Editorial

The Complete Annual Physical Examination Refuses to Die

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The concept of the periodic health examination for asymptomatic persons was first discussed in the English medical literature in the 19th century.[1] It did not become popular in the United States, however, until the 1920s, after an uncontrolled study by the Metropolitan Life Insurance Company reportedly showed that policyholders undergoing annual physical examinations had lower mortality than predicted by actuarial data.[2] The American Medical Association endorsed the concept of periodic examinations of healthy persons in 1922 and restated their position in 1947, recommending "an annual medical examination for all persons over age 35."[3]

After World War II, the complete annual physical examination (CPE) became the standard recommendation for office-based preventive care of asymptomatic patients, even though no one had defined the content of the CPE, and the finding of decreased mortality related to CPEs, which had been initially reported by Fisk,[2] had not been confirmed or even questioned by additional studies. Implementation of preventive care by primary care physicians, however, has been sporadic, with some corporate executives receiving extensive, expensive annual examinations while the majority of the population received little coordinated preventive care.

As early as 1945, some authors proposed that examinations of asymptomatic persons should be selective, based on age and sex, rather than comprehensive and performed annually for everyone.[4] In 1975, Frame and Carlson[5] suggested an evidence-based program of selective longitudinal health maintenance for adults that included only interventions of proven value to be done at appropriate intervals depending on age and sex. The concept was that all patients should be systematically offered appropriate health maintenance, and that this could often be done during acute care visits or by periodic health examinations, which need not necessarily be annual or include a complete physical.[6] Several major groups, including the Canadian Task Force on the Periodic Health Examination,[7,8] the United States Preventive Services Task Force,[9] and the American College of Physicians,[10] have subsequently published extensive reviews of the scientific evidence supporting specific preventive interventions and have endorsed the concept of selective longitudinal health maintenance. In 1989, Oboler and LaForce[11] reviewed evidence that specific components of the physical examination were valuable in examinations of asymptomatic persons, and found only a few items of proven value.

In 1981, the American College of Physicians[12] recommended that individualized selective longitudinal health maintenance should replace the complete annual physical examination; and the American Medical Association made a similar recommendation in 1983.[3]

In view of the large body of evidence that the annual CPE is not the best way to deliver preventive care and the lack of official sanction for the annual CPE, the opinions of practicing physicians reported by Luckmann and Melville[13] in this issue of *The Journal* are surprising. In a large, randomly selected survey of New England family physicians, 90.6% of respondents stated their belief that periodic health examinations should include a comprehensive physical examination. Furthermore, a majority of physicians felt this examination should be annual for women of all ages and men over the age of 65. A significant minority of physicians (33% to 40%) expressed the belief that men over the age of 40 should also be examined annually. Luckmann and Melville offer three possible explanations for physicians continuing to place so much emphasis on the CPE: (1) inadequate knowledge of the benefits and risks of screening tests, (2) patients' expectation of a complete physical examination, and (3) a feeling that the physical examination plays a role in the physician-patient relationship. All these explanations have at least a kernel of validity. I would add three more reasons why conscientious physicians still cling to the annual CPE: (1) tradition: old habits are simply very hard to change, and the essence of the traditional image of the doctor is the physical examination; (2) many physicians have a fear of malpractice suits if they don't do a "complete" examina-

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tion; and (3) in a fee-for-service environment, the complete annual physical examination, especially if combined with multiple procedures, can generate substantial income.

The Luckmann and Melville study has two significant limitations, which the authors acknowledge. First, it is a survey of physicians' opinions with no verification of actual performance of preventive services. Data from other studies suggest that physicians usually overestimate their performance of preventive services by as much as a factor of two.[14] If this is true, it is likely that some patients are actually receiving annual CPEs while many patients are receiving sporadic or no preventive care. The authors also did not examine counseling interventions, an important omission since high-risk behaviors are a major cause of preventable illness. The US Preventive Services Task Force recommendations[9] place significantly more emphasis on counseling interventions than on interventions that would be considered part of the physical examination.

What is wrong with the annual complete physical examination? The most important problem is cost. CPEs take physicians' time and patients' money. This would not necessarily be bad if value were obtained for the price, but the previously cited research of the last two decades has shown that little value is derived from the ritual of annual CPEs for asymptomatic persons.[7–10] In addition to the direct costs of the examinations, one must add the missed-opportunity costs of acute care and the lack of appropriate preventive care being provided because doctors are busy doing CPEs. It is risky to make calculations from survey data; however, Luckmann and Melville report that the average family physician may be performing four CPEs per day. This sounds like a lot, but if this average physician has 1500 adult patients and works 184 days per year (46 weeks × 4 days per week), less than one half of the patients in the practice (736 patients) are receiving preventive care. Why not provide appropriate preventive care for all our patients in the same amount of time?

An additional problem with the annual CPE is the generation of false-positive tests that must be evaluated and can be harmful to the patient. The lower the prevalence of disease in a population and the more tests that are performed, the greater the number of false-positive tests that will occur and require further workup.

Finally, there is a false assurance of health associated with the CPE, which perhaps explains why many patients wish to have a CPE. At the end of a normal physical examination, most physicians do not say, "I have examinated those parts of your body I can see or palpate and have done the tests you can afford (or your insurance will pay for). I find nothing wrong, but as you know, medical science is inexact, and this is no guarantee you are or will remain healthy." Rather we say, "I'm glad to report your physical examination is entirely normal." We even include rectal exams to screen for colon cancer, pelvic exams to screen for ovarian cancer, and electrocardiograms to screen for future heart disease. None of these tests has the ability to affect the outcome of those diseases.

I submit it is more honest to spend a few minutes in mutual dialogue with patients explaining that "no one can predict the future but there are a number of things you can do that will decrease your risk of premature death or disability." My experience of 20 years in practice suggests that patients really appreciate candor and are reassured by knowing that their doctor has a specific individual preventive plan for them.

It is imporant to make a distinction between a comprehensive *patient* evaluation and a complete *physical* examination. Although both can be abbreviated "CPE," the comprehensive patient evaluation should replace the complete physical examination in almost all situations. A comprehensive patient evaluation requires careful history-taking, including the traditional present and past medical histories, social history, and family history, as well as a review of systems. The combined history then dictates which aspects of the physical examination or procedural testing are necessary. The primary role of the physical examination and procedural testing, with a few exceptions, is to confirm or disprove possible hypotheses generated by the history. In contrast, the complete physical examination suggests that a standard set of procedures should be performed on all patients, and that these procedures have equal importance with the history.

It is also necessary to differentiate between what is appropriate for asymptomatic patients and what is appropriate for patients presenting with problems. Asymptomatic patients feel fine and are asking the medical profession what they can do to ensure that they continue to feel that way. An initial comprehensive patient evaluation is ideal for all new patients to determine whether they are truly asymptomatic or to define their particular problems. Truly asymptomatic patients should be offered preventive procedures of proven value and advice on risk reduction rather than repeat CPEs. The clinician, however, must always be alert to changes and subtle symptoms that may warrant more in-depth evaluation. For example, the patient who complains of fatigue warrants at least a focused evaluation and possibly a comprehensive evaluation of that symptom.

A frequently heard argument, mentioned by the authors, in favor of the annual CPE is that it nurtures the physician-patient relationship in ways that are important but difficult to measure or quantify. Two important components of this relationship can be identified, but neither requires an annual CPE.

It is important for patients to feel that their physician cares for them as an individual. The "laying on of hands," or touching the patient, is a commonly mentioned expression of caring. Caring can also be demonstrated by listening to the patient and by having a specific preventive plan, including mailing periodic individualized preventive reminders. Touching, listening, and having an individual-

ized preventive plan can all be accomplished without annual CPEs.

It is also important for physicians to have an understanding of each patient's medical and social situation. A comprehensive patient evaluation for new patients is the ideal way to achieve this understanding. Once obtained, the patient database is updated as needed at every patient encounter, whether for acute care visits or during the brief periodic health examinations. Subsequent complete patient evaluations may be indicated to evaluate new symptoms or for patients with complex medical problems. Annual physical examinations contribute little to this process.

Patients often expect or request a preventive complete physical examination. This is rational behavior. Many patients wish to remain healthy, and for at least 50 years the medical establishment has been telling them the annual CPE is an important part of maintaining health.

So what do I do in my practice if an asymptomatic patient requests a CPE? Usually I do it, at least the first time. I do a traditional history and review of systems and a head-to-toe physical examination which, yes, does include a rectal exam if I think the patient expects one or is over the age of 50. I am looking for the patient's hidden agenda or symptoms that may require a more extensive focused evaluation. I try to keep laboratory testing to a minimum. I may do no tests at all or only a serum cholesterol. A relatively asymptomatic patient would be offered only those procedures in our health maintenance protocol that are relevant to his or her age and sex. At the end of this session, the patient would be given a handout explaining our health maintenance protocol. I would explain how often a screening check would be advisable (every 2 years if under age 50 or annually if over age 50) but would add that if the patient is feeling well, a CPE is unnecessary. During the screening checkup, we look for those few things we can actually do something about.

My experience is that most patients readily accept this approach and especially appreciate having a specific, written health maintenance plan. Of course, a few patients continue to request an annual CPE. In my current fee-for-service (and IPA/HMO) setting, I usually comply. However, I try to protect these patients from unnecessary testing and may periodically gently remind them that the CPE is being done at their request, not my recommendation.

Much has been written about whether preventive care should be delivered during acute care visits or during separately scheduled "periodic health examinations" (PHEs). Most of the respondents (80%) in Luckmann and Melville's survey said the periodic health examination was their primary mechanism for delivering preventive care. Of course, if the annual CPE is one's health maintenance protocol, it is too time-consuming and cannot be done during an acute care visit. If a sparser, evidence-based protocol is used, health maintenance can frequently be done during acute care visits. A young man, for example, may need only a blood pressure check and a serum cholesterol. It would make no sense to have him schedule a separate visit just for those tests.

The important point is that health maintenance needs to be considered at *every* visit. If feasible, it is more efficient for the provider and patient to include this aspect of health care at that visit; otherwise a separate PHE should be scheduled. Truly asymptomatic patients generally do not have acute care visits and will, instead, need separate appointments for health maintenance.

The complete annual physical examination was a useful first cut at introducing preventive medicine to the primary care physician's office. In 1995, however, it has outlived its usefulness and should be allowed to die a natural death with appropriate acknowledgment of its historical value. Its place should be taken by comprehensive patient evaluations for new patients and to evaluate symptoms, and a program of evidence-based, selective, longtitudinal health maintenance routinely offered to all members of the practice.

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