BRIEF CLINICAL UPDATE

The Annual Physical for Adult Patients: Common Practice and Guideline Recommendations

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Introduction

The annual physical exam, also known as the comprehensive physical examination (CPE) and the periodic health examination (PHE), is a specific type of primary care office-based visit that is distinct from a follow-up or problem-focused visit. Annual physicals are often performed several times per day by primary care clinicians including many trainees. However, there is little consensus on what these visits include, regarding needed history what questions to inquire of the physical exams and which labs or other studies should be ordered. The American Academic of Family Practice (AAFP) notes that the CPE should include elements of physical examination, lifestyle counseling, and preventative care.[1] Practicing clinicians must balance evidence-based recommendations, patient expectations, and motivational factors when deciding what to examine and what tests to order. More may not be better, but including only proven guidelines may meet patient expectations. We will examine each section of the annual physical with evidence-based guidelines, as well as common practice considerations.

The Rationale for and Boundaries Around the Annual Physical

The annual physical has been a mainstay of American health care since the 1940s. It is a special type of office visit with specific billing. Requirements vary by patients' billing requirements. However, many have questioned its necessity. A 2019 Cochrane review reported "general health checks are unlikely to be beneficial."[2] They reviewed 17 trials and cite lack of effects on total mortality, cancer mortality, or cardiovascular mortality. However, a noted study in the Annals of Internal Medicine reported high public desire for comprehensive annual physical examinations in the United States.[3] Physicians also note the annual examination provides an opportunity to have extra time with the patient which improves the doctor-patient relationship, and allows the time to counsel lifestyle changes with motivational interviewing.[4] There are benefits to patients when their physician has time to address these important topics. Annual physicals are often when behavioral or mental health concerns are raised, (even if not previously known), with important impact on health and wellness.[4]

The true annual physical should be a preventive focused visit and ideally separated out from other illness focused visits. Isolation for purely preventive evaluations allows sufficient time for a thorough social history and time to respond with preventive lifestyle counseling. It also allows exploration of the social determinants of health, discussion of advanced care planning, and shared decision-making discussions on prostate cancer screening, frequency of mammograms, and vaccinations. Helping patients understand the value of counseling is an art, and seasoned clinicians are often able to set patient expectations for mutually agreed plan. Adequate discussion of these topics along with acute/chronic problems is challenging during a 15-minute follow-up visit.

The Annual Physical: Patient History

The annual physical should start with history taking. From a coding standpoint, elements of the history that must be documented include past medical history, medications, allergies, past surgical history, family history, social history and in some cases, a minimum 10-point review of systems. Current billing requirements and documentation requirements are covered elsewhere.[5,6]

An established patient returning for an annual physical, should have adequate time for the social history. The HEADSS pneumonic can be a guide, starting with the Home situation and Environment, Employment and Education, activities of daily living and recreation including exercise and diet, screening for substance use (alcohol, tobacco, recreational drugs), sexuality, which may include inquiry about pronouns, sexual activity and practices, sexual identity, and any sexual health concerns, and lastly a mental health screening for depression, anxiety and if applicable, suicidality. Time should be spent on any topics that elicit patient or provider concerns. At the minimum should include lifestyle counseling for diet, exercise, and safety habits such as seatbelt, STI protection, and firearm safety, as applicable. This is also an excellent time to inquire about advanced care planning, particularly in older patients with chronic health conditions.

The United States Preventive Services Task Force (USPSTF) provides graded recommendations. Grade A or B have benefits outweigh risk. These include: depression screening, tobacco smoking cessation counseling, screening/counseling for unhealthy alcohol or drug use screening and counseling, sexually transmitted infections, intimate partner violence,

referral for behavioral interventions for individuals with a body mass index (BMI) over 30.[7]

The Annual Physical: The Physical Exam

The USPSTF, recommends only two examinations are in asymptomatic patients: measuring blood pressure every one to two years, and periodic weight measurement.[7] Grade D examinations are discouraged. Average risk patients have moderate or high certainty of no benefit or that harms outweigh the benefits. These include testicular exam for testicular cancer screening, carotid artery auscultation for carotid artery stenosis screening, screening for thyroid cancer by palpation, and ovarian cancer screening with bimanual examinations. Other examinations are graded as an *I*, or "insufficient evidence," where the balance of benefits and harms cannot be determined for the average risk patient. These include screening for visual and hearing loss screening in older adults, clinical skin exams, yearly pelvic examinations, oral cancer screening, prostate cancer screening with digital rectal examinations, breast examination for breast cancer screening, and ankle brachial index for peripheral artery disease screening. These are not recommended in asymptomatic, average risk individuals. Patients with risk factors need individualized recommendations.

Although there is variation by provider, examinations commonly performed on adults are included in table 1. The number of exam elements performed greatly exceeds what is evidence based due to historical convention, training, and patient expectations. Patients may judge physicians' care-based CPE thoroughness. The idea that a CPE involves a detailed inspection of each organ system is pervasive and may be hard to dispel. The determination net benefit or harm in performing individual examination maneuvers is provider and patient specific.

The Annual Physical: The Assessment and Plan

Much clearer evidence exists for the age group preventive health screening for early disease detection.[7] The nuance and debate, which we will focus on here, is often which labs to order. The USPSTF has grade A or B recommendation which are listed in table 2 and should generally be offered to all eligible patients. The USPSTF has graded checking thyroid stimulating hormone (TSH) screening for hypo- or hyperthyroidism as an *I*, for insufficient evidence, as well as vitamin D deficiency screening and urinalysis screening for bladder cancer. These tests are variably performed by practitioners, but our approach is to individualize decisions on whether to screen based on the patients personal and family risk factors. For example, in an individual with a strong family history of Hashimoto's Thyroiditis, it may make sense to screen yearly for abnormal TSH to identify subclinical onset. The average risk patient with no family history or thyroid disorder should be screened. Patients with a known history of vitamin D deficiency or diseases that can be associated with vitamin D deficiency, such as osteoporosis, may warrant screening but given the lack of clear data on supplementation of vitamin D and many other health outcomes, routine screening is generally not recommended. Finally, these authors argue against screening for bladder cancer with a urinalysis in non-smokers and anyone without a significantly increased risk. Ordering a urinalysis in a carefully selected patient population at higher risk for bladder cancer (exposure to chemicals or dyes known to cause bladder cancer, smoking, family history, etc.) can be considered. However, shared decision making is key, and patients should be counseled on the risks of screening including need for invasive tests, such as cystoscopy and further imaging, which may lead to other incidental findings and further testing.

In these authors' opinion, the labs most often order by primary care physicians include a complete blood count without differential, comprehensive metabolic panel, hemoglobin A1c, and fasting or non-fasting lipid panel. Though patients may not technically fall into the screening category based on USPSTF recommendations, may still benefit. For example, a normal weight young patient with a poor diet, high in processed food and low in fiber, may be at increased risk for diabetes, hyperlipidemia, hypertension, and future cancers due to the negative lifestyle factors. Certain patients may be motivated by testing to improve their lifestyle and *prevent* the onset of diabetes and metabolic syndrome that these labs are meant to screen for when they become floridly abnormal later in age seeing that their cholesterol is mildly elevated, or they are in the prediabetic range, even if medicines will not be recommended. However, for healthy young patients without risk factors, healthy lifestyle choices, and negative review of systems, deferring labs until the age recommended by the USPSTF may be most appropriate. Ultimately, there is no right or wrong answer, and much of this decision is stylistic as well as individualized to the patient.

Frequently patients request lab testing that is not indicated. Here, there is no one approach, and the decision of which labs to order needs to weigh patient preference, motivation, health anxiety, and potential risks, including cost and the prompting of unnecessary work ups. Checking a lipid panel may not have significant adverse effects, but screening for a whole panel of unnecessary vitamin tests in a patient without any reason to suspect a deficiency is likely not a good use of health care dollars and will not change management. Managing patient expectations and getting to the real issue at hand, such as anxiety about health or concern about certain lifestyle choices, is another example of how the time available for an annual exam is necessary for mutual decision making in this scenario.

It is worth mentioning the USPSTF grade *D* recommendations for labs and imaging studies in the otherwise average risk population. These include routine serologic screening for genital HSV in asymptomatic adults, including pregnant persons, chronic obstructive pulmonary disease (COPD) screening in asymptomatic adults, asymptomatic carotid artery stenosis screening in the general adult population by ultrasound, computed tomography (CT) or magnetic resonance angiography (MRA), pancreatic cancer screening, resting or exercise electro-

cardiography (ECG) to prevent or detect cardiovascular disease (CVD) events in asymptomatic adults at low risk of CVD events, and prostate specific antigen (PSA) screening in men over the age of 70.

The annual physical is also the time to ensure completion of any recommended immunizations based on patient risk factors and age. A full schedule of recommendations is found on the CDC website.[8]

Conclusion

The annual physical can have many benefits since it provides time for a comprehensive preventative health focused conversation. Having a visit each year to review healthy lifestyle habits, screen for mental health disease and social determinant of health, as well as the time to have thorough shared decision making around labs, imaging, diagnostic tests, and immunizations, may help primary care physicians fulfill their recommended responsibilities. Too often, primary care physicians do not have adequate time during appointments to perform patient-centered counseling or motivational interviewing. Thus, the annual physical may help to accomplish these tasks. It may strengthen the doctor-patient relationship with future important health benefits. We believe isolating the time at the annual physical allows for these rich discussions is in the best interest of the patient, provider, and even long-term public health.

Table 1

- Ear examination for wax (especially in adults >65)
- Oropharynx examination
    - Dentition
    - Mallampati score for assessment of sleep apnea risk
    - For smokers, lesions
- Cervical and supraclavicular lymph node examination
- Thyroid examination for thyromegaly (not cancer detection)
- Cardiovascular examination
    - At least 4-point auscultation with diaphragm
    - Dorsalis pedis pulses
    - Evaluation of edema
- Lung examination, anterior and posterior
- Abdominal examination with auscultation and palpation
- Breast examination*
- Gross skin examination for abnormal nevi and onychomycosis / hygiene, especially for elderly
- Gross neurological and gait examination
    - Pupillary response to light

*Breast examination varies among practitioners, refer to USPSTF guidance

Table 2

- Syphilis screening in all pregnant women and those at increased risk
- Latent TB screening in populations at increased risk
- Chlamydia and gonorrhea for all women <24 and for women >25 at increased risk
- Hepatitis B screening
- Hepatitis C screening
- HIV screening
- Lipid panel to assess atherosclerotic cardiovascular disease (ASCVD) risk score for adults ages 40-75 years
- Diabetes screening in asymptomatic adults aged 35 to 70 years who have excess weight or obesity

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