Performing Breast Cancer Risk Assessments in a Community Setting

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This article describes the implementation of a risk assessment program for women having screening mammography at a community center. The program used the National Cancer Institute's Breast Cancer Risk Assessment Tool to raise awareness in high-risk women. An evidence-based process is essential when implementing changes in clinical practice to overcome challenges and barriers.

Evidence-based practice (EBP) integrates clinical expertise and best available evidence to provide quality health care (Newhouse, Dearholt, Poe, Pugh, & White, 2005). Successfully translating evidence into practice can occur through the use of an organizational and collaborative framework (LoBiondo-Wood & Haber, 2006). This project aimed to implement a program using the National Cancer Institute's (NCI's) Breast Cancer Risk Assessment Tool (BCRAT), also known as the modified Gail model (Gail et al., 1989), for women having screening mammograms at a community breast center affiliated with a not-for-profit hospital system. This project addressed recommendations from the American Cancer Society ([ACS], 2009) and the U.S. Preventive Services Task Force (2009) on breast cancer screening for women at high risk (20% or higher lifetime risk) through the addition of screening breast magnetic resonance imaging (MRI) scans. In addition, the project capitalized on Murphy et al.'s (2008) work indicating that the population of women receiving screening mammography requires greater awareness of breast cancer risk factors.

Synthesis of Evidence

Breast cancer is the most frequently diagnosed malignancy among women in the United States (Edwards, Maradiegue, Seibert, Saunders-Goldson, & Humphreys, 2009; Mahoney, Bevers, Linos, & Willett, 2008). Women have an estimated 12% lifetime risk of developing breast cancer (Fletcher, 2009; Mahoney et al., 2008). Gender and age are identified as the two major elements that quantify risk for breast cancer. Although other factors associated with personal and family history have been shown to increase a woman's risk for breast cancer (Edwards et al., 2009; Mahoney et al., 2008), the majority of breast cancers are sporadic (Katapodi & Aouizerat, 2005). In addition, women are not aware of all breast cancer risk factors (Katapodi & Aouizerat, 2005).

Schwartz et al. (2008) defined a *risk factor* as any variable that increases an affected individual's risk of breast cancer. Risk factors have been classified as major and minor (Schwartz et al., 2008). Major risk factors increase relative risk by at least double, whereas minor risk factors increase a relative risk by less than double (Joy, Penhoet, & Petitti, 2005; Schwartz et al., 2008). Major risk factors include *BRCA* mutation, family history of breast cancer in a first-degree relative younger than age 60, receiving mantle radiation before age 30, personal history of high-risk lesions, personal history of breast or ovarian cancer, and breast density (Boyd et al., 2007; Edwards et al., 2009; Joy et al., 2005; Mahoney et al., 2008; McKian et al., 2009; Palomares, Machia, Lehman, Daling, & McTiernan, 2006; Schwartz et al., 2008; Travis et al., 2005). Minor risk factors include age at first birth, early menarche, late menopause, breast cancer in second- or third-degree relatives, obesity, history of hormone-replacement therapy, and alcohol intake (Gail et al., 1989; Joy et al., 2005; Schwartz et al., 2008).

Interest in stratifying women into risk categories in the screening population and providing appropriate interventions for risk reduction and surveillance is increasing (Amir et al., 2003; Bondy, Vogel, Halabi, & Lustbader, 1992; Brown, 2005; Decarli et al., 2006; Edwards et al., 2009; Fletcher, 2009; Gail et al., 1989; Hollingsworth & Stough, 2008; Jones et al., 2005). Risk assessment prediction tools are designed to estimate a woman's risk for breast cancer based on multiple coexisting risk factors. The original Gail model was developed using data from women who were actively undergoing annual screening mammography as part of the Breast Cancer Detection and Demonstration Project (Gail et al., 1989). The model has been validated and evaluated

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