The Guide to Community Preventive Services
THE COMMUNITY GUIDE
What Works to Promote Health

Cancer Prevention and Control, Client-Oriented Screening Interventions: Group Education – Breast Cancer (2008 Archived Review)

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Review Summary

Intervention Definition

Group education conveys information on indications for, benefits of, and ways to overcome barriers to screening with the goal of informing, encouraging, and motivating participants to seek recommended cancer screenings. Group education can be delivered in many settings, by different types of educators and can include various topics.

Summary of Task Force Finding

The Community Preventive Services Task Force finds insufficient evidence to determine the effectiveness of group education in increasing screening for breast cancer.

The Task Force has related findings for group education specific to:

- Cervical cancer (insufficient evidence)
- Colorectal cancers (insufficient evidence)

Results from the Systematic Review

Seven studies with eight study arms (one study included two separate interventions) qualified for the systematic review but their findings were inconsistent.

These findings were based on a systematic review of all available studies, conducted on behalf of the Task Force by a team of specialists in systematic review methods, and in research, practice and policy related to cancer prevention and control.

Publications

Baron RC, Rimer BK, Breslow RA, et al. Client-directed interventions to increase community demand for breast, cervical, and colorectal cancer screening: a systematic review [www.thecommunityguide.org/cancer/screening/client-oriented/Cancer2008_ClientDirected_Demand.pdf]. *Am J Prev Med* 2008;35(1S): S34-55.

Task Force on Community Preventive Services. Recommendations for client- and provider-directed interventions to increase breast, cervical, and colorectal cancer screening [www.thecommunityguide.org/cancer/screening/client-oriented/Cancer2008_TaskForceRecs.pdf]. *Am J Prev Med* 2008;35(1S): S21-5.

The following Task Force finding and supporting materials are for group education interventions to increase breast, cervical, and colorectal cancer screening.

Task Force Finding

Intervention Definition

Group education sessions are usually conducted by health educators or trained laypeople, using slide presentations or other teaching aids in a lecture or interactive setting. These sessions convey information on indications for, benefits of, and ways to overcome barriers to screening, with the goal of informing, encouraging, and motivating participants to seek recommended screenings.

Task Force Finding (July 2008)*

Evidence is insufficient to determine the effectiveness of group education in increasing screening for breast cancer (based on inconclusive findings), cervical cancer (based on a small number of studies with inconsistent findings and methodological limitations), and colorectal cancer (based on a single study with mixed results).

*From the following publication:

Task Force on Community Preventive Services. Recommendations for client- and provider-directed interventions to increase breast, cervical, and colorectal cancer screening [www.thecommunityguide.org/cancer/screening/client-oriented/Cancer2008_TaskForceRecs.pdf]. *Am J Prev Med* 2008;35(1S): S21-5.

Supporting Materials

Analytic Framework

See Figure 1 on page S36 of Baron RC, Rimer BK, Breslow RA, et al. Client-directed interventions to increase community demand for breast, cervical, and colorectal cancer screening: a systematic review [www.thecommunityguide.org/cancer/screening/client-oriented/Cancer2008_ClientDirected_Demand.pdf]. *Am J Prev Med* 2008;35(1S): S34-55.

Evidence Gaps

What are Evidence Gaps?

Each Community Preventive Services Task Force (Task Force) review identifies critical evidence gaps—areas where information is lacking. Evidence gaps can exist whether or not a recommendation is made. In cases when the Task Force finds insufficient evidence to determine whether an intervention strategy works, evidence gaps encourage researchers and program evaluators to conduct more effectiveness studies. When the Task Force recommends an intervention, evidence gaps highlight missing information that would help users determine if the intervention could meet their particular needs. For example, evidence may be needed to determine where the intervention will work, with which populations, how much it will cost to implement, whether it will provide adequate return on investment, or how users should structure or deliver the intervention to ensure effectiveness. Finally, evidence may be missing for outcomes different from those on which the Task Force recommendation is based.

General:

- How does the effectiveness of interventions to increase community demand for screening vary with the health literacy of a target population or subpopulation?
- How can newer methods of communication—including automated telephone calls and Internet-delivered applications—be used to improve delivery, acceptance, and effectiveness of these interventions?
- How effective are these interventions in increasing screening by colorectal endoscopy or by double contrast barium enema (for which no qualifying studies were identified)?
- What is required to disseminate and implement effective interventions in community settings across the United States?
- How can or should these approaches be applied to assure that screening, once initiated, is maintained at recommended intervals?
- With respect to interventions that may be tailored to individuals, how are effective tailoring programs adapted, disseminated, and implemented in community-based settings across the United States?
- Are these interventions potentially effective in increasing screening of these cancer sites?
- Do these interventions result in other positive or negative changes in healthcare services (e.g., blood pressure monitoring or adult immunization) or health behaviors (e.g., smoking or physical activity)?

Group Education

It has been difficult to generalize about the effectiveness of group education because of the variety of groups, settings, educators, and styles. Yet despite insufficient evidence of overall effectiveness, group education could be effective among selected subsets of the population, in certain settings, or under certain conditions. Thus, we encourage

researchers to address additional basic questions that carefully examine specific elements of group education and target populations. We also encourage voluntary health organizations and public health agencies that remain committed to group education to collect additional evaluation data, where possible, to assess such programs as practiced.

- Is group education more effective in some settings than in others or when delivered in particular formats or by particular kinds of educators?
- Do some populations benefit more from group education than from other interventions?
- What are the minimal and optimal number, length, and intensity of group education sessions for intervention effectiveness and how does effectiveness vary by screening site and screening histories of populations?
- Are there optimal combinations of information and motivational content within group education interventions?
- Is group education effective when combined with other interventions, such as one-on-one education?
- What is the cost effectiveness of group education?

Summary Evidence Table

Author (Pub year), Study Period, Intervention	Design, Category, Execution	Study Location, Setting type Population Description	Interventions Studied, Comparison, and Number of Participants	Outcome/Effect Size and Statistical Significance
Aiken, 1994 (1987-1989) **Intervention:** Group Education	**Design Category:** Greatest suitability **Execution:** Fair	Phoenix, AZ, Urban; Community organizations (religious, business/professional, social, educational, political and service organization). Almost 100% Caucasian population; mean age ~52 years; Income "categories" b/w 40,000 and 60,000. About 30% had ever had a mammogram prior to the intervention	1. Didactic Education program alone - increase perceived severity & decrease perceived barriers (n= 48) 2. Interactive Education plus psychological program; the E program + 5 compliance exercises (n= 64) 3. Comparison (n= 54)	Completed mammography determined by self report (6 months post intervention): 1 vs. 3 = 25 pct pt (p<.05) 2 vs. 3 = 23.9 pct pt (p<.05)
Erwin 1996 (1993–1994) **Intervention:** Group Education	**Design:** Before/after **Design Category:** Least suitable **Execution:** Fair	Arkansas, Rural; Community-wide (churches and community groups). Average age 53 years (range 16-93); 70% had a high school degree or less; only African American participants analyzed (only 2 non African American participants)	1. Interactive Witness Project Intervention Program; relied on witness role models (African American women who were survivors of breast or cervical cancer) 2. Comparison (no education) total n = 152	Completed mammography determined by self report by telephone interview (6 months post intervention) 1 vs. 2 = 10.9 pct pt (p<.05)

Author (Pub year), Study Period, Intervention	Design, Category, Execution	Study Location, Setting type Population Description	Interventions Studied, Comparison, and Number of Participants	Outcome/Effect Size and Statistical Significance
King 1998 (Sept. 1993 – Feb. 1995) **Intervention:** Group Education	**Design:** Randomized trial (Group) **Design Category:** Greatest suitability **Execution:** Fair	Pennsylvania and North Carolina, Mixed Urbanicity, Community wide. 77% White, 23% African American; Senior citizen housing in Philadelphia (urban), and North Carolina (rural/mixed); Aged 65 - 84; 67% high school education or less. No mammogram in past 2 years	1. Interactive – program designed to overcome misconceptions about mammography and breast cancer + video and Q & A project (n = 115) 2. Usual care – Medicare flier (n = 122)	Completed mammography determined by self report (6 months): 1 vs. 2 = 5 pct pt (ns)
Maxwell, 2003 (Feb. 1998 – Feb. 2000) **Intervention:** Group Education	**Design:** Randomized trial (Group) **Design Category:** Greatest suitability **Execution:** Fair	LA County, CA; Urban, Community-wide Mean age 63.5 years, Filipino American, Low SES	1. Small group education about breast and cervical cancer screening; culturally tailored to Filipino American women – led by Filipino American female healthcare workers (n = 213) 2. Comparison – same program with content focus on physical activity (n = 234)	Determined by self report telephone interviews (12 months): Completed mammography: 1 vs. 2 = 3 pct pt (ns) Completed Pap test: 1 vs. 2 = 0 pct pt (ns)
Mishra, 1998 (Exact dates NR ~ 10 weeks) **Intervention:** Group Education	**Design:** Randomized trial (Individual) **Design Category:** Greatest suitability **Execution:** Good	Orange County, CA; Mixed Urbanicity, community-based primary care clinics. Women ages 37–49, 100% Latino, ~ 50% income <$10K, 92% <13 yrs education, ~ 80% non-US born No mammography in the last 2 years	1. Interactive 4 sessions (2 hrs, 2 x week) addressing different aspects of breast cancer prevention. Women were paid $25 for their participation at each educational session (n = 51) 2. No intervention given (n = 37)	Completed mammography (in the past year) determined by self report (~8 weeks): 1 vs. 2 = -1pct pt (ns)
Navarro, 1998 (Exact dates NR, 12 weeks) **Intervention:** Group Education	**Design:** Randomized trial (Group) **Design Category:** Greatest suitability **Execution:** Fair	San Diego, CA, Community-based Women ages 18–72, 100% Latina, Average age: 34, 7 years of formal education Median gross income: 12K	1. 12 weekly small-group ed sessions about breast and cervical cancer screening. Sessions were conducted by consejeras (Latina women recruited to provide health education) in natural social networks (n = 199) 2. Participants received generic community living skills education (n = 162)	Determined by self-report: Completed mammography: 1 vs. 2 = 7% (ns) Completed Pap test: 1 vs. 2 = 9.1% (p<.05)

Author (Pub year), Study Period, Intervention	Design, Category, Execution	Study Location, Setting type Population Description	Interventions Studied, Comparison, and Number of Participants	Outcome/Effect Size and Statistical Significance
Skinner 2000 {1138} (Feb 1995 – March 1997) **Intervention:** Group Education	**Design Category:** Greatest suitability **Execution:** Fair	St Louis, MO, Urban, Low-income independent elderly community housing. Mean age: 73 yrs, 45% >75 yrs 99% African-American, low income, 10 yrs of education 64%	1. Sessions led by health care professionals (Learn, Share and Live) designed to promote understanding about breast cancer and screening (n =69) 2. Comparison site (n = 83)	Completed mammography determined by self-report (2 years): 1 vs. 2 = 24 pct pt (p<.05)
Weinrich 1993 {791} (Fall 1990 – May 1991) **Intervention:** Group Education	**Design:** Randomized trial (Group) **Design Category:** Greatest suitability **Execution:** Good	South Carolina, Council on Aging congregate elderly meal sites 77.2% female, 50.3% white, 49.7% black, 59.6% income ≤$5800, 55% widowed mean age: 72	Interventions: individual ed program at meal site. FOBT kit distributed at interview 1. Didactic: Elderly educators (EE) leading the 'traditional method' as teachers/demonstrators 2. Didactic Adaptation for Aging Changes (AAC): used techniques to modify the ACS presentation to accommodate for normal aging changes (i.e. increase time needed for learning etc) 3. Didactic Combination of 1+2 4. Comparison group 'Traditional Method' = standard ACS presentation & handout about colorectal cancer Total n = 171	Completed FOBT determined by returned FOBT kit 6 days after interview/intervention: 1 vs. 4 = 5 pct pt (p<.05) 2 vs. 4 = –13 pct pt (p<.05) 3 vs. 4 = 37 pct pt (p<.05)

Included Studies

Breast Cancer

Aiken L, West S, Woodward C. Increasing screening mammography in asymptomatic women: evaluation of a second-generation, theory-based program. *Health Psychol* 1994;13:526 –38.

Erwin D, Spatz T, Ches R, Stotts C, Hollenberg J, Deloney L. Increasing mammography and breast self-examination in African American women using the Witness Project Model. *J Cancer Educ* 1996;11:210 –5.

King E, Rimer B, Benincasa T, Harrop C, Amfoh K, Bonney G. Strategies to encourage mammography use among women in senior citizens' housing facilities. *J Cancer Educ* 1998;13:108 –15.

Maxwell AE, Bastani R, Vida P, Warda US. Results of a randomized trial to increase breast and cervical cancer screening among Filipino American women. *Prev Med* 2003;37:102–9.

Mishra S, Chavez L, Magana J, Nava P, Valdez R, Hubbell F. Improving breast cancer control among Latinas: evaluation of a theory-based educational program. *Health Educ Behav* 1998;25:653–70.

Navarro A, Senn K, McNicholas L, Kaplan R, Roppe B, Campo M. Por La Vida model intervention enhances use of cancer screening tests among Latinas. *Am J Prev Med* 1998;15:32– 41.

Skinner C, Arfken C, Waterman B. Outcomes of the Learn, Share & Live Breast Cancer Education Program for Older Urban Women. *Am J Public Health* 2000;90:1229 –34.

Search Strategy

The following outlines the search strategy used for these reviews of interventions to increase breast, cervical, and colorectal cancer screening: Client Reminders (archived); Client Incentives (archived); Mass Media Targeting Clients (archived); Small Media Targeting Clients; Group Education for Clients (archived); One-on-One Education for Clients (archived); Reducing Structural Barriers for Clients (archived); Reducing Client Out-of-Pocket Costs (archived); Provider Assessment and Feedback (archived); Provider Incentives (archived).

To establish the evidence base the team searched five computerized databases from the earliest entries in each through November 2004: MEDLINE, database of the National Library of Medicine (from 1966); the Cumulative Index to Nursing and Allied Health database (CINAHL, from 1982); the Chronic Disease Prevention database (CDP, Cancer Prevention and Control subfield, from 1988); PsycINFO (from 1967); and the Cochrane Library databases. Medical subject headings (MeSH) searched (including all subheadings) are shown below. The team also scanned bibliographies from key articles and solicited other citations from other team members and subject-matter experts. Conference abstracts were not included because, according to Community Guide criteria, they generally do not provide enough information to assess study validity and to address the research questions.

The search identified over 9000 citations whose titles and abstracts were screened for potential relevance to interventions and outcomes of interest; of these, 580 articles were retrieved for full-text review.

Search terms used in five electronic databases to find studies for inclusion in the systematic reviews of cancer screening. Searches were conducted to find all studies of cancer screening including those specific to screening for breast, cervical, or colorectal cancer.

General

Neoplasms—combined with any of the following headings:
Early detection
Mass screening
Multiphasic screening
Preventive health services
Screening

Breast cancer

Breast neoplasms
Mammography

Cervical cancer

Cervical intraepithelial neoplasia

(Uterine) cervical neoplasms
Cervix dysplasia
Vaginal smears

Colorectal cancer

Colonic neoplasms
Colorectal neoplasms
Occult blood
Sigmoid neoplasms
Sigmoidoscopy

From: Baron RC, Rimer BK, Coates RJ, et al. Methods for conducting systematic reviews of evidence on effectiveness and economic efficiency of interventions to increase screening for breast, cervical, and colorectal cancers. *Am J Prev Med* 2008;35(1S):26-33.

Disclaimer

The findings and conclusions on this page are those of the Community Preventive Services Task Force and do not necessarily represent those of CDC. Task Force evidence-based recommendations are not mandates for compliance or spending. Instead, they provide information and options for decision makers and stakeholders to consider when determining which programs, services, and policies best meet the needs, preferences, available resources, and constraints of their constituents.

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