Prevention and Screening Recommendations

TOPIC	REC	NOTES
A **Abdominal Aortic Aneurysm**	**B**	Recommend one-time screening for abdominal aortic aneurysm (AAA) by ultrasonography in men aged 65 to 75 who have ever smoked. Good evidence on benefit & harms. Harms = increased surgical and psychological morbidity. Conclusion: moderated benefit outweighs harms for male smokers, age 65-75.
B **Bacteriuria**	**A**	Good evidence that screening pregnant women for asymptomatic bacteriuria with urine culture significantly reduces symptomatic urinary tract infections, low birth weight, and preterm delivery. Not true for non-pregnant women or men.
Bladder Cancer	**D**	Fair evidence that screening with available tests can detect bladder cancer in asymptomatic individuals. Potential benefit of screening would be small for the following reasons: fair evidence that many of the cancers detected by screening have low tendency to progress to invasive disease; relatively low overall prevalence of asymptomatic bladder cancer that would eventually lead to important clinical consequences; limited evidence that early treatment of bladder cancer detected through screening improves long-term health outcomes.
Blood Pressure	**A**	Good evidence that blood pressure measurement can identify adults at increased risk for cardiovascular disease due to high blood pressure, and good evidence that treatment of high blood pressure substantially decreases the incidence of cardiovascular disease and causes few major harms.
Breast Cancer	**B**	Fair evidence that mammography screening every 12-33 months significantly reduces mortality from breast cancer. Evidence is strongest for women aged 50-69. For women aged 40-49, the evidence that screening mammography reduces mortality from breast cancer is weaker, and the absolute benefit of mammography is smaller, than it is for older women. Most, but not all, studies indicate a mortality benefit for women undergoing mammography at ages 40-49, but the delay in observed benefit in women younger than 50 makes it difficult to determine the incremental benefit of beginning screening at age 40 rather than at age 50.
C **Carotid Artery Stenosis**	**I**	Insufficient evidence to recommend for or against screening asymptomatic persons for carotid artery stenosis using physical examination or carotid ultrasound. For selected high-risk patients, a recommendation to discuss the potential benefits of screening and carotid endarterectomy may be made on other grounds. All persons should be screened for hypertension, and clinicians should provide counseling about smoking cessation.
Cervical Cancer	**A**	Good evidence from multiple observational studies that screening with Pap smears reduces incidence of and mortality from cervical cancer. Evidence to determine the optimal starting and stopping age and interval for screening is limited. Indirect evidence suggests most of the benefit can be obtained by beginning screening within 3 years of onset of sexual activity or age 21 (whichever comes first) and screening at least every 3 years. Consider stopping screening > 65 y/o if women has had adequate screening with 3 negative findings in past and no abnormal Pap tests in 10 yrs. Be alert to screen any women who has not had adequate screening in past.
Chlamydial Infection	**A**	Good evidence that screening women at risk for chlamydial infection reduces the incidence of pelvic inflammatory disease and fair evidence that community-based screening reduces prevalence of chlamydial infection. Routinely screen all sexually active women aged 25 years and younger (including those pregnant), and other asymptomatic women at increased risk for chlamydial infection.
Colorectal Cancer	**A**	Strongly recommends that clinicians screen men and women 50 years of age or older for colorectal cancer. Fair to good evidence that several screening methods are effective in reducing mortality from colorectal cancer. Benefits from screening substantially outweigh potential harms, but the quality of evidence, magnitude of benefit, and potential harms vary with each method (FOB testing, flex sig, colonoscopy). Initiate screening at 50 years of age for men and women at average risk for colorectal cancer. In persons at higher risk (for example, those with a first-degree relative who receives a diagnosis with colorectal cancer before 60 years of age), initiating screening at an earlier age is reasonable.
Coronary Heart Disease	**D,I**	Recommends against routine screening with resting ECG, exercise testing (ETT), or scanning for coronary calcium for either the presence of severe coronary artery stenosis (CAS) or the prediction of coronary heart disease (CHD) events in adults at low risk for CHD events. Found insufficient evidence to recommend for or against routine screening with ECG, ETT, or EBCT scanning for coronary calcium in adults at increased risk for CHD events.
D **Dementia**	**I**	Evidence is insufficient to recommend for or against routine screening for dementia in older adults.
Depression	**B**	Good evidence that screening improves the accurate identification of depressed patients in primary care settings and that treatment of depressed adults identified in primary care settings decreases clinical morbidity. Insufficient evidence to recommend screening for adolescents and children.

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Diabetes Mellitus	**I, B**	The evidence is insufficient to recommend for or against routinely screening asymptomatic adults for type 2 diabetes, impaired glucose tolerance, or impaired fasting glucose. Good evidence to screen patients with hyperlipidemia, and those with hypertension, since lowering blood pressure to below conventional target ranges is deemed beneficial in diabetic hypertensives..
Diet	**B,I**	Recommends intensive behavioral dietary counseling for adult patients with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease. Intensive counseling can be delivered by primary care clinicians or by referral to other specialists, such as nutritionists or dietitians. Insufficient evidence to determine the significance and magnitude of the benefit of routine counseling to promote a healthy diet in adults
Drug Abuse	**I**	There is insufficient evidence to recommend for or against routine screening for drug abuse with standardized questionnaires or biologic assays. Including questions about drug use and drug-related problems when taking a history from all adolescent and adult patients may be recommended on other grounds.All pregnant women should be advised of the potential adverse effects of drug use on the development of the fetus.Clinicians should be alert to the signs and symptoms of drug abuse in patients and refer drug abusing patients to specialized treatment facilities where available.
F **Family Violence:**	**I**	Found no direct evidence that screening for family and intimate partner violence leads to decreased disability or premature death. The USPSTF found fair to good evidence that interventions reduce harm to children when child abuse or neglect has been suspected and assessed.
Glaucoma	**I**	Good evidence that screening can detect increased intraocular pressure (IOP) and early primary open-angle glaucoma (POAG) in adults. The USPSTF also found good evidence that early treatment of adults with increased IOP detected by screening reduces the number of persons who develop small, visual field defects, and that early treatment of those with early, asymptomatic POAG decreases the number of those whose visual field defects progress. The evidence, however, is insufficient to determine the extent to which screening—leading to the earlier detection and treatment of people with IOP or POAG—would reduce impairment in vision-related function or quality of life
Gonorrhea	**B**	Fair evidence that screening tests can accurately detect gonorrhea infection and good evidence that antibiotics can cure gonorrhea infection. There is fair evidence that screening pregnant women at high risk for gonorrhea, including women at high risk because of younger age, may prevent other complications associated with gonococcal infection during pregnancy, such as preterm delivery and chorioamnionitis. Risk factors for gonorrhea include a history of previous gonorrhea infection, other sexually transmitted infections, new or multiple sexual partners, inconsistent condom use, sex work, and drug use.
H **Hearing Impairment**	**B**	Screening for older adults for hearing impairment is recommended through: • Periodically questioning them about their hearing. • Counseling them about the availability of hearing aid devices. • Making referrals for abnormalities when appropriate.
Hemoglobinopathies	**B,I**	Neonatal screening for sickle hemoglobinopathies is recommended to identify infants who may benefit from antibiotic prophylaxis to prevent sepsis. Whether screening should be universal or targeted to high-risk groups will depend on: • The proportion of high-risk individuals in the screening area. • The accuracy and efficiency with which infants at risk can be identified. • Other characteristics of the screening program. Offering screening for hemoglobinopathies to pregnant women at the first prenatal visit is recommended, especially for those at high risk. There is insufficient evidence to recommend for or against routine screening for hemoglobinopathies in high-risk adolescents and young adults, but recommendations to offer such testing may be made on other grounds. All screening efforts must be accompanied by comprehensive counseling and treatment services.
Hepatitis B Virus Infection	**A,D**	Good evidence that universal prenatal screening for HBV infection using HBsAg substantially reduces prenatal transmission of HBV and the subsequent development of chronic HBV infection. The current practice of vaccinating all infants against HBV infection and postexposure prophylaxis with hepatitis B immune globulin administered at birth to infants of HBV-infected mothers substantially reduces the risk for acquiring HBV infection.

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		No evidence that screening the general population for HBV infection improves long-term health outcomes such as cirrhosis, hepatocellular carcinoma, or mortality. The prevalence of HBV infection is low; the majority of infected individuals do not develop chronic infection, cirrhosis, or HBV-related liver disease.
Hepatitis C Virus Infection	**D,I**	Good evidence that screening with available tests can detect HCV infection in the general population. The prevalence of HCV infection in the general population is low, and most who are infected do not develop cirrhosis or other major negative health outcomes. There is no evidence that screening for HCV infection leads to improved long-term health outcomes, such as decreased cirrhosis, hepatocellular cancer, or mortality. No evidence that screening for HCV infection in adults at high risk leads to improved long-term health outcomes, although the yield of screening would be substantially higher in a high-risk population than in an average-risk population and there is good evidence that anti-viral therapy improves intermediate outcomes, such as viremia. There is, as yet, no evidence that newer treatment regimens for HCV infection, such as pegylated interferon plus ribavirin, improve long-term health outcomes.
Herpes Simplex, Genital	**D**	Fair evidence that screening asymptomatic pregnant women using serological screening tests for HSV antibody does not reduce transmission of HSV to newborn infants. Women who develop primary HSV infection during pregnancy have the highest risk for transmitting HSV infection to their infants. Because these women are initially seronegative, serological screening tests for HSV (enzyme-linked immunosorbent assay [ELISA], immunoblot, and western blot assay [WBA]) do not accurately detect those at highest risk. No evidence that screening asymptomatic adolescents and adults with serological tests for HSV antibody improves health outcomes or symptoms or reduces transmission of disease.
Hormone Replacement Therapy	**D**	Good evidence that the use of combined estrogen and progestin results in both benefits and harms. Benefits include reduced risk for fracture (good evidence) and colorectal cancer (fair evidence). Combined estrogen and progestin has no beneficial effect on coronary heart disease and may even pose an increased risk (good evidence). Other harms include increased risk for breast cancer (good evidence), venous thromboembolism (good evidence), stroke (fair evidence), cholecystitis (fair evidence), dementia (fair evidence), and lower global cognitive function (fair evidence).
Human Immunodeficiency Virus (HIV) Infection	**A**	Good evidence that rapid screening tests accurately detect HIV infection. The USPSTF also found good evidence that appropriately timed interventions, particularly highly active antiretroviral therapy (HAART), lead to improved health outcomes for many of those screened, including reduced risk for clinical progression and reduced mortality. Since false-positive test results are rare, harms associated with HIV screening are minimal. Potential harms of true-positive test results include increased anxiety, labeling, and effects on close relationships. Most adverse events associated with HAART, including metabolic disturbances associated with an increased risk for cardiovascular events, may be ameliorated by changes in regimen or appropriate treatment. The USPSTF concluded that the benefits of screening individuals at increased risk substantially outweigh potential harms.
Hypothyroidism, Congenital	**A**	Screening for congenital hypothyroidism with thyroid function tests on dried-blood spot specimens is recommended for all newborns in the first week of life.
Lipid Disorders	**A,B**	Good evidence that lipid measurement can identify asymptomatic middle-aged people (men $\geq$ 35, women $\geq$ 45) at increased risk of coronary heart disease and good evidence that lipid-lowering drug therapy substantially decreases the incidence of coronary heart disease in such people with abnormal lipids and causes few major harms. Recommends that clinicians routinely screen younger adults (men aged 20 to 35 and women aged 20 to 45) for lipid disorders if they have other risk factors for coronary heart disease.
Lung Cancer	**I**	Evidence is insufficient to recommend for or against screening asymptomatic persons for lung cancer with either low dose computerized tomography (LDCT), chest x-ray (CXR), sputum cytology, or a combination of these tests
Motor Vehicle Injuries		The following counseling to all patients, and the parents of young patients, is recommended: • Use occupant restraints (lap/shoulder safety belts and child safety seats). • Wear helmets when riding motorcycles. • Refrain from driving while under the influence of alcohol or other drugs.
O **Obesity in Adults**	**I**	Found good evidence that body mass index (BMI) is reliable and valid for identifying adults at increased risk for mortality and morbidity due to overweight and obesity. There is fair to good evidence that high-intensity counseling—about diet, exercise, or both—together with behavioral interventions aimed at skill development, motivation,

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		and support strategies produces modest, sustained weight loss (typically 3-5 kg for 1 year or more) in adults who are obese (as defined by BMI $\geq$ 30 kg/m^2). Although the USPSTF did not find direct evidence that behavioral interventions lower mortality or morbidity from obesity, the USPSTF concluded that changes in intermediate outcomes, such as improved glucose metabolism, lipid levels, and blood pressure, from modest weight loss provide indirect evidence of health benefits
Oral Cancer	**I**	No good-quality evidence that screening for oral cancer leads to improved health outcomes for either high-risk adults (i.e., those over the age of 50 who use tobacco) or for average-risk adults in the general population.
Osteoporosis	**B,C**	Recommends that women aged 65 and older be screened routinely for osteoporosis. No recommendation for or against routine osteoporosis screening in postmenopausal women who are younger than 60 or in women aged 60-64 who are not at increased risk for osteoporotic fractures.
Ovarian Cancer	**D**	Fair evidence that screening with serum CA-125 level or transvaginal ultrasound can detect ovarian cancer at an earlier stage than it can be detected in the absence of screening; however, the USPSTF found fair evidence that earlier detection would likely have a small effect, at best, on mortality from ovarian cancer. Because of the low prevalence of ovarian cancer and the invasive nature of diagnostic testing after a positive screening test, there is fair evidence that screening could likely lead to important harms.
P **Peripheral Arterial Disease**	**D**	Fair evidence that screening with ankle brachial index can detect adults with asymptomatic PAD. The evidence is also fair that screening for PAD among asymptomatic adults in the general population would have few or no benefits because the prevalence of PAD in this group is low and because there is little evidence that treatment of PAD at this asymptomatic stage of disease, beyond treatment based on standard cardiovascular risk assessment, improves health outcomes.
Physical Activity	**I**	Insufficient evidence to determine whether counseling patients in primary care settings to promote physical activity leads to sustained increases in physical activity among adult patients. Controlled trials of physical activity counseling in adult primary care patients were of variable quality and had mixed results. There were no completed trials with children or adolescents that compared counseling with usual care practices. The USPSTF reviewed only the literature on the effectiveness of primary care counseling to promote physical activity. It did not review the evidence for the effectiveness of physical activity to reduce chronic disease morbidity and mortality, which has been well documented in other recent reviews, or review evidence of counseling in other settings.
Postexposure Prophylaxis for Selected Infectious Diseases		Postexposure prophylaxis should be provided to selected persons with exposure or possible exposure to: • Haemophilus influenzae type b. • Hepatitis A. • Hepatitis B. • Meningococcal pathogens. • Rabies pathogens • Tetanus pathogens
Prostate Cancer:	**I**	Good evidence that PSA screening can detect early-stage prostate cancer but mixed and inconclusive evidence that early detection improves health outcomes. Screening is associated with important harms, including frequent false-positive results and unnecessary anxiety, biopsies, and potential complications of treatment of some cancers that may never have affected a patient's health.
Rubella	**A**	Routine screening for rubella susceptibility by history of vaccination or by serology is recommended for all women of childbearing age at their first clinical encounter. Susceptible non-pregnant women should be offered rubella vaccination; susceptible pregnant women should be vaccinated immediately after delivery. An equally acceptable alternative for non-pregnant women of childbearing age is to offer vaccination against rubella without screening.
S **Skin Cancer:**	**I**	Evidence is insufficient to recommend for or against routine screening for skin cancer using a total-body skin examination for the early detection of cutaneous melanoma, basal cell cancer, or squamous cell skin cancer. Also insufficient evidence to determine whether clinician counseling is effective in changing patient behaviors to reduce skin cancer risk. Counseling parents may increase the use of sunscreen for children, but there is little evidence to determine the effects of counseling on other preventive behaviors (such as wearing protective clothing, reducing excessive sun exposure, avoiding sun lamps/tanning beds, or practicing skin self-examination) and little evidence on potential harms.
Suicide Risk	**I**	No evidence that screening for suicide risk reduces suicide attempts or mortality. There is limited evidence on the accuracy of screening tools to identify suicide risk in the primary care setting, including tools to identify those at high risk.

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		There is insufficient evidence that treatment of those at high risk reduces suicide attempts or mortality.
Syphilis	**A**	Strongly recommends that clinicians screen persons at increased risk for syphilis infection. Observational evidence that the universal screening of pregnant women decreases the proportion of infants with clinical manifestations of syphilis infection and those with positive serologies.
T **Testicular Cancer**	**D**	No new evidence that screening with clinical examination or testicular self-examination is effective in reducing mortality from testicular cancer. Even in the absence of screening, the current treatment interventions provide very favorable health outcomes. Given the low prevalence of testicular cancer, limited accuracy of screening tests, and no evidence for the incremental benefits of screening, the USPSTF concluded that the harms of screening exceed any potential benefits.
Thyroid Disease	**I**	Fair evidence that the thyroid stimulating hormone (TSH) test can detect sub-clinical thyroid disease in people without symptoms of thyroid dysfunction, but poor evidence that treatment improves clinically important outcomes in adults with screen-detected thyroid disease. Although the yield of screening is greater in certain high-risk groups (e.g., postpartum women, people with Down syndrome, and the elderly), the USPSTF found poor evidence that screening these groups leads to clinically important benefits.
Thyroid Cancer	**D, C**	Routine screening for thyroid cancer using neck palpation or ultrasonography is not recommended for asymptomatic children or adults. There is insufficient evidence to recommend for or against screening persons with a history of external head and neck irradiation in infancy or childhood, but recommendations for such screening may be made on other grounds.
Tobacco Use	**A**	Good evidence that brief smoking cessation interventions, including screening, brief behavioral counseling (less than 3 minutes), and pharmacotherapy delivered in primary care settings, are effective in increasing the proportion of smokers who successfully quit smoking and remain abstinent after 1 year. Recommends that clinicians screen all pregnant women for tobacco use and provide augmented pregnancy-tailored counseling to those who smoke.
Tuberculous Infection	**A**	Screening for tuberculous infection with tuberculin skin testing is recommended for asymptomatic high-risk persons. Bacille Calmette-Guerin (BCG) vaccination should be considered only for selected high-risk individuals.
V **Visual Impairment**		Vision screening to detect amblyopia and strabismus is recommended once for all children before entering school, preferably between the ages of 3 and 4. Clinicians should be alert for signs of ocular misalignment when examining infants and children. Screening for diminished visual acuity with the Snellen visual acuity chart is recommended for elderly persons. There is insufficient evidence to recommend for or against screening for diminished visual acuity among other asymptomatic persons, but recommendations against routine screening may be made on other grounds.
Vitamin Supplementation to Prevent Cancer and Coronary Heart Disease	**I**	Evidence is insufficient to recommend for or against the use of supplements of vitamins A, C, or E; multivitamins with folic acid; or antioxidant combinations for the prevention of cancer or cardiovascular disease.

The above recommendation summaries were created using the USPSTF guidelines.

USPSTF Recommendation Levels:

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

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

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

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

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