Estimated Effects of the National Breast and Cervical Cancer Early Detection Program on Breast Cancer Mortality

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Am J Prev Med 40:397-404, 2011

Background.—The National Breast and Cervical Cancer Early Detection Program (NBCCEDP) provides breast cancer screening to medically underserved, low-income women aged 40–64 years. No study has evaluated NBCCEDP's effect on breast cancer mortality.

Purpose.—This study estimates life-years saved by NBCCEDP breast cancer screening compared with screening in the absence of NBCCEDP and with no screening.

Methods.—A breast cancer simulation model based on existing Cancer Intervention and Surveillance Modeling Network models was constructed. The screening module from these models was modified to reflect screening frequency for NBCCEDP participants. Screening data for uninsured women represented what would have happened without the program. Separate simulations were performed for women who received NBCCEDP (Program) screening, women who potentially received screening without the program (No Program), and women who received no screening (No Screening). The impact of NBCCEDP was estimated as the difference in life-years between the Program and No Program, and the Program and No Screening scenarios. The analysis was performed in 2008–2009.

Results.—Among 1.8 million women who were screened between 1991 and 2006, the Program saved 100,800 life-years compared with No Program and 369,000 life-years compared with No Screening. Per woman screened, the Program saved 0.056 life-years (95% CI = 0.031, 0.081) compared with No Program and 0.206 life-years (95% CI = 0.177, 0.234) compared with No Screening. Per woman with invasive breast cancer and screen-detected invasive cancer, the Program saved 0.41 and 0.71 life-years, respectively, compared with No Program.

Conclusions.—These estimates suggest that NBCCEDP breast cancer screening has reduced mortality among medically uninsured and underinsured low-income women.

▶ Women's health care providers engage in preventative medicine in many aspects of their practice, an important responsibility that is not readily recognized by patients or the community at large. In this study from the Centers for Disease Control and Prevention and the University of North Carolina, the authors evaluated, by use of screening and breast cancer models, the impact of the National Breast and Cervical Cancer Early Detection Program that provides, among several services, breast cancer screening to medically underserved and low-income women between the age of 40 and 64 years. They estimated that this program, with regard to breast cancer alone, was responsible for saving 100 800 life-years compared with no program and 369 000 life-years compared with no screening. It is studies like this that best communicate the

power and importance of preventative medicine programs such as breast health screening, especially when such screening can be provided to communities characterized historically by suboptimal resources and reduced access to health care providers. There is likely no better demonstration of the value of government programs that help to promote better health practices and facilitate access to screening and interventions that allow for early diagnosis and prevention of conditions that are a grave threat to women in these communities.

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Optimization of Clinical Breast Examination

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Am J Med 123:329-334, 2010

Background.—Breast examination is necessary for evaluation of the 8% to 17% of cancers missed by mammograms, but it is being done less often and less effectively. To improve the use of breast examination, we tested whether a technique to focus attention could improve the call rate (the percent of examinations leading to further evaluation), a measure of quality, without retraining in examination technique.

Methods.—Clinicians were randomized to complete 1 of 2 dedicated, de-identified forms after routine breast examination: a long form intended to focus attention by requesting general breast descriptors along with clinical information and breast examination findings (10 clinicians recorded 964 examinations) or a short form recording only clinical information and examination findings (11 clinicians recorded 558 examinations). There was no technique retraining. Study call rates were compared with historical controls (298 breast examinations by 16 clinicians).

Results.—The call rates by the study groups of clinicians were similar, but the call rate using either form (8.3%) was significantly higher than the call rate in the preceding year when no dedicated form was used (4.7%; $P = .031$), suggesting a Hawthorne effect in which altering conditions of data collection (using the dedicated forms) functioned as an independent variable. Surveillance, Epidemiology, and End Results data predicted 3.4 cancers in all 1822 patients; 4 cancers were found.

Conclusion.—Breast examination call rate doubled when attention was focused on examination results using a dedicated form, and we found the anticipated cancers. Breast examination quality can be improved by focusing clinician attention without retraining in technique.

▶ While a clinical breast examination is a routine component of annual well-woman visits, its overall effectiveness in detection of breast cancer is questionable. As stated in this report, the use of imaging has diminished the relevance of a clinical breast examination. However, given the known false-negative rate of mammography (10%-15%), additional screening methods must be continued. These researchers demonstrate that clinicians are more likely to report abnormal