New Roles for Public Health in Cancer Screening

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Screening tests for the early detection of breast, cervical, and colorectal cancer are prioritized clinical preventive services that can reduce the burden of cancer in the United States.\(^1\) While significant progress has been made in this area, screening rates for breast and cervical cancers have not improved in almost a decade and rates for colorectal cancer are unacceptably low. Lack of insurance has traditionally been the main factor preventing adults from obtaining cancer screening.\(^2\) Components of the Patient Protection and Affordable Care Act will help address this through Medicaid expansion, subsidized state insurance exchanges, and the elimination of cost sharing.

However, access to health insurance and medical care are not the only factors that limit participation in cancer screening. Many people who currently have health insurance and regular access to medical care are not being screened. Based on 2010 National Health Interview Survey data, among adults aged 50 to 75 years with a regular source of medical care, only 62\% were up to date with screening for colorectal cancer and only 75\% of women in this age range had received a mammogram within the preceding 2 years.\(^3\)

Analyses of national Medicare data revealed that, despite coverage of cancer screening services, only 66\% of eligible women had undergone a mammogram within the past 2 years\(^4\) and only 47\% of adults had insurance claims documenting adequate screening for colorectal cancer.\(^5\) To realize the full potential of anticipated improvements in access to care, public health must provide leadership to ensure that cancer screening is proactive, organized, and equitable.

**Efforts Should Build on Existing Infrastructure and Capacity**

Existing public health infrastructure could be built upon to increase cancer screening rates. In 1990, Congress passed the Breast and Cervical Cancer Mortality Prevention Act, which authorized the Centers for Disease Control and Prevention (CDC) to implement the National Breast and Cervical Cancer Early Detection Program (NBCCEDP). The CDC funds 50 states, the District of Columbia, 5 US territories, and 12 American Indian/Alaska Native (AI/AN) tribes or tribal groups. They, in turn, have contracted with individual providers, practice networks, hospital systems, health centers, and local health departments to recruit and screen medically underserved, low-income women aged 40 to 64 years for breast cancer and women aged 18 to 64 years for cervical cancer. In 2000, the Breast and Cervical Cancer Prevention and Treatment Act allowed states to provide Medicaid coverage to women diagnosed with breast cancer through the NBCCEDP.

A 2009 analysis by the Government Accounting Office found that current funding for the NBCCEDP allowed it to reach 15\% of eligible, uninsured, low-income women for breast cancer screening. Approximately 26\% of this population receives screening through other mechanisms. The remaining 60\% may not be screened.\(^6\) Subsequent analysis of the NBCCEDP's effect on breast cancer mortality found that the program saved 369,000 life-years compared with women who received no screening.\(^7\) The median medical costs of providing breast and cervical cancer screening services in the NBCCEDP are $120 and $59, respectively, which compares favorably with cost data from other health care delivery systems. The outreach and service delivery components of the NBCCEDP play an important role in addressing health care disparities. Of the 1.6 million women screened for breast cancer by the program from 2005 through 2010, 17\% were black, 27\% were Hispanic, and 3\% were AI/AN.

The CDC has also developed a national system to ensure the timely follow-up and treatment of patients with abnormal screening test results. The CDC requires funded providers to collect and report state-based, standardized data to the Minimum Data Elements registry. This registry is the only national system that collects information to monitor attainment of screening quality. The NBCCEDP has consistently met its quality standards on diagnostic follow-up and treatment initiation since the inception of the program. A study on the timeliness of breast cancer...
diagnosis and treatment in state, tribal, and territorial programs found that 80% of women were diagnosed within 60 days of abnormal screening test results and almost 94% of women initiated treatment within 60 days after diagnosis. Comparison with a similar population of women in New Jersey reported median diagnostic intervals that were almost 2 weeks longer than those for the NBCCEDP.8

**More Aggressive Approaches Are Needed to Improve Cancer Screening**

The infrastructure to promote and ensure cancer screening in the United States must be expanded to achieve desired screening goals. While the medical care system is an important partner in promoting and providing cancer screening services, efforts to increase screening rates in this setting are limited by the opportunistic nature of clinical services. Most patients are offered screening tests when they visit a medical provider for unrelated reasons. Evidence-based interventions, including reminders to clients and providers to ensure that individuals are screened on time, have been shown to increase cancer screening rates.9 Screening registries have been found to improve the follow-up of patients with positive screening tests. However, the widespread implementation of these approaches has been challenging in our fragmented health care system. In a recent study of primary care physicians’ practices, only 40% reported that they had a system in place to remind patients to come in for breast or cervical cancer screenings.10 Compared with the general population, minorities and those from lower socioeconomic backgrounds receive less timely follow-up after an abnormal screening test.11 The patient-centered medical home is an emerging model with which to improve the quality of medical practice. This approach could be applied to the delivery of clinical preventive services but, to date, efforts have focused primarily on achieving intermediate outcomes in the management of patients with diabetes, asthma, and congestive heart failure.12

A more organized and comprehensive approach is needed to increase cancer screening participation among individuals who already have medical insurance or are likely to become insured through the Patient Protection and Affordable Care Act. Lessons can be learned from other countries and from some managed care systems in the United States. They have actively developed systems to identify members who are eligible to participate in recommended screenings and have also developed practices to ensure appropriate follow-up of patients with positive tests. These programs enhance recruitment into organized screening programs through direct personal invitations. Media advertising is used to reinforce these personal invitations, and there is active surveillance of screening use.

**Public Health Should Develop Organized Cancer Screening Systems**

Surveillance of cancer screening in the United States is currently based on self-reported population surveys that monitor temporal trends in screening use. However, data on current screening rates would be more accurate if they were based on actual use of services. Public health agencies are uniquely positioned to lead the development of centralized data systems for cancer screening because of their access to population data and their experience developing, implementing, and managing surveillance systems that require patient confidentiality. These data could be used to develop more organized, systematic approaches to cancer screening in the United States.

For example, centralized lists from insurance company databases or emerging state insurance exchanges could be developed and managed to prompt eligible adults, via telephone, mail, or electronic reminders, to participate in screening. More resource-intensive approaches, such as case management and patient navigation, could be targeted to more effectively reach communities most affected by health care disparities. In particular, public health departments will have a tremendous opportunity to work collaboratively with state Medicaid programs to increase cancer screening as previously uninsured adults become eligible. Public health agencies could work with state Medicaid programs to identify populations eligible for screening from Medicaid enrollee data and actively link these individuals with available screening services. Agencies could also develop data linkages and clinical registries to monitor participation, diagnostic follow-up, treatment initiation, and long-term outcomes.

Provider systems must be fully integrated into these efforts to ensure they do not create a demand that providers are not ready to fulfill. Efforts currently are ongoing to increase the capacity of Federally Qualified Health Centers (FQHCs) to provide clinical services. Public health departments could expand on their existing relationships with FQHCs through the NBCCEDP. Collaborative approaches could include expedited screening referrals, direct mailing of fecal occult blood test kits to patients, and the use of practice-based outreach workers in traditionally underserved communities. Systems to improve the follow-up of patients with abnormal screening tests could be based on the experience of the CDC’s existing quality assurance system described above. Recent initiatives to expand the implementation of electronic health records in FQHCs could facilitate these efforts to ensure appropriate diagnostic testing and treatment.

In an era of health care reform, public health has opportunities to ensure that participation in cancer screening is widespread and equitable. Given the magnitude of cancer morbidity and mortality, and the considerable capacity that
has been developed throughout the 22-year history of the NBCCEDP, public health has a responsibility to lead a national approach to cancer control that is comprehensive, strategic, and organized. An initial focus on developing an organized system to improve cancer screening could ultimately be expanded to other clinical preventive services.

References


