

# Using Lay Health Advisors to Promote Breast and Cervical Cancer Screening Among Latinas: A Review

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## ABSTRACT

*Context:* Breast and cervical cancer (BCC) represent leading causes of morbidity and mortality among Latinas. The use of lay health advisors (LHAs) represents a promising approach for health promotion among underserved and minority populations.

*Objective:* This study reviews the evidence regarding the effectiveness of LHA-based interventions to promote BCC screening among Latinas.

*Methods:* A search was conducted using the *PubMed* online electronic database. The search included studies published through August 2008. Study abstracts were reviewed to select intervention studies that met our inclusion criteria. References in selected articles were also reviewed for inclusion in the review. Of 134 articles identified, 14 met the selection criteria. The main characteristics and results of each study were extracted using a pre-established template.

*Results:* Most studies were conducted in the west or southwest regions of the United States. Few studies were guided by health behavior theory. Most studies used weak methodological designs, lacked a comparison group, and/or failed to collect both pre-test and post-test data. Only 2 studies found evidence of effectiveness.

*Conclusions:* More intervention research guided by health behavior theory and using rigorous methods is needed to elucidate the potential effectiveness of LHA interventions to promote BCC screening among Latinas.

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## INTRODUCTION

Breast cancer is the most commonly diagnosed cancer and the leading cause of cancer death among Latinas in the United States.<sup>1</sup> (This article uses the term Latino/Latina to refer to individuals of Hispanic or Latino descent living in the United States. Our terminology does not reflect the labeling used in the original studies.) Cervical cancer rates in the United States are twice as high among Latinas as non-Hispanic whites.<sup>2</sup> Early detection of breast and cervical cancer (BCC) through mammography and Pap smear is critical to reduce BCC morbidity and mortality.<sup>3-4</sup> Latinas are less likely to adhere to BCC screening guidelines than other ethnic groups.<sup>5-9</sup>

The use of lay health advisors (LHAs) represents a promising approach to increase access to health care, including cancer prevention services, and reduce health disparities in underserved communities.<sup>10</sup> LHAs are individuals to whom community members naturally turn to for advice, emotional support, and tangible aid.<sup>11</sup> LHA-based interventions typically enlist indigenous members of the target population to connect community members to health-enhancing resources through education, social support, and community-building activities.<sup>11</sup> LHAs use social networks within the community and use culturally sensitive approaches, tailored to the needs of the community members.<sup>12</sup> Previous research has examined the effectiveness of this intervention approach to promote a variety of health behaviors among Latinos.<sup>10</sup> This study reviews the evidence regarding the effectiveness of LHA-based interventions to specifically promote BCC screening among Latinas.

## METHODS

A search of extant literature was conducted using the *PubMed* online electronic database. The database was searched from its inception through August 2008. Three

consecutive Boolean searches were conducted using a combination of the following Medical Subject Headings (MeSH) as keywords: Hispanic Americans; community health aides; vaginal smears; uterine neoplasms; mammography; breast neoplasms; breast self-examination; breast, physical examination, diagnostic tests, and routine; intervention studies; clinical trials as topic; evaluation studies as topic; clinical trial; program evaluation; and health promotion. Study abstracts were reviewed to select studies that (1) sought to promote screening for breast and/or cervical cancer, (2) included Latinas in the sample, (3) used LHAs as part of the intervention, and (4) provided process, impact, or outcome data. References in selected articles were also reviewed for inclusion in the review.

## RESULTS

A total of 134 articles were identified. Of these, 14 studies met the inclusion criteria (Table 1). Of the 14 studies, the majority were conducted in the west (5)<sup>12,16-17</sup> or the southwest (6)<sup>14-15,18</sup> regions of the United States. Most studies (11) targeted screening for both breast and cervical cancer; only 3 focused on either type of cancer.<sup>16-17,28</sup> About 9 projects explicitly focused on low-income women. Most interventions (12) involved LHA-based outreach and education. In some cases, this component was combined with mass media campaigns (3)<sup>18,26,30</sup> and/or community events, such as free on-site or mobile screenings (3).<sup>14,16,26</sup> Few interventions (5) were guided by health behavior theory. Only 5 studies involved an experimental or quasi-experimental design with a comparison group and pre- and post-test measures. Of these, 2 found no significant effects on screening rates,<sup>15,23</sup> 1 found effects on Pap smear rates for women <40 only,<sup>18</sup> 1 found significant effects on mammogram rates for women 40 and older,<sup>12</sup> and 1 found a significant interaction effect indicating that the intervention was more effective for Latinas than non-Latinas.<sup>28-29</sup> Almost half of the studies (6) used a single group descriptive design and reported only process data (eg, number of women reached by intervention) or post-test-only outcome data (eg, % or number of screenings received by study participants). Four studies did not report results separately for the Latino subsample. LHAs' involvement varied from volunteer networks<sup>20,30</sup> to part-time employment.<sup>12,17</sup> In general, little information was provided regarding LHAs' numbers, characteristics, and training received. Only 2 interventions were led by a community-based agency,<sup>24,30</sup> with most projects involv-

ing collaboration with local churches and health agencies for recruitment or provision of screening services.

## DISCUSSION

Despite decades of research on the effectiveness of LHA-based interventions, particularly for underserved and minority populations,<sup>11</sup> the evidence regarding the use of this intervention approach to promote BCC among Latinas is still limited. The relatively low number of studies and the variety of designs, intervention approaches, and number and characteristics of LHAs involved make it difficult to draw conclusions regarding factors associated with differential effectiveness of these interventions. A recent review of LHA-based health promotion interventions among Latinos found that 40% of the studies provided evidence of program effectiveness.<sup>10</sup> Clearly, this percentage is higher than that observed for research on BCC screening. This could be the result of different barriers affecting BCC screening practices and/or differences in the methodological quality of the studies on these health topics.

More research using rigorous designs and health behavior theory is needed to further examine this intervention approach as applied to BCC screening with Latinas. Furthermore, the feasibility and effectiveness of LHA interventions in new regions should be tested. None of the studies reviewed were conducted in the Midwest, a region where lower levels of urbanicity and diversity may increase barriers to accessing BCC screening services among Latinas and influence the level of effectiveness of this intervention approach. Latinos are the second largest minority group and the fastest growing population in Wisconsin.<sup>32</sup>

An ongoing project funded by the Wisconsin Partnership Fund and led by the author is examining the effectiveness of a LHA-based intervention to promote BCC screening among Latinas in Wisconsin. The intervention is based on a social ecological framework<sup>33</sup> and combines LHA-based outreach and education, mass media, and cultural competency for health care professionals. Evaluation methods include a combination of longitudinal and cross-sectional methods, as well as monitoring of community BCC screening rates. This study will contribute to expand the evidence basis for this intervention approach.

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**Table 1.** Summary of Studies On the Use of Lay Health Advisers (LHAs) to Promote Breast and/or Cervical Cancer Screening Among Latinas

| Study   | 12, 27 | 13 | 14, 15 | 16 | 17 | 18-20 | 21 | 22 | 23 | 24 | 25 | 26 | 28, 29 | 30, 31 |
|---|--------|----|--------|----|----|-------|----|----|----|----|----|----|--------|--------|
| <b>Region</b>                                   |        |    |        |    |    |       |    |    |    |    |    |    |        |        |
| East  |        | X  |        |    |    |       |    |    |    |    |    |    |        |        |
| Southwest                                       |        |    | X      |    |    | X     |    | X  | X  |    | X  |    |        | X      |
| West  | X      |    |        | X  | X  |       |    |    |    | X  |    |    | X      |        |
| South   |        |    |        |    |    |       | X  |    |    |    |    | X  |        |        |
| <b>Type of screening promoted</b>               |        |    |        |    |    |       |    |    |    |    |    |    |        |        |
| Breast cancer (BC)                              |        |    |        |    | X  |       |    |    |    |    |    |    | X      |        |
| Cervical cancer (CC)                            |        |    |        | X  |    |       |    |    |    |    |    |    |        |        |
| Breast and cervical cancer (BCC)                | X      | X  | X      |    |    | X     | X  | X  | X  | X  | X  | X  |        | X      |
| <b>Intervention(s) tested</b>                   |        |    |        |    |    |       |    |    |    |    |    |    |        |        |
| Outreach  | X      | X  |        |    |    | X     | X  | X  |    | X  |    | X  |        | X      |
| Education                                       | X      | X  | X      | X  |    | X     | X  | X  |    | X  | X  |    | X      | X      |
| Community events                                |        |    | X      |    |    |       |    |    |    |    |    |    |        |        |
| In-site/mobile screenings                       |        |    | X      | X  |    |       |    |    |    |    |    | X  |        |        |
| Phone-based counseling                          |        |    |        |    | X  |       |    |    |    |    |    |    |        |        |
| Media campaign                                  |        |    |        |    |    | X     |    |    |    |    |    | X  |        | X      |
| LHA home visits                                 |        |    |        |    |    |       |    |    | X  |    |    |    |        |        |
| Social support                                  |        |    |        |    |    |       |    |    |    |    | X  |    |        |        |
| <b>Design features</b>                          |        |    |        |    |    |       |    |    |    |    |    |    |        |        |
| Single group                                    |        |    |        | X  |    |       | X  | X  |    | X  | X  | X  |        | X      |
| Control/comparison group                        | X      |    | X      |    | X  | X     |    |    | X  |    |    |    | X      |        |
| Randomization of participants                   |        |    |        |    | X  |       |    |    | X  |    |    |    |        |        |
| Randomization of larger units                   | X      |    | X      |    |    |       |    |    |    |    |    |    |        |        |
| Baseline data                                   | X      |    | X      |    | X  | X     |    |    |    |    | X  |    | X      | X      |
| Posttest data                                   | X      |    | X      | X  | X  | X     | X  | X  | X  |    | X  |    | X      | X      |
| Not described                                   |        | X  |        |    |    |       |    |    |    |    |    |    |        |        |
| <b>Exclusively focused on Latino women</b>      | X      |    | X      |    |    | X     |    |    | X  |    | X  |    |        |        |
| <b>Emphasis on low-income women</b>             | X      |    | X      |    | X  | X     | X  |    |    | X  | X  |    | X      | X      |
| <b>Intervention is theory based</b>             | X      | X  |        |    | X  | X     |    |    |    |    |    |    |        | X      |
| <b>Outcomes for Latino sample</b>               |        |    |        |    |    |       |    |    |    |    |    |    |        |        |
| Only descriptive results                        |        |    |        | X  |    |       | X  | X  |    |    | X  |    |        |        |
| Significant effects for BC screening            | X      |    |        |    |    |       |    |    |    |    |    |    |        | X      |
| Significant effects for CC screening            |        |    |        |    |    | X     |    |    |    |    |    |    |        |        |
| No significant effects                          |        |    | X      |    |    |       |    |    | X  |    |    |    | X      |        |
| Not reported                                    |        | X  |        |    | X  |       |    |    |    | X  |    | X  |        |        |
| <b>LHA recruitment</b>                          |        |    |        |    |    |       |    |    |    |    |    |    |        |        |
| Through churches                                |        |    | X      | X  | X  |       |    |    |    |    |    |    |        |        |
| Through community ads                           |        |    |        |    |    |       | X  |    |    |    |    |    |        |        |
| Through other agencies                          |        |    |        |    |    |       | X  | X  |    |    |    |    |        | X      |
| Through Latino community members                | X      |    |        |    |    |       |    |    |    |    |    |    |        |        |
| Not described                                   |        | X  |        |    |    | X     |    |    | X  | X  | X  | X  | X      |        |
| <b>LHA involvement</b>                          |        |    |        |    |    |       |    |    |    |    |    |    |        |        |
| Hired/remunerated                               | X      | X  | X      |    | X  |       | X  |    |    |    |    |    |        |        |
| Volunteers                                      |        |    |        |    |    | X     |    |    |    |    |    |    |        | X      |
| Not described                                   |        |    |        | X  |    |       |    | X  | X  | X  | X  | X  | X      |        |
| <b>LHA prior experience on health education</b> |        |    |        |    |    |       |    |    |    |    |    |    |        |        |
|   |        |    |        |    |    |       |    |    | X  |    |    |    |        |        |
| <b>Involvement of community-based agency</b>    |        |    |        |    |    |       |    |    |    |    |    |    |        |        |
| Churches  |        |    | X      | X  | X  |       |    |    | X  | X  |    | X  | X      | X      |
| Local health agencies                           |        |    |        |    |    |       |    |    |    |    |    |    |        |        |
| <b>Program led by community-based agency</b>    |        |    |        |    |    |       |    |    |    | X  |    |    |        | X      |

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