The National Cancer Institute (2008) defined cancer health disparities as differences in the incidence, prevalence, mortality, and burden of cancer that exist among specific populations in the United States. Racial and ethnic minorities account for a disproportionate number of invasive cancers and experience higher mortality rates. Evidence has linked the high mortality rates of certain cancers to later disease detection, which may partially be from lack of screening or underuse of cancer screening practices (Hegarty, Burchett, Gold, & Cohen, 2000; Suarez & Pulley, 1995). Identified barriers to cancer screening include socioeconomic factors, limited access to preventive healthcare services, lack of insurance, lack of knowledge about cancer and cancer screening, and language barriers for some immigrants (Centers for Disease Control and Prevention, 2005).

The use of lay health advisors (LHAs) has been a leading public health initiative to help educate minority populations about healthy behaviors, including education about cancer and cancer screening (American Public Health Association [APHA], 2009). The introduction of LHAs has been initiated to promote breast and cervical cancer screening (Brownstein, Cheal, Ackermann, Bassford, & Campos-Outcalt, 1992). This article will evaluate current evidence concerning the effectiveness of LHAs in promoting cancer screening and increasing cancer knowledge in the three minority groups included in prior LHA literature: African American, Vietnamese, and Hispanic women.

An LHA is a member of the community who has received training to promote health or to carry out health services and is aware and knowledgeable about the community’s health needs (Lewin et al., 2005). According to the APHA (2009), LHAs are able to provide culturally appropriate care, offer social support to members of the community, and may serve as a bridge between community members and healthcare services. Because of the lower cancer screening rates of various minority groups, research in the past decade has focused on the implementation of training programs for LHAs (see Figure 1). The programs prepare LHAs to educate minority populations about cancer and promote effective cancer screening behaviors.

Ethnic Differences

African Americans

African American women tend to have lower rates of breast cancer incidence when compared to their Caucasian counterparts but have higher mortality rates and often are diagnosed with more advanced stages of disease (Newman, 2005) because of a lack of breast cancer screening (Eley et al., 1994). The North Carolina Breast Cancer Screening (NCBCS) program was a community trial designed to evaluate the effectiveness of LHAs in promoting breast cancer screening in rural African American women aged 50 years and older in North Carolina (McLeroy, Bibeau, Steckler, & Glanz, 1988). LHAs were trained based on the social-ecological model, which emphasized strategies on individual, social network, organization, community, and policy levels (McLeroy et al., 1988).

Earp et al. (2002) evaluated the effectiveness of the NCBCS in promoting breast cancer screening in rural African American women aged 50 years and older. The intervention group included outreach by LHAs to promote mammography use during an 18-month period. Although the use of mammography for breast cancer screening increased in the comparison and intervention groups, a 6% difference (p < 0.05) was observed between the two groups; the intervention
group had a 17% increase compared to an 11% increase in the comparison group. In low-income communities, mammography use in the intervention group was 12% (p < 0.02), higher than that of the comparison group. That study concluded that the use of LHAs was effective in promoting breast cancer screening among African American women (Earp et al., 2002).

Russell et al. (2010) measured the effectiveness of LHAs in promoting breast cancer screening in African American women by testing the efficacy of a combined interactive computer program versus a LHA intervention to promote breast cancer screening in African American women aged 41-75 years. The intervention group included an interactive, tailored computer instruction at baseline and LHA counseling sessions every four months. The comparison group received culturally appropriate pamphlets regarding mammography screening. A retrospective audit of medical records provided verification of receipt of mammograms. The intervention group had a 51% increase in mammograms after six months compared to an 18% increase in the comparison group. After adjusting for confounders such as employment status, disability, health insurance, and previous biopsies, the intervention group was significantly more likely to get screened for breast cancer than the comparison group. Combining LHAs with the computer-based instruction was effective in increasing mammography usage in African American women (Russell et al., 2010).

Older African American women are less likely than younger women to screen for breast cancer (Roberson, 1994). Zhu et al. (2002) measured the effectiveness of an intervention program in promoting breast cancer screening in older African American women. The intervention program included three educational brochures, derived from the Health Belief Model, the Precede-Proceed model, and the Basic Stress model, and presentations by trained lay health educators in the study participants’ homes (Zhu et al., 2002). The brochures and at-home presentations were designed to increase knowledge about breast cancer, provide social support, decrease fears about breast cancer screening, and increase support from significant others.

The results showed an increased use of clinical breast examinations and mammography between the intervention group when compared to the control group, but the increase was not statistically significant. A decrease also existed in breast cancer worry relating to cost, radiation, and discomfort, but also was without statistical significance. Although the results of the study were not statistically significant, the use of LHAs had other benefits in decreased worry about breast cancer and increased use of clinical breast examinations and mammography.

Vietnamese Americans

Vietnamese women are another minority group in the United States that uses breast cancer screening (Gomez, Tan, Keegan, & Clarke, 2007). Three studies measured the effects of LHAs and media education to promote breast and cervical cancer screening in Vietnamese women. Nguyen et al. (2009) implemented an intervention where women received two educational sessions from LHAs about breast cancer screening, follow-up phone calls by the LHAs after the sessions, and media education (i.e., newspaper, radio, and television advertisements). Advertisements were aimed to increase awareness of breast cancer screening and address cultural stigmas regarding screening. The results showed a significant increase in ever having had a mammogram (84% at baseline to 92% [p < 0.001] after intervention) and mammography in the past two years (65%–82% [p < 0.001] in the intervention group). Both the control and intervention groups showed increases in clinical breast examinations. In a multivariate analysis, the intervention of LHAs and media education was significantly more effective in increasing all four outcomes postintervention.

Mock et al. (2007) used similar methods to promote cervical cancer screening in Vietnamese women. Screening for cervical cancer increased significantly in the intervention group (p < 0.001). More women in the intervention group received a “first ever” Papanicolaou test. Lam et al. (2003) used the same methods to evaluate the implementation of these two programs in promoting cervical cancer screening in Vietnamese women. The intervention included the use of LHAs and media education and results demonstrated a significant increase in knowledge about cervical cancer. “Intent to acquire” a Papanicolaou test also increased more in the intervention group than in the control group. Although media education showed some increase in knowledge about breast cancer and screening for breast and cervical cancers, the combined intervention of LHAs and media was most effective in promoting cancer screening (Lam et al., 2003; Mock et al., 2007; Nguyen et al., 2009).

Hispanics

Hispanic women also have low rates of breast and cervical cancer screening when compared to non-Hispanic Caucasian women (American Cancer Society, 2006). Barriers to screening identified for those cancers include lack of knowledge, fear, and fatalistic attitudes about cancer (Austin, Ahmad, McNally, & Stewart, 2002). To address those barriers, a group of researchers and community workers developed the Cultivando la Salud in 2004 to increase breast and cancer screening among low-income Hispanic women (Fernández et al., 2009). The program implemented LHAs to deliver educational information about cervical and breast cancer screening. The intervention included one-on-one outreach by LHAs to women about cervical and breast cancer screening; the control group received no interventions. Screening completion was higher for cervical (p < 0.05) and
breast cancer screening (p < 0.05) in the intervention group when compared to the control group. The intervention also increased mammography self-efficacy, perceived susceptibility to cancer, and significantly increased Papanicolaou test self-efficacy (Fernández et al., 2009).

**Conclusion**

The incorporation of interventions using LHAs to promote cancer screening has been shown to increase cancer screening practices and knowledge in minority populations. LHA interventions to promote cancer screening in minority women have been effective in increasing knowledge, self-efficacy, and even receipt of screening measures for cervical and breast cancers. Combining LHAs and media education significantly increased cancer screening in Vietnamese women and the interaction with LHAs provided support and encouraged the women to screen for cancer (Lam et al., 2003). Combining LHAs with other media-based, computer-based, and pamphlet-based information has been shown to be more effective than these interventions without LHA outreach (Lam et al., 2003; Mock et al., 2007; Nguyen et al., 2009; Russell et al., 2010).

Oncology nurses are key to providing LHAs and community members with accurate cancer and cancer screening information and presenting that information in a holistic and culturally appropriate manner. LHAs working with oncology nurses and healthcare providers may help alleviate fatalistic views about cancer and promote cancer screening so that community members, particularly in minority groups, make informed decisions about cancer screening. Ultimately, improving screening use will improve cancer outcomes for these populations.

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