

Use of a Point-of-Care Tool to Improve Nurse Practitioner *BRCA* Knowledge

Mary Alison Smania, DNP, FNP-BC, AGN-BC



Courtesy of Florida Hospital—Orlando

Background: Women who have been identified with a *BRCA* mutation benefit from a multidisciplinary, individualized medical evaluation to reduce their risk of developing cancers. Identifying women who would gain from testing for *BRCA* mutations is essential. Nurse practitioners (NPs) as primary care providers are important members of the healthcare team and are instrumental in identifying and referring women for testing. However, studies have shown that NPs lack knowledge about and confidence in identifying women at risk.

Objectives: This project was undertaken to increase NP knowledge about assessing women at risk for the *BRCA* mutation and determining whether such testing is appropriate. This was accomplished through a *BRCA* risk assessment tool developed as a mobile health technology (MHT) application using the Ontario Family History Assessment Tool, one of the tools recommended by the U.S. Preventive Services Task Force in its guidelines on *BRCA*-related cancer risk assessment, genetic counseling, and genetic testing to assist primary care providers in the assessment of women.

Methods: NPs attending an NP conference in the midwestern United States completed pre-test, post-test, and satisfaction surveys regarding use of the MHT application. The application included a point-of-care tool and educational information.

Findings: The participants demonstrated increased knowledge from pre- to post-test after use of the MHT application, with an overall positive evaluation.

Mary Alison Smania, DNP, FNP-BC, AGN-BC, is an assistant professor of health programs in the College of Nursing at Michigan State University in East Lansing. The author takes full responsibility for the content of the article. Writing and editorial support was provided by Leslie Nicoll, PhD, MBA, RN, FAAN, at Maine Desk. The study was funded in part by a grant from the Mid-Michigan Affiliate of Susan G. Komen for the Cure and donated time from Yankee Ingenuity, an information technology company. The content of this article has been reviewed by independent peer reviewers to ensure that it is balanced, objective, and free from commercial bias. No financial relationships relevant to the content of this article have been disclosed by the independent peer reviewers or editorial staff. Smania can be reached at smaniama@msu.edu, with copy to editor at CJONeditor@ons.org. (Submitted January 2015. Revisions submitted September 2015. Accepted for publication September 14, 2015.)

Key words: mobile health technology; point of care; tablet; smartphone; *BRCA*; nurse practitioners

Digital Object Identifier: 10.1188/16.CJON.327-331

Breast cancer is the most frequently diagnosed cancer in women, with about one in eight (or 12%) of U.S. women developing invasive breast cancer during their lifetime (American Cancer Society [ACS], 2016). Of the women diagnosed with breast cancer each year, about 5%–10% of the cases are attributable to the *BRCA* gene (National Cancer Institute [NCI], 2016). Women with a *BRCA* mutation have a substantially increased risk of breast cancer; anywhere from 45%–65% of this population will be diagnosed with breast cancer by age 70 years (NCI, 2016). In addition, these women have an increased risk of ovarian cancer—anywhere from an 11%–39% risk of developing the disease by age 70 years (NCI, 2016). Women who have been identified with a *BRCA* mutation can benefit from a multidisciplinary, individualized medical evaluation that can lead to medical and surgical interventions to reduce their risk for disease (Nelson

et al., 2013). Nurse practitioners (NPs), along with other providers, are essential members of the healthcare team and are instrumental in identifying women who are at increased risk for *BRCA* mutations (Pruthi, Gostout, & Lindor, 2010).

The U.S. Preventive Services Task Force (USPSTF) has recommended, with fair evidence, referral for genetic counseling and evaluation for *BRCA* testing in women whose family history indicates an increased risk for the *BRCA* mutation (Nelson et al., 2013). In addition, routine referral for genetic counseling or *BRCA* testing is not recommended if the family history does not indicate an increased risk (USPSTF, 2015). The USPSTF recommendations regarding risk assessment, genetic counseling, and genetic testing are available online (<http://bit.ly/1E4i3ux>). A systematic review found that nurses did not demonstrate adequate or appropriate levels of knowledge and skills in genetic competency areas (Skirton, O'Connor, & Humphreys, 2012),