Clinical Prevention in Primary Care—The Time Is Now!

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The United States Preventive Services Task Force (USPSTF) has recently released its long awaited *Guide to Clinical Preventive Services*.[1] The task force, made up of 20 experts in fields relating to disease prevention, was convened by the Department of Health and Human Services in 1984 to develop recommendations for preventive measures that can be incorporated into personal health services. From the beginning it was decided that rules of evidence and grading the quality of the evidence in a fashion similar to that pioneered by the Canadian Task Force on the Periodic Health Examination[2] should be part of the formulation of each recommendation.[3] Grades of evidence range from grade I (evidence obtained from at least one properly randomized controlled trial) to grade III (opinions of respected authorities based on clinical experience, descriptive studies, or reports of expert committees). Recommendations are ranked A through E, depending on the quality of the supporting evidence. The Canadian and US task forces have worked closely together throughout the process of formulating recommendations.

The task force met 14 times between July 1984 and February 1988. An expert in each particular field was assigned to research and prepare a draft report for each topic under consideration. These reports were then reviewed by task force members at one of their quarterly meetings and were either accepted or returned to the author for revision. Draft reports were also sent to a panel of senior advisors for comments prior to final approval. Unfortunately, the task force ran out of time and funding and had not completed work on many of the topics by its last meeting in February 1988. The remaining sections were completed by physician staff members of the Office of Disease Prevention and Health Promotion. They were sent for review and comment by task force members and senior advisors but were not discussed in face-to-face debate by the entire group as had been the original plan. These later sections were prepared according the same rules of evidence as earlier sections and the quality of these sections does not seem to have suffered from the change in methods.

What does publication of the *Guide to Clinical Preventive Services* mean for family physicians? First and foremost, it means there is now a reasonable consensus, based on scientific evidence, to support a basic core of preventive procedures for asymptomatic persons.

For children this consensus represents a refinement of the schedule of immunizations and periodic checkups that have been recommended for some time with the realization that certain tests, such as routine tuberculin testing and complete blood counts, are unnecessary and that emphasis should be placed on counseling for healthier lifestyles, prevention of unwanted pregnancy, and prevention of sexually transmitted disease.

Health maintenance guidelines for the adult population continue a 15-year evolution away from an uncritical and unrealistic dogma that all adults should have a complete, annual physical examination to a recommendation that a selective longitudinal health maintenance program should be developed for each individual. Minimum components of this examination are now agreed upon by multiple authors including Frame,[4-7] Breslow and Somers,[8] the Canadian Task Force on the Periodic Health Examination,[2] the American Cancer Society,[9] and now the United States Preventive Services Task Force.[1] Recommended procedures include encouraging and helping persons avoid tobacco in all forms, detecting and treating hypertension, detecting and treating hypercholesterolemia, tetanus immunization every 10 years, and encouraging healthy habits including exercise, weight reduction, and use of automobile seatbelts. Women should have periodic Papanicolaou smear testing for cervical cancer and regular physician breast examinations. Women over 50 years of age should have regular mammography. Colon cancer screening is recommended, although the evidence for specific modalities is less complete.

The USPSTF recommends only nine procedures for which there is good evidence they should be done regularly

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on low-risk adults according to age and sex. These procedures include blood pressure, weight, cholesterol determination, physician breast examination, mammography, Papanicolaou smear, tetanus–diphtheria immunization, and pneumococcal and influenza vaccination. This list of preventive procedures is conservative and should certainly be feasible to implement in practice.

Beyond this core of agreement there is plenty of controversy. Examples include mammography for women aged less than 50 years, screening for prostate cancer, influenza vaccination for otherwise healthy persons over the age of 65 years, and many other issues. The primary care physician must be familiar with necessary criteria for screening for a particular disease and be able to evaluate the quality of the evidence. Recommendations of specialty organizations should not be uncritically accepted without meeting screening criteria. Such recommendations may be biased by the self-interest of that specialty or they may be made without an awareness of the conflicting priorities encountered in the care of the whole patient. For example, the American Optometric Association recommends annual eye examinations for adults older than 35 years. The American Cancer Society and the National Cancer Institute recommend digital rectal examination of older men as a screening examination for prostate cancer. The USPSTF found both these recommendations not to be supported by adequate evidence.

In contrast to the rather conservative list of procedures recommended by the task force, the list of suggested counseling interventions for asymptomatic patients is longer and includes the following:

(Section 48) Tobacco cessation counseling should be offered on a regular basis to all persons who use tobacco. (1/3 of adults)

(Section 49) Counsel all patients to engage in a program of regular exercise.

(Section 50) All patients should receive periodic counseling regarding dietary intake of calories, fat, cholesterol, complex carbohydrates, fiber and sodium.

(Section 51) All patients should be urged to use automobile seat belts, wear a helmet when riding a motorcycle, and not drive when intoxicated.

(Section 52) Patients who drink should be warned not to engage in potentially dangerous activities while intoxicated.

(Section 53) Clinicians should take a complete sexual and drug history on all adolescent and adult patients. Sexually active patients should be counseled about safe sex.

(Section 54) Sexually active persons who do not want to have children should be counseled about methods of preventing pregnancy.

(Section 55) Patients should be encouraged to visit a dentist on a regular basis and should receive counseling regarding daily tooth brushing and dental flossing, the appropriate use of fluoride for caries prevention, and avoiding sugary foods.

Regardless of the merits of these counseling recommendations, actual implementation by primary care physicians on a regular basis would require a significant reorientation of priorities, expansion of manpower, and increase in reimbursement. Government and third-party insurance carriers have traditionally been extremely reluctant to reimburse physicians for counseling services. It is not realistic to expect physicians to add these time-consuming services into the already overcrowded routine office visit without adequate compensation.

How often to screen for a particular disease is a recurring question in clinical prevention. It is a crucial question with such expensive, potentially invasive procedures as mammography to detect breast cancer, which can progress rapidly, and is less crucial for low-cost, noninvasive tests for such conditions as detecting tobacco use, where the test (history) is simple and sensitive and the disease has a slow progression. This issue is confused by the misconception that a person's risk of acquiring a disease is a major determinant of how often one needs to screen for it. The two factors that determine how often one needs to screen for a particular disease are (1) the rate of progression of the disease (ie, the duration of the interval during which detection is possible and the disease can be prevented or cured), and (2) the sensitivity of the screening test. Incidence or prevalence may influence the decision of whether to screen for a particular disease but has little effect on the decision of how often to do a screening test.

The individual physician ultimately will decide what procedures to incorporate in practice. In today's legalistic society, however, physicians deciding not to follow recommendations *for which there is significant consensus* should be prepared to justify their actions to peers, patients, judge, and jury.

The *Guide to Clinical Preventive Services* is an extremely valuable resource for physicians wanting to research the evidence supporting a particular health maintenance procedure both through its secondary conclusions and the extensive bibliography of primary articles and source material. It is unfortunate, however, that the task force chose to group the ratings for the quality of evidence in an appendix at the end of the report instead placing each rating directly in the text next to the specific recommendation, as it did in the article on screening for breast cancer previously published in *JAMA*.[10]

In some sections of the *Guide* the stated recommendation does not seem to follow directly from the evidence presented. For example, the text of the section on screening for cervical cancer (Section 8) makes a convincing case for Papanicolaou smear screening at less frequent than yearly intervals, yet the recommendation avoids the issue and

leaves screening frequency to physician discretion. Similarly, the text of the section on pneumococcal vaccine (Section 57) states, "Other studies, including a randomized placebo-controlled trial, have found the vaccine to have little efficacy. Additional research is needed to provide more definitive data on the efficacy of pneumococcal vaccine." Yet the task force recommendation is that all adults aged over 65 years should receive pneumococcal vaccine. Including the grade of evidence and quality of the recommendation with the text of each section would facilitate rigorous evaluation of the report.

At the same time the *Guide to Clinical Preventive Services* is solidifying expert opinion about what preventive procedures are indicated for asymptomatic adults, the study by Ornstein and colleagues[11] in this issue of the Journal once again illustrates that physicians are not doing a very good job of providing preventive services to their patients. This study comes, not from an average family practice, but rather from an academically oriented family practice residency program with a computerized reminder system for health maintenance procedures. Yet none of the recommended procedures were done on a majority of active patients. It is true that Ornstein et al use a very broad definition of active patient (any member of a family in which one person has been seen in the last 2 years), which tends to lower the patient compliance, but by any standard the results could be improved.

Why do physicians do such a poor job of providing health maintenance to their patients? In the past a major factor has been conflicting and unrealistic recommendations of what tests should be done. The USPSTF report should help resolve this dilemma. Other factors include physician time pressures, lack of reimbursement for preventive procedures, and disorganized records, which are not conducive to prevention. Patient-related barriers to prevention include cost, discomfort, fragmented medical care often with no identified primary care provider, and a highly mobile population in which 20% to 30% of patients may move or change doctors every year. Ornstein and colleagues identify several factors within the practice that are predictive of health maintenance compliance, including provider motivation, type of medical insurance, continuity of care or visit frequency, and increasing age.

The time for clinical prevention in primary care is now! The *Guide to Clinical Preventive Services* strengthens the consensus of what procedures should be offered. The major barrier to realizing the potential of prevention in practice is not lack of sensitivity of specific tests or debates about how often they should be done, but that most patients do not receive even the minimum core of preventive services. Identifying the barriers to prevention allows physicians and researchers to focus their energies to overcome these barriers. Physicians must accept the challenge of incorporating these procedures into their daily practice even as they critically evaluate the evidence on which health maintenance recommendations are based.

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