

The Challenges of Preventive Screenings

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INTRODUCTION

Implementing preventive care and screening test strategies to reduce disease and illness continues to prove challenging. Assessing the efficacy of screening and preventive interventions requires ongoing monitoring and consistent revision of standards of care to incorporate new information. Some items recently in the news echo the continuing difficulties of crafting preventive strategies to deliver real benefits.

ANALYSIS

Preventive care ought to reduce the incidence of disease. However, prevention efforts may pose unanticipated risks. Reporting in the current issue of *Infection Control and Hospital Epidemiology*, U.S. investigators asked, "Are Well-Child Visits a Risk Factor for Subsequent Influenza-Like Illness Visits?"¹ The answer appears to be yes. While the goal of well child visits is health maintenance, this study's authors identified pediatric waiting rooms as a potent source of infection for children and their parents. Based in data from 1998-2006, conservative estimates are that wellness visits may be responsible for as many as 700,000 excess cases of influenza in the U.S. each year. The authors suggest two strategies for reducing the numbers of incidental flu infections from well child visits—adherence to standard infection control policies in waiting rooms and scheduling well-child visits outside of peak influenza seasons.

When and if mammography's benefits outweigh the risks of over-diagnosis and treatment of breast cancer continues to be in dispute. Publishing in the February 11th issues of the *British Medical Journal*, Canadian researchers concluded that screening women under 60 produces no benefit when compared to breast self-exam plus an annual physician exam. The authors are reporting further findings of a contentious study, now in its 25th year.² This Canadian research adds to uncertainties for women and their physicians. In 2009, the independent U. S. Preventive Services Task Force (U.S.P.S.T.F) recommended against routine screening for women under 50 and only bi-annual screens for older women.³ Pushback from physician and breast cancer advocacy groups to the U.S.P.S.T.F. recommendations is echoed by immediate challenges to the new Canadian report.^{3, 4}

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CONCLUSION

On the prostate cancer front, screening for prevention may soon take a step forward. As in breast cancer, over-diagnosis and treatment of non-aggressive prostate cancers diminishes quality of life. Faced with elevated PSA scores, physicians and patients have had few tools to guide decisions on opting for “watchful waiting” or choosing surgical and other interventions—and their risks. New research suggests genetic assessment of the risk of aggressive prostate cancer may be available soon for improved clinical guidance. Reporting in the *British Journal of Cancer* on February 20th, researchers identified 13 mutations predisposing their carriers to invasive forms of prostate cancer.⁵ Among the genes tested for were variants of BRCA1 and BRCA2, familiar as risk factors in some heritable breast cancers. Genetic testing combined with PSA screening should allow for more accurate risk assessment timely treatment for some men at higher risk.

¹ Simmering, J. E. Are Well-Child Visits a Risk Factor for Subsequent Influenza-Like Illness Visits? *Infection control and hospital epidemiology* **35**, 251-256, doi:10.1086/675281 (2014).

² Miller, A. B. *et al.* Twenty five year follow-up for breast cancer incidence and mortality of the Canadian National Breast Screening Study: randomised screening trial. *BMJ* **348**, doi:10.1136/bmj.g366 (2014).

³ Force, U. S. P. S. T. Screening for breast cancer: U.S. Preventive Services Task Force recommendation statement. *Annals of internal medicine* **151**, 716-726, W-236, doi:10.7326/0003-4819-151-10-200911170-00008 (2009).

⁴ Woolf, S. H. The 2009 breast cancer screening recommendations of the us preventive services task force. *JAMA* **303**, 162-163, doi:10.1001/jama.2009.1989 (2010).

⁵ Leongamornlert, D. *et al.* Frequent germline deleterious mutations in DNA repair genes in familial prostate cancer cases are associated with advanced disease. *Br J Cancer*, doi:10.1038/bjc.2014.30 (2014).