Primary Care Interventions to Prevent Child Maltreatment
- Screening for Cervical Cancer
- Screening for Speech & Language Delay & Disorders in Young Children

Final Research Plan

- Folic Acid to Prevent Neural Tube Defects
- Interventions for Weight Management in Children & Adolescents
- Interventions to Prevent Falls in Older Adults
- Interventions to Support Breastfeeding
- Iron Deficiency Anemia During Pregnancy
- PrEP for HIV Prevention
- Preventive Services for Food Insecurity
- Primary Care Interventions to Prevent Child Maltreatment
- Screening for Genital Herpes
- Screening for Osteoporosis
- Screening for Speech & Language Delay & Disorders in Young Children

Draft Recommendation

- Aspirin Use to Prevent Cardiovascular Disease
- Counseling to Promote a Healthy Lifestyle in Adults Without CVD Risk Factors
- Hormone Therapy for the Prevention of Chronic Conditions
- Screening for COPD
- Screening for Anxiety in Children & Adolescents
- Screening for Anxiety in Adults
- Screening for Depression & Suicide Risk in Children & Adolescents
- Screening for Depression & Suicide Risk in Adults
- Screening for Eating Disorders
- Screening for Genital Herpes
- Screening for Glaucoma
- Screening for Impaired Vision
- Screening for Prediabetes & Type 2 Diabetes in Youth
- Screening for Sleep Apnea
- Screening for Syphilis in Nonpregnant Persons
- Statin Use to Prevent Cardiovascular Disease

Final Recommendation

- Aspirin to Prevent Cardiovascular Disease
- Counseling to Promote a Healthy Lifestyle in Adults Without CVD Risk Factors
- Screening for Atrial Fibrillation
- Screening for COPD
- Screening for Eating Disorders in Adolescents & Adults
- Screening for Glaucoma
- Screening for Impaired Vision
- Screening for Prediabetes & Type 2 Diabetes in Youth
- Screening for Syphilis Infection
- Screening & Interventions to Prevent Dental Caries in Children
- Statin Use to Prevent Cardiovascular Disease
- Vitamin & Mineral Supplementation to Prevent CVD & Cancer

Partner Engagement to Develop and Disseminate Recommendations

The USPSTF continued to work with its partner organizations to enhance the accuracy and relevance of its recommendations, disseminate the work of the USPSTF, and facilitate implementation of the Task Force recommendations into practice. As part of its commitment to improving health equity, the Task Force welcomed five new partner organizations in 2022:

- American College of Nurse-Midwives
- American Geriatrics Society
- Association of American Indian Physicians
- Health Professionals Advancing LGBTQ Equality
- National Council of Asian Pacific Islander Physicians

The complete list of USPSTF Partners is available in **Appendices C** and **D**.

Efforts to Reduce Disparities in Healthcare

This report focuses on recent evidence gaps related to promoting healthy behaviors across the lifespan, with emphasis on high-risk populations. Chronic diseases are the leading cause of death and disability in the United States, with high-risk populations often having higher incidences and worse outcomes due to social, economic, and structural factors, including those that perpetuate systemic racism.

Systemic racism affects every aspect of our society—including health and healthcare. It can prevent some people from accessing and receiving their recommended healthcare and increase the risk of illness. The Task Force has a long-standing commitment to methods for evaluating the evidence for clinical preventive services and making recommendations that promote health equity.[7,9] To improve equity in disease prevention, the USPSTF proactively searches the data on populations historically underrepresented in research and calls for new research to fill existing gaps in support of the varying health needs of people nationwide.

In November 2021, the USPSTF published an article titled "Actions to Transform U.S. Preventive Services Task Force Methods to Mitigate Systemic Racism in Clinical Preventive Services." In this article, the Task Force asserts that people who experience racism generally have shorter life expectancies and experience more health problems due to preventable causes. The article details the actions the Task Force is taking to promote antiracism and health equity in preventive care by confronting these issues throughout its recommendation development process. These efforts are aimed at reducing the effects of social injustices in healthcare and, ultimately, helping better equip clinicians with the evidence-based guidance they need to prevent disease and keep everyone as healthy as possible.

Dissemination Impact of USPSTF Recommendations

The USPSTF engages in several activities to disseminate its recommendations in order to increase their uptake. During the past fiscal year (October 1, 2021, to September 30, 2022), clinicians, patients, and other stakeholders viewed the USPSTF recommendations via the USPSTF website, the *Journal of the American Medical Association (JAMA)*, and the Prevention TaskForce app as follows:

Email Outreach

80,724
Task Force email list subscribers notified regularly about topics and other activities

Digital Impact

19,192,539
Total page views of the Task Force website

6,120,744
Total unique visitors to the Task Force website

1,249,012 visits
Home Page

595,224 visits
Colorectal Cancer Recommendation

585,505 visits
A and B Recommendarions

Top visited pages of the Task Force website

Clinical Practice Impact

481,005
Total page views of Task Force articles published on *JAMA* website

115,944
Number of new Prevention TaskForce app downloads

1,116,558
Total number of Prevention TaskForce app downloads

Efforts to Fill USPSTF Research Gaps

The USPSTF, supported by the Agency for Healthcare Research and Quality (AHRQ), works with its partner organizations to help disseminate the work of the USPSTF to its members and constituents and help put the recommendations into practice. For each recommendation, the USPSTF calls attention to high-priority research gaps where evidence is insufficient, with special attention to areas where evidence is needed for specific populations. The National Institutes of Health (NIH) reviews these research gaps and uses this information when developing future funding opportunities.

In fiscal year 2022, AHRQ and NIH commissioned the National Academies of Sciences, Engineering, and Medicine to develop a taxonomy to help categorize and communicate evidence gaps in USPSTF clinical preventive service recommendations. In response, the USPSTF has reaffirmed its commitment to highlighting priority evidence gaps and is working with AHRQ and NIH to explore ways to integrate the proposed taxonomy.

THE USPSTF IN 2023

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

Develop and Release New Recommendation Statements

- Work on more than 35 topics that are in progress
- Work on 7 new topics nominated for consideration through the public topic nomination process
- Post 9 draft research plans and 12 draft recommendation statements and evidence reports for public comment
- Publish 13 final recommendation statements

Coordinate With Partners to Develop and Disseminate Recommendations

- Coordinate with the USPSTF Dissemination and Implementation Partners and Federal Liaisons to solicit input and disseminate the recommendations to primary care clinicians and other stakeholders

Address Research Gaps

- Continue close coordination with NIH's Office of Disease Prevention to identify areas that might warrant expanded research efforts to fill evidence gaps
- Prepare the 13th Annual Report to Congress on High-Priority Evidence Gaps (see **Appendix E** for a list of prior reports)

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

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APPENDICES

Appendix A: Members of the USPSTF (2022)

Carol M. Mangione, M.D., M.S.P.H., Chair

Dr. Mangione is the chief of the Division of General Internal Medicine and Health Services Research; holds the Barbara A. Levey, M.D., and Gerald S. Levey, M.D., endowed chair in medicine; and is a distinguished professor of medicine and public health at the University of California, Los Angeles (UCLA) and the executive vice chair for Health Equity and Health Services Research in the UCLA Department of Medicine.

Michael J. Barry, M.D., Vice Chair

Dr. Barry is the director of the Informed Medical Decisions Program in the Health Decision Sciences Center at Massachusetts General Hospital. He is also a professor of medicine at Harvard Medical School and a primary care clinician at Massachusetts General Hospital.

Wanda K. Nicholson, M.D., M.P.H., M.B.A., Vice Chair

Dr. Nicholson is a tenured professor of obstetrics and gynecology, director of the PoWER (Patient-Centered Women's Endocrine and Reproductive Health) Research Program, and director of the Generalist Reproductive Health Fellowship at the University of North Carolina at Chapel Hill School of Medicine. She is a member and vice-president-elect of the board of directors of the American Board of Obstetrics and Gynecology; editor of health equity, diversity, and inclusion for the *American Journal of Obstetrics and Gynecology*; past chair of the American College of Obstetricians and Gynecologists (ACOG) Diversity, Equity, and Inclusive Excellence Workgroup; and an immediate past member of the executive board of ACOG.

Michael Cabana, M.D., M.A., M.P.H., Member

Dr. Cabana is a general pediatrician, professor of pediatrics, and chair of the Department of Pediatrics at the Albert Einstein College of Medicine. He is also physician-in-chief at the Children's Hospital at Montefiore.

David Chelmow, M.D., Member

Dr. Chelmow is the Leo J. Dunn professor of obstetrics and gynecology and interim dean at Virginia Commonwealth University (VCU) School of Medicine in Richmond, Virginia. He serves as interim executive vice president for medical affairs at VCU Health, where he has directed obstetric and gynecological clinical services as chair for more than a decade.

Tumaini Rucker Coker, M.D., M.B.A., Member

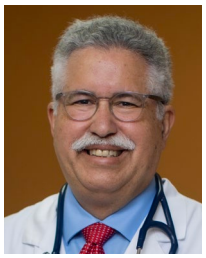
Dr. Coker is chief of the Division of General Pediatrics and professor of pediatrics at the University of Washington School of Medicine and Seattle Children's. She serves as the co-director of the University of Washington's Child Health Equity Research Fellowship, which is funded by the National Institutes of Health.

Esa M. Davis, M.D., M.P.H., Member

Dr. Davis is an associate professor of medicine and clinical and translational science at the University of Pittsburgh School of Medicine and the director of the University of Pittsburgh Medical Center Tobacco Treatment Service. She is the co-director of the Clinical and Translational Science Institute's KL2 Program and director of the Career Education and Enhancement for Health Care Research Diversity Program at the University of Pittsburgh. Dr. Davis is a practicing family physician and health services researcher.

Katrina Donahue, M.D., M.P.H., Member

Dr. Donahue is a professor and vice chair of research at the University of North Carolina at Chapel Hill Department of Family Medicine. She is a family physician and senior research fellow at the Cecil G. Sheps Center for Health Services Research and the co-director of the North Carolina Network Consortium, a meta-network of six practice-based research networks and four academic institutions in North Carolina.



Carlos Roberto Jaén, M.D., Ph.D., M.S., FAAFP, Member

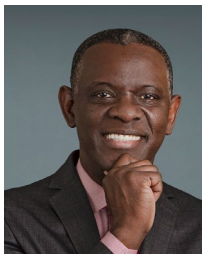
Dr. Jaén is a professor and the Dr. and Mrs. James L. Holly distinguished chair in the Department of Family and Community Medicine at the Joe R. and Teresa Lozano Long School of Medicine at The University of Texas Health Science Center at San Antonio.

Martha Kubik, Ph.D., R.N., Member

Dr. Kubik is a professor at the School of Nursing, College of Health and Human Services at George Mason University. She is a nurse scientist, active researcher, and past standing member on the National Institutes of Health's Community-Level Health Promotion Study Section. Dr. Kubik is an advanced practice nurse and a fellow of the American Academy of Nursing.

Li Li, M.D., Ph.D., M.P.H., Member

Dr. Li is a family physician and the Walter M. Seward professor and the chair of family medicine at the University of Virginia (UVA) School of Medicine. He is also the director of population health at UVA Health and leader of the Cancer Prevention and Population Health program at the UVA Comprehensive Cancer Center.



Gbenga Ogedegbe, M.D., M.P.H., Member

Dr. Ogedegbe is the inaugural and founding director of the Institute for Excellence in Health Equity at New York University (NYU) Langone Health. He is the Dr. Adolph and Margaret Berger Professor of Medicine and Population Health at NYU Grossman School of Medicine. Dr. Ogedegbe is a member of the National Academy of Medicine.

Lori Pbert, Ph.D., Member

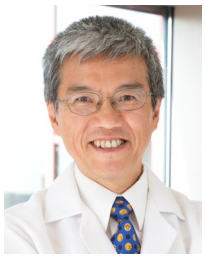
Dr. Pbert is a professor in the Department of Population and Quantitative Health Sciences, associate chief of the Division of Preventive and Behavioral Medicine, and founder and director of the Center for Tobacco Treatment Research and Training at the University of Massachusetts Chan Medical School.

John M. Ruiz, Ph.D., Member

Dr. Ruiz is a professor of clinical psychology in the Department of Psychology at the University of Arizona, where he is also the director of diversity, equity, and inclusivity.

James Stevermer, M.D., M.S.P.H., Member

Dr. Stevermer is the vice chair for clinical affairs and a professor of family and community medicine at the University of Missouri (MU). He is the medical director of MU Health Care Family Medicine–Callaway Physicians, where he practices and teaches rural primary care. His scholarly activities focus on dissemination and evidence-based medicine.



John B. Wong, M.D., Member

Dr. Wong is vice chair for academic affairs, chief of the Division of Clinical Decision Making, and a primary care clinician in the Department of Medicine at Tufts Medical Center. He is also a professor of medicine at Tufts University School of Medicine.

Appendix B: USPSTF Final Recommendations Published October 2021–September 2022

Over the past year, the members of the Task Force continued working on a full portfolio of topics. It published 12 final recommendation statements with 19 recommendation grades in a peer-reviewed journal between October 1, 2021, and September 30, 2022. For a complete listing of all current USPSTF recommendations, see the USPSTF website (https://www.uspreventiveservicestaskforce.org/).

Appendix B Table. Final Recommendation Statements Published by the USPSTF, October 1, 2021, to September 30, 2022

Topic	Recommendation
Aspirin Use to Prevent Cardiovascular Disease (CVD)	The decision to initiate low-dose aspirin use for the primary prevention of CVD in adults ages 40 to 59 years who have a 10% or greater 10-year CVD risk should be an individual one. Evidence indicates that the net benefit of aspirin use in this group is small. Persons who are not at increased risk for bleeding and are willing to take low-dose aspirin daily are more likely to benefit. **(Grade C)** The USPSTF recommends against initiating low-dose aspirin use for the primary prevention of CVD in adults age 60 years or older. **(Grade D)**
Behavioral Counseling Interventions to Promote a Healthy Diet and Physical Activity for CVD Prevention in Adults Without CVD Risk Factors	The USPSTF recommends that clinicians individualize the decision to offer or refer adults without CVD risk factors to behavioral counseling interventions to promote a healthy diet and physical activity. **(Grade C)**
Screening and Interventions to Prevent Dental Caries in Children Younger Than Age 5 Years	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 younger than age 5 years. **(I statement)**
Screening for Atrial Fibrillation	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for atrial fibrillation. **(I statement)**
Screening for Chronic Obstructive Pulmonary Disease	The USPSTF recommends against screening for chronic obstructive pulmonary disease in asymptomatic adults. **(Grade D)**
Screening for Eating Disorders in Adolescents and Adults	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for eating disorders in adolescents and adults. **(I statement)**

Topic	Recommendation
Screening for Impaired Visual Acuity in Older Adults	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for impaired visual acuity in older adults. **(I statement)**
Screening for Prediabetes and Type 2 Diabetes in Children and Adolescents	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for type 2 diabetes in children and adolescents. **(I statement)**
Screening for Primary Open-Angle Glaucoma	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 statement)**
Screening for Syphilis Infection in Nonpregnant Adolescents and Adults	The USPSTF recommends screening for syphilis infection in persons who are at increased risk for infection. **(Grade A)**
Statin Use for the Primary Prevention of CVD in Adults	The USPSTF recommends that clinicians prescribe a statin for the primary prevention of CVD for adults aged 40 to 75 years who have 1 or more CVD risk factors (i.e., dyslipidemia, diabetes, hypertension, or smoking) and an estimated 10-year risk of a cardiovascular event of 10% or greater. **(Grade B)** The USPSTF recommends that clinicians selectively offer a statin for the primary prevention of CVD for adults aged 40 to 75 years who have 1 or more CVD risk factors (i.e., dyslipidemia, diabetes, hypertension, or smoking) and an estimated 10-year risk of a cardiovascular event of 7.5% to less than 10%. The likelihood of benefit is smaller in this group than in persons with a 10-year risk of 10% or greater. **(Grade C)** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of initiating a statin for the primary prevention of CVD events and mortality in adults 76 years or older. **(I statement)**
Vitamin, Mineral, and Multivitamin Supplementation to Prevent Cardiovascular Disease and Cancer	The USPSTF recommends against the use of beta carotene or vitamin E supplements for the prevention of CVD or cancer. **(Grade D)** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the use of multivitamin supplements for the prevention of CVD 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 (other than beta carotene and vitamin E) for the prevention of CVD or cancer. **(I statement)**

Appendix C: USPSTF Dissemination and Implementation Partner Organizations (2022)

AARP
American Academy of Family Physicians
American Academy of Pediatrics
American Academy of Physician Associates
American Association of Nurse Practitioners
American College of Nurse-Midwives
American College of Obstetricians and Gynecologists
American College of Physicians
American College of Preventive Medicine
American Geriatrics Society
American Medical Association
American Osteopathic Association
American Psychological Association
America's Health Insurance Plans
Association of American Indian Physicians
Business Group on Health
Canadian Task Force on Preventive Health Care
Community Preventive Services Task Force
GLMA: Health Professionals Advancing LGBTQ Equality
National Association of Pediatric Nurse Practitioners
National Committee for Quality Assurance
National Council of Asian Pacific Islander Physicians
National Hispanic Medical Association
National Medical Association/Cobb Institute
Patient-Centered Outcomes Research Institute

Appendix D: Federal Liaisons to the USPSTF (2022)

Centers for Disease Control and Prevention
Centers for Medicare & Medicaid Services
Department of Defense Military Health System
Department of Health and Human Services, Office of Minority Health
Department of Veterans Affairs National Center for Health Promotion and Disease Prevention
Health Resources and Services Administration
Indian Health Service
National Cancer Institute
National Institutes of Health
Office of the Assistant Secretary for Health, Office of Disease Prevention and Health Promotion
Substance Abuse and Mental Health Services Administration
U.S. Food and Drug Administration

Appendix E: Prior Annual Reports to Congress on High-Priority Evidence Gaps for Clinical Preventive Services

The table below lists the prior annual Reports to Congress on High-Priority Evidence Gaps for Clinical Preventive Services. Electronic versions of each report are available on the USPSTF website at https://www.uspreventiveservicestaskforce.org/uspstf/about-uspstf/reports-congress.

Appendix E Table. Prior Annual Reports to Congress

Year	Title	Theme
2021	Eleventh Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Health equity in cardiovascular disease and cancer prevention
2020	Tenth Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Child and adolescent health and health inequities
2019	Ninth Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Mental health, substance use, and violence prevention
2018	Eighth Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Cancer prevention and cardiovascular health
2017	Seventh Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Recent evidence gaps
2016	Sixth Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Recent evidence gaps
2015	Fifth Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Women's health
2014	Fourth Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Child and adolescent health
2013	Third Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Older adult health
2012	Second Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Recent evidence gaps
2011	First Annual Report to Congress on High-Priority Evidence Gaps for Clinical Preventive Services	Recent evidence gaps

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