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# A Community Peer-Volunteer Telephone Reminder Call to Increase Breast Cancer–Screening Attendance

Guido Goelen, MD, PhD, Gerlinde De Clercq, RN, MS, and Sophie Hanssens, RN, MSN

One in eight women develops invasive breast cancer, and more than half are aged 40–69 years at diagnosis (Jemal et al., 2008). Mammography screening has been shown to reduce breast cancer mortality in women aged 50–69 years by about 30%, but its benefit for women aged 40–49 years is less clear (Armstrong, Moye, Williams, Berlin, & Reynolds, 2007; de Koning, 2003; Elmore, Armstrong, Lehman, & Fletcher, 2005; Gotzsche, & Nielsen, 2006). Population-based screening mammography programs as well as efforts to increase participation in the programs have been established in many countries (Klabunde & Ballard-Barbash, 2007).

Several interventions to increase mammography-screening rates have demonstrated value. Meta-analyses are available on the effect of individual-directed, physician-directed, access-enhancing, social networking, and multistrategy interventions (Denhaerynck et al., 2003; Legler et al., 2002; Mandelblatt & Yabroff, 1999; Miller, Livingstone, & Herbison, 2008; Ratner, Bottorff, Johnson, Cook, & Lovato, 2001; Sohl & Moyer, 2007; Stoddard et al., 2002; Yabroff & Mandelblatt, 1999; Yabroff, O'Malley, Mangan, & Mandelblatt, 2001). However, most of the published studies are from the United States, and, as Denhaerynck et al. (2003) cautioned in the case of direct-contact interventions, the mammography-screening rates realized by the strategies may differ depending on the healthcare system. Therefore, the results of U.S. studies cannot be generalized confidently to countries that have other healthcare systems, such as those used in Europe.

Nurses have contributed to the ongoing research related to interventions to improve breast cancer screening, such as in African American and Hispanic women (Fowler, Rodney, Roberts, & Broadus, 2005; Grindel, Brown, Caplan, & Blumenthal, 2004; Hall et al., 2005; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007). However, the nursing literature lacks evidence from random-

**Purpose/Objectives:** To assess the effect of a tailored telephone reminder call by community peer volunteers on mammography rates in women who do not attend a breast cancer–screening program.

**Design:** Individual-level randomized trial.

**Setting:** Four semirural communities in Belgium.

**Sample:** Women aged 50–69 years who had not had a mammogram.

**Methods:** Women in the usual care (control) arm received an invitation letter for screening mammography and an information leaflet; women in the intervention arm received usual care as well as a telephone reminder call. The call was tailored on four variables: individual mammography history, mailing of the invitation letter, mammography appointment date, and type of mammography facility in the area (e.g., mobile unit versus fixed site). Community peer volunteers made up to three attempts to call the women in the intervention arm.

**Main Research Variables:** Mammography rates verified by screening registration review and adverse events identified in contacts with peer volunteers, radiologists, and community workers of local authorities.

**Findings:** A total of 3,880 women were included in the study and individually randomized into control and intervention groups. Phone numbers were identified for 79% of the women in the intervention group, and 69% were contacted. Twenty-two percent had screening mammography, which was 4% higher than controls (relative risk = 1.22). No adverse effects were identified. An additional mammogram came at an average cost of 17 phone conversations and two hours of volunteer work.

**Conclusions:** The tested telephone reminder call is suitable for Belgian women.

**Implications for Nursing:** The telephone reminder call may be implemented in settings similar to the studied context.

ized, controlled trials to support these contributions, and the need to determine the effectiveness of reminder telephone calls for mammography screening has been suggested (Fowler et al., 2005).