Comparing Outcomes of Genetic Counseling Options in Breast and Ovarian Cancer: An Integrative Review

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When the tumor suppressor genes BRCA1 and BRCA2 (BRCA1/2) are mutated, they are strongly associated with the development of breast and ovarian cancer (Jacobs et al., 2016). Commercial testing for BRCA1/2 mutations was first made available in 1996 and is now widely used for those at high risk (Ahn & Port, 2017). Within the United States, an estimated 350,000 women carry a BRCA1/2 mutation; however, it is likely that only 15% of these cases have been identified (Schwartz et al., 2014). Identification of women with a BRCA1/2 mutation is of important clinical significance because interventions can help reduce their risk of developing hereditary breast and ovarian cancer (HBOC), including early initiation of breast cancer screening, chemoprevention, and risk-reduction surgery, such as mastectomy or oophorectomy (Schwartz et al., 2014).

The U.S. Preventive Services Task Force supports genetic counseling and risk assessment for women at high risk for these mutations (Mette et al., 2016). Genetic counseling and risk assessment involves analysis of personal and family medical history, education regarding cancer risk and prevention, as well as discussion of genetic testing and interventions for people who test positive for a BRCA mutation (Mette et al., 2016). Cancer genetic services have traditionally included in-person counseling with pre- and post-testing counseling provided by a qualified health professional. However, the National Society of Genetic Counselors Service Delivery Model Task Force identifies four distinct methods for delivering genetic counseling services (Bradbury et al., 2016), which include in-person genetic counseling (IPGC), group genetic counseling, telegenetics, and telephone genetic counseling (TGC) (McDonald, Lamb, Grillo, Lucas, & Miesfeldt, 2014). Telegenetics encompasses counseling services provided remotely...