Breast cancer control among the underserved — An overview

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Summary

This paper explores barriers to the use of standard screening and breast cancer treatment that result in systematic differences in health outcomes. We review available data on individual, socioeconomic, and health system determinants of access to standard breast cancer care, including screening, diagnostic, and treatment services. Based on this review, we discuss the combination of factors which result in underservice. We argue that a broad framework which considers health system and social class as well as individual factors is useful for analyzing how structures of health care delivery tend to provide less than standard care to women who are older, have less income, or are less educated, black, or Hispanic. Data collection efforts which do not include structural and socioeconomic variables may result in an incomplete or misleading understanding of the determinants of underservice. These factors also need to be considered in the design and evaluation of public health policies and interventions meant to ameliorate the effects of underservice.

Introduction

Recent developments in cancer research and clinical practice have contributed to our ability as a nation to advance science in the area of breast cancer control. Discovery of progressively more agents (chemotherapy and hormonal therapies) with survival benefits for more common cancers, recent linking of certain genes with cancer, and earlier detection modalities promise enormous potential for cancer control.

Breast cancer provides an excellent case study for evaluating the extent to which cancer control strategies have been disseminated throughout the population because breast cancer is associated with screening and consensus treatment recommendations. Proponents of the National Cancer Program anticipated that each discovery would make an orderly and thorough progression into the population. NCI was directed by Congress in 1937, and again in 1971, to promote widespread use of developments in cancer control. Dissemination of cancer control technologies was reiterated as the mission of the Division of Cancer Prevention and Control (DCPC) a decade ago [1]. However, widespread dissemination of effective cancer prevention, diagnosis, and treatment has not occurred uniformly in all segments of the population [2].

Standard care for breast cancer is a multi-step
process requiring medical intervention at every step. Mammography and clinical breast examination (CBE) facilitate early detection. A biopsy is usually required for clinical diagnosis. A range of treatment modalities associated with high survival is available when women are diagnosed with early-stage disease.

In this paper, we will explore barriers to use of standard screening and breast cancer treatment that result in systematic differences in health outcomes. We conclude with approaches to readdress underservice, taking into account that expanding access to the underserved may have to be accomplished while public health resources are dwindling and the health service sector of the economy is shifting toward for-profit managed care.

Who is underserved?

Early detection provides women diagnosed with breast cancer the greatest probability of survival. Harold Greenwald contends that "early detection may well have contributed more to survival than improvement in treatment" [3]. Early detection requires medical intervention. Unless women are getting routine screening appropriate to their age group, they are already underserved. Information on individual characteristics associated with screening is available. National Health Interview Surveys (NHIS), conducted in 1987, 1990, 1992, and 1993, provide data on age, sex, race, education, marital status, income, occupation, type of insurance, health service access and use, and knowledge, attitudes and practices related to cancer screening.

Screening

The 1987 NHIS showed differential mammography use by age, race, education, family income, and geographic location. Differentials by indicators of socioeconomic status (SES) were larger than those by race. Older women were less likely to have had a mammogram than younger women. More women reported having had a clinical breast examination (CBE) than a mammogram, though patterns by sociodemographic characteristics were similar [4]. Among women who reported never having had a mammogram, five factors explaining lack of mammography use were more advanced age, Hispanic ethnicity, low income, low education, and residency outside a metro area [5].

Mammography use doubled between 1987 and 1990 [6]. Though 1990 rates were essentially identical for African-American, white, and Hispanic women, differentials by education, income, and residency persisted, though they narrowed somewhat. The age differential also narrowed. CBE rates rose between 1987 and 1990, from 50% to 65%. More African-American than white or Hispanic women reported using CBE.

Data from the 1992 NHIS indicate similar mammography and CBE rates and patterns to 1990. While mammography (and to a lesser extent CBE) fell with education, differences by educational group disappeared for women under 65 years who were enrolled in an HMO. The education differential diminished, but did not disappear, for women 65 and older, who are nearly universally covered by Medicare insurance [7].

Mammograms, when viewed as a social resource, are not very equally or rationally distributed. Mammography facilities are concentrated in urban areas [8], and mobile facilities are underutilized to reach women in rural and inner-city areas. Women with less income or education are less likely to get a mammogram. NHIS data shows that, in 1992, 41% of all mammograms were reported by women 30-49 years old even though evidence of a mortality benefit is not definitive for this age group. Mammography use declines after age 60 even though older women are at greatest risk of breast cancer.

Diagnosis and treatment

Delay in diagnosis as measured by stage of diagnosis is another measure of underserved