health officials, public health officials, and the myriad of others who work to improve the well-being of children and their families; and (2) they become increasingly involved in the communities where they practice so they can address the real issues and determinants of child health.

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References

1. National Center for Health Statistics. Advance report of final mortality statistics, 1987. Monthly Vital Statistics Report 1989; 38(Suppl 5):8. Hyattsville, MD: Public Health Service, 1989. DHHS publication no. (PHS) 89-1120.
2. US Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives. Washington, DC: US Government Printing Office, 1990. DHEW publication no. (PHS) 91-50212.
3. Wiener JM, Engel J. Improving access to health services for children and pregnant women. Washington, DC: The Brookings Institution, 1991.
4. Schneider D. Setting priorities for children's health: Viewpoints of family physicians and pediatricians. J Am Board Fam Pract 1994;7:387-94.
5. Parsons T. The sick role and the role of the physician reconsidered. Milbank Mem Fund Q Health Soc 1975; 53:257-8.

Clinical Prevention In Primary Care: Everyone Talks About It, Why Aren't We Doing It?

During the past two decades, dozens if not hundreds of studies have been published on the issue of implementing prevention in primary care. Frequently these studies have been of short-term interventions to improve provider or patient compliance with a single preventive intervention. Several researchers have also looked at strategies to improve compliance with more comprehensive preventive protocols. The results of these studies usually show positive results, with improved preventive compliance resulting from the tested intervention. In spite of this abundance of research and knowledge, survey studies continue to reveal that primary care physicians are not consistently providing preventive care to many patients. Recent surveys of cancer prevention[1] and immunizations[2] document this failing.

On the surface the article by Taplin and colleagues[3] in this issue of *JABFP* appears to be one more piece of evidence of the failure of physicians, especially family physicians, to provide routine preventive services (in this case mammography) for most patients. Only 42 percent of family physicians said they ordered mammograms on more than 90 percent of eligible women, even though 94 percent of family physicians said they believed mammography detects nonpalpable cancers, 90 percent believed mammography reduced breast cancer mortality, and 85 percent believed it offered some protection from lawsuits. This finding was in contrast to obstetrician-gynecologists, 76 percent of whom said they ordered mammograms on more than 90 percent of their eligible women patients.

The importance of the Taplin, et al. physician survey data, however, is uncertain for at least two reasons. First, the authors based their study on a survey, with no validation of the physicians' actual mammography-ordering performance. As recognized by the authors, findings from other studies have shown physicians usually overestimate their performance of preventive procedures, often by a factor of 2 or more.[4] Second, the authors used an artificial dichotomy of greater than 90 percent as good compliance and less than 90 percent as poor compliance. This dichotomy might have simplified data analysis but makes interpretation of the results difficult. Any physician who has audited his or her practice knows that actually offering mammography to more than 90 percent of eligible women is a very difficult task. In 1988 I did such an audit in my practice (myself and a physician's assistant) and found 60 percent of eligible women had been offered mammograms. A practice offering mammograms to more than 75 percent of eligible women is doing an excellent job but would have

Submitted 27 April 1994.
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been considered to have poor compliance by this survey method. An alternate explanation of the findings is that family physicians are more honest and have a better understanding of their actual practice patterns.

The Taplin, et al. patient survey data are more convincing that obstetricians are providing more mammograms than family physicians but that performance of all physicians is suboptimal. Only 32 percent of women seeing a family physician said they had at least two mammograms in the past 4 years, whereas 57 percent of women seeing an obstetrician said they had at least two mammograms in the previous 4 years. That performance of clinical breast examination was associated with ordering mammograms is not surprising and only illustrates the intuitively obvious fact that physicians who do more breast cancer screening also do more clinical breast examinations.

Of more importance than the issue about which specialty provides better preventive care is what can be done to improve the generally suboptimal rates of providing preventive services in the United States. Many barriers to the provision of preventive services have been described.[5] It is clear that specific tools, including flowcharts, reminder stickers, and even computerized prompting systems, can aid the motivated provider. I believe, however, that acceptable rates of provision of preventive services in this country will not be achieved until the reinforcements (both positive and negative) to providers for providing preventive care become more direct and immediate. This, in turn, cannot happen until major changes occur in the medical care system.

In the usual acute care patient encounter, there is prompt positive reinforcement for the physician doing the right thing and equally prompt negative reinforcement for errors of judgment or technical skill. If a patient seeks care for pneumonia and the physician fails to prescribe antibiotics, the repercussions are immediate. The patient gets worse, is unhappy, possibly needs hospitalization, or changes physicians. These types of reinforcements are potent but do not pertain to prevention. The average family physician will diagnose one to two cases of breast cancer each year and might never have seen a case of tetanus. Failure to order a mammogram or a tetanus booster usually results in no patient dissatisfaction or adverse consequences. It should, therefore, not be surprising that busy physicians take care of acute problems and omit prevention.

Because the natural reinforcements are not present, improving preventive care will require imposing substitute external reinforcements, such as financial incentives or incentives related to credentialing and privileges. It is not possible or fair to institute such accountability for prevention until several changes in the health care system are made.

First, there needs to be a consensus on minimum preventive recommendations that the medical community agrees are effective and society agrees are acceptable and affordable. For too long primary care providers have been exhorted to perform procedures of no proven value, such as rectal examinations to screen for colon cancer or pelvic examinations to screen for ovarian cancer. Even today there is precipitous promotion of tenuous recommendations, such as prostate-specific antigen testing for prostate cancer, or lowering the threshold of acceptable lead levels to 10 μg/dL, before proof of benefit is demonstrated. Providers cannot be expected to comply with recommendations unless the recommendations have proven value. Not all physicians must use the same preventive protocol; providers could do more or include additional procedures above the minimum if agreeable and affordable to the patient.

Second, before providers can be held accountable for providing preventive services, they must know who their patients are. In a traditional fee-for-service practice, physicians have no firm concept of their patient population. Practice turnover is often 10 percent or more each year with no signing in or out when patients come or go. Patients often see more than 1 physician and might be getting preventive services at free-standing screening clinics, the worksite, shopping malls, or other locations. In this environment accountability for preventive care is difficult to achieve.

Finally, a data system is needed to provide feedback and quality assurance to individual providers and the health care system about whether preventive goals are being met.

The immunization program of the British National Health System has demonstrated how preventive goals can be met. In this system each child is enrolled with a specific general practitioner. Each general practitioner is responsible for the

immunization of the panel of children and receives a basic incentive payment only if at least 70 percent of eligible children have been immunized. The practitioner receives a substantially larger incentive for a 90 percent rate of immunization. A computerized data system tracks individual and collective performance.

Progress is being made toward changing the system in the United States. The work of the US Preventive Services Task Force and other groups is defining a core of scientifically proven effective preventive procedures. The growth of managed care delivery systems allows assigning each enrolled patient to a primary provider and should provide the resources to establish necessary data systems. Some managed care plans are starting to provide incentives to providers to achieve specific preventive care goals.

Taplin and colleagues have shown that much remains to be accomplished. Many Americans receive fragmented, disjointed preventive care or no preventive care at all. Exhortation and provider flagellation will not get the job done. The system needs to change before meaningful improvement in the delivery of clinical preventive care will occur.

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References

1. 1989 survey of physicians' attitudes and practices in early cancer detection. CA 1990; 40:77-101.
2. Vaccination coverage of 2-year-old children—United States, 1991-1992. MMWR 1994; 42:985-8.
3. Taplin SH, Taylor V, Montano D, Chinn R, Urban N. Specialty differences and the ordering of screening mammography by primary care physicians. J Am Board Fam Pract 1994;375-86.
4. McPhee SJ, Richard RJ, Solkowitz SN. Performance of cancer screening in a university general internal medicine practice: comparison with the 1980 American Cancer Society Guidelines. J Gen Intern Med 1986; 1:275-81.
5. Frame PS. Health maintenance in clinical practice: strategies and barriers. Am Fam Physician 1992; 45:1192-200.