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Evaluation Study of the American Cancer Society's Cancer Screening in Primary Care Program

Lori Belle-Isle

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EVALUATION STUDY OF THE
AMERICAN CANCER SOCIETY'S
CANCER SCREENING IN PRIMARY CARE PROGRAM

Lori Belle-Isle

B.A., Mount Holyoke College, 1995

A Thesis
Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Public Health
at the
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2001
EVALUATION STUDY OF THE
AMERICAN CANCER SOCIETY'S
CANCER SCREENING IN PRIMARY CARE PROGRAM

Presented by

Lori Belle-Isle, B.A.

Major Advisor

David Gregorio, Ph.D.

Associate Advisor

Joan Segal, MA, MS

Associate Advisor

Holger Hansen, MD, Ph.D.

University of Connecticut
2001
Acknowledgments

I would like to express my sincere appreciation to the cancer control staff from the Connecticut Division of the American Cancer Society who participated in this study. The staff's contribution was invaluable to the study's implementation and its completion. Special recognition is given to Program Coordinator, Zana Baruch, for her facilitation of the study. Sincere thanks to Pat Evans and Susan Richter, RN for their support and encouragement.

I would also like to thank the primary care providers and their staff who participated in the study.
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Chapter I

Introduction

The need for comprehensive cancer control services, which include cancer prevention and early detection strategies, is the impetus for interventions within the primary care setting. Several factors including low delivery rates of clinical preventive services (reported to be less than 50 percent), unsatisfactory physician compliance with cancer screening guidelines, populations with a high rate of late stage cancer diagnosis, and low screening utilization rates in high risk populations indicate a need for cancer control intervention strategies targeted at primary care physicians. The benefits of screening are known as a result of clinical trials, case-control studies, and historical data from the Papanicolou (pap) test. Screening mammography and clinical breast examination can reduce breast cancer mortality (ACS, 1998); use of the Pap test can reduce mortality from invasive cervical cancer; and procedures for the early detection of colorectal cancer such as fecal occult blood testing, proctoscopy, and digital rectal examination may also reduce mortality (Anderson et al., 1987; ACS, 1998; Mendal, et al., 1993). Although studies indicate that practitioners are familiar with cancer screening guidelines, audit studies indicate that physician compliance with cancer screening recommendations is low and hence patients receive less than optimal care with respect to routine cancer screening.

Primary care physicians and nurse practitioners are ideally positioned to provide cancer screening education and recommendations to their patients and to play a major role in the reduction of cancer mortality. This potential for primary care providers to reduce mortality is evidenced by a 0.6 percent decrease in mortality annually between
1991 and 1996 which was greatly impacted by cancer prevention and early detection methods (ACS, 1998). Reports indicate that if all physicians and patients were to follow the recommended mammography and clinical breast exam guidelines, deaths from breast cancer would be reduced by 30 percent among women 50 years and older (NCI, 1990). According to a 1987 survey, physician encouragement is the most important factor related to mammography compliance (Kruse & Phillips, 1987). Results of the Mammography Attitudes and Usage (MAUS) indicate major increases in mammography use are related to physician encouragement. Nearly three-fourths of the women who received mammograms did so on the recommendation of their physician (MMWR, 1990). The data indicate that the behavior of primary care physicians may have a major effect on compliance with cancer screening guidelines.

In the 1990s, the American Cancer Society (ACS) made the early detection of cancer and encouragement of primary care providers to use appropriate interventions core priorities. To this end, the Connecticut Division of the society appointed an ad hoc committee from the Division's Medical Affairs Committee, Cancer Screening in Primary Care, headed by Bernard Greenberg, MD, Professor of Medicine, Division of Hematology/Oncology, University of Connecticut School of Medicine, to develop an early detection screening program. The committee's charge was to develop a program that would improve primary-care physician compliance with recommended cancer screening guidelines and assist primary care physicians in achieving their potential in the early detection of cancer. The committee developed the Cancer Screening in Primary Care program with the primary goal of working with physicians and their office staffs to improve compliance with screening guidelines by: 1) education (awareness), 2) involving
office staff support, and 3) providing access to computer software and reminder systems. The program was also intended to help physicians improve patient access to education in regard to the importance and recommended frequency of cancer screening (Greenberg et al., 1996).

ACS cancer control staff and volunteers implemented this Cancer Screening in Primary Care program designed by Greenberg and the ad hoc committee. The visits were made during the noon hour and lunch was provided to the physicians and office staff. The visit began with a discussion of the program's goals; a review of ACS screening guidelines for five cancers: breast, cervix, colon, prostate and skin; and the rationale for the program. Next, the physicians were asked questions about their current practice strategies for cancer screening. The questions addressed what were they developing now and what their goals were in regard to cancer screening. Following this discussion, the issues of barriers to screening, ways office staff could become involved with improving strategies, and resources to aid in improving cancer screening compliance were addressed with the physician and staff. Materials, such as a sample of ACS patient brochures and an educational videotape created specifically for patients in physicians' waiting rooms, were also presented and discussed. The visit concluded with a discussion of how the practice envisioned using the ideas and resources provided to them and whether the resource materials would be of assistance. One week later, the practice received a courtesy follow up telephone call that was intended to offer clarification of the materials provided and inquire whether the practice was interested in ordering patient education materials (Greenberg et al., 1996). Practices were not followed up beyond this courtesy call.
**Purpose of Evaluation**

The purpose of this evaluation is to assess the effectiveness of the Cancer Screening in Primary Care program. More specifically, this evaluation is designed to measure the impact of the program on cancer screening in primary care practices. As the ACS develops a population-based planning and evaluation process to meet its objectives in cancer control for the year 2015, program evaluations are being conducted nationwide to evaluate the effectiveness of prevention programs and to learn from cancer control programs within the ACS.

The identification of the strengths and weakness of the Cancer Screening in Primary Care program, in regard to the adoption of cancer control activities, will assist to improve the current program. Both the New England Division of the American Cancer Society and the State of Connecticut Department of Public Health plan to use the findings of this evaluation to develop future cancer control early detection programs targeted at primary care physicians and primary care settings.

This study of cancer screening explores the limitations and complexity of educational interventions within the primary care setting. Chapter II. provides a comprehensive review of the literature that addresses the many barriers that have been reported to hinder prevention activities and studies that have measured various provider reminder systems to promote cancer screening activities. Chapter III. describes the methodology used for data collection and analysis. I conducted a three phase quantitative study, an administered pre and post intervention questionnaire (n=25) and in person office visits. Chapter IV. outlines the study results including which prevention activities the primary care physicians chose as goals for their office, the proportion of goals they
were successful in implementing and the goals they failed in implementing and the prevention activities adopted by both the intervention and control groups. Chapter V. provides a discussion of the study results. I adopt Bandura's framework of the social learning theory. Specifically, I adopt Bandura's Social Learning Theory Constructs (SLTC) that are particularly relevant to this evaluation, which include Reciprocal Determinism, Behavioral Capability, and Self-efficacy. The results indicate that, for the majority of primary care practices in this study, physicians implemented prevention activities when provided with sufficient information and training. No difference in the achievement of goals was found between the intervention and control groups. Chapter VI. outlines the recommendations for the program. Chapter VII. presents the limitations and strengths of the study.
Institutionalizing cancer control and early detection standards within primary care practices is a challenging component of comprehensive clinical prevention services implementation. There are health system barriers, patient barriers and physician barriers that cancer control interventions, which are targeted at primary care practices, must be designed to mitigate. The many barriers which have been reported to hinder prevention activities in the primary care setting can be placed into three categories: 1) Physician obstacles such as lack of physician time and interest, distraction by competing acute health problems, inadequate knowledge and expertise and physician forgetfulness; 2) Patient obstacles which include cost, patient refusal, and lack of patient knowledge; 3) Health care system obstacles such as lack of insurance coverage for recommended screening tests, physicians' inflated self-reports of cancer screening performance, lack of consensus in regard to recommended screening guidelines, and lack of office systems to incorporate preventative care into the health care delivery process (ACS, 1995; Ackermann, 1994; Frame, 1993; Greenburg, 1996; Spitz, et al., 1992; Wender, 1993).

Numerous studies have addressed these barriers to integrating cancer screening activities within the primary care setting (Ackermann, 1994; ACS, 1985; Bird, et al., 1990; Costanza, 1992; Dietrich, 1992; Flocke, 1998; Frame, 1993; Friedell, 1997; Gann et al., 1993; Gill et al., 1998; Hamblin, 1998; Leiningen et al., 1996; McPhee & Detmer, 1993; Miller et al; 1998). Several studies (ACS, 1985; Ackermann, 1994; Flocke, 1998) examine the attributes and attitudes of primary care physicians that will most likely impact screening performance. The Ohio Division of the ACS in 1985 conducted a
survey of physician attitudes and practices in early cancer detection. The study, based on telephone interviews with 1,035 primary care physicians in 1984, found that while many physicians generally agree with the ACS screening guidelines, many do not follow them in daily practice. This paradox can be partially attributed to conflicting screening recommendations from other organizations. The study results indicated that seven in 10 physicians (68 percent) are doing more screening of asymptomatic patients for early detection cancer than they did in the previous five years. However, only 21 percent of general physicians report an increase in mammography recommendations for the detection of breast cancer compared to approximately seven in 10 (68 percent) of obstetricians and gynecologists who now order mammograms for asymptomatic patients. A large percentage (75 percent) of all physicians either followed or exceeded the ACS guidelines for the Pap test.

Ackermann (1994) used a one-group, meta-analytic design to assess survey results published between 1985 and 1990 that measured adherence to the breast cancer screening guidelines by U.S primary care physicians. This study examined barriers such as practice characteristics, practice constraints, professional considerations, test constraints and patient characteristics. In regard to physician characteristics, obstetricians and gynecologists, female physicians, younger physicians, and physicians familiar with the guidelines were more likely to follow the guidelines. Agreement with the guidelines also affected adherence. The effects of office constraints were less clear. In regard to test constraints, cost of mammography was a major barrier and five studies established that adherence was less likely when physician perceptions of possible risks from radiation exposure outweighed the benefits of screening. The availability of screening resources
and facilities was also a consideration. Ackermann suggests a provider intervention strategy that provides physicians with a directory of accredited mammography facilities and a resource list for low cost screening. In the Flocke (1998) study four primary care attributes, including patients' preference for their regular physician, interpersonal communication, physicians' knowledge of their patients, and coordination of care, were measured for effect on the delivery of preventive care. Results indicated that when patients had good interpersonal communication with their physician and the practice had a high degree of coordination of care, patients were more likely to have up to date screening services.

Various reminder intervention systems have been developed and tested (McPhee & Detmer, 1993) to improve the low screening performance of primary care physicians. McPhee and Detmer (1993) reviewed three dozen studies that tested four types of interventions: physician interventions, patient interventions, physician and patient interventions, and office staff interventions. Seven of the reviewed studies examine Provider Reminder System (PRS) interventions such as flow sheets, chart stickers, medical record checklists, computerized reminders and written reminders designed to promote cancer screening activities. Several investigators have shown efficacy for computerized reminders. The authors concluded that the provider interventions are more effective than physician education alone and that in the majority of cases they were effective in overcoming barriers to screening such as physician forgetfulness. Patient interventions such as mailed reminders, telephone calls, patient held screening cards, and assistance with appointment scheduling were measured in eight articles. Several of these studies concluded that these patient reminders were successful in increasing compliance
to cancer screening. However, studies indicate that interventions targeted at both physicians and patients have better outcomes. Office interventions that involved nursing staff and administrative staff in a reorganization of office routines were also found effective in improving the delivery of preventive care. The authors concluded that office reminder systems are most effective in increasing cancer activities when they combine several reminder strategies and involve office staff and physicians.
Overview of Evaluation

This evaluation is designed to measure the effectiveness of a physician and office staff-directed intervention on the adoption of cancer control activities in primary care practices. The Connecticut Division of the American Cancer Society conducted the 13-month intervention, which was funded by the Connecticut State Department of Public Health. The evaluation was a three-phase process that began in January 1998 and ended in June 1999.

Phases I, II and III

<table>
<thead>
<tr>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Develop proposal, study design, and baseline and end-of-study survey instruments</td>
<td>- Conduct Visit Two and deliver EDA with both intervention and control groups</td>
<td>- Administer Post-intervention Questionnaire</td>
</tr>
<tr>
<td>- Recruit primary care practices</td>
<td>- Conduct three additional visits with intervention group</td>
<td>- Collect data</td>
</tr>
<tr>
<td>- Train Primary Care Implementers (PCI)</td>
<td>- Deliver follow-up phone call to control group</td>
<td>- Enter data</td>
</tr>
<tr>
<td>- Administer Baseline Questionnaire (Visit One)</td>
<td></td>
<td>- Analyze Post-intervention Questionnaire</td>
</tr>
<tr>
<td>- Develop Early Detection Assessments (EDA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Enter Data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Analyze Baseline Questionnaire</td>
<td></td>
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</tbody>
</table>

Evaluation Questions: Prior research has examined the efficacy of an intervention in promoting preventive care services. This evaluation examines the prevention goals
chosen by primary care physicians and the reasons these goals may or may not be achieved. The evaluation was guided by the following questions:

- What cancer control activities do primary care physicians currently include in their office practice?
- Which prevention activities do primary care physicians choose to improve?
- What prevention goals do primary care physicians successfully achieve and fail to achieve? Does achievement of prevention goals differ by intervention status?
- For both the intervention and control groups, did cancer control activities in the primary care practices increase as a result of the intervention?
- Based on the study findings, how can the New England Division of the American Cancer Society improve Connecticut's Cancer Screening in Primary Care program?

**Study Subjects**

The target population was comprised of community-based primary care medical practices in Connecticut. Participants were recruited to the study from 100 practices that had previously expressed an interest in the Cancer Screening in Primary Care Program. A recruitment letter from Bernard Greenburg, MD, Chair of the ACS Medical Affairs Committee, was sent to these 100 practices previously interested in participating in the program. From these practices, 33 were recruited on a continuous basis and randomly assigned, by flip of a coin, to one of two groups, a control group (n=16) or an intervention group (n=17). Of the 33 self-selected practices enrolled in the study, 26 completed the baseline survey (79%) and 25 completed the post intervention survey (76%). Of the initial 33 practices, eight practices (four from intervention group and four from control group) were unwilling to participate in the study after enrollment. Reasons for dropping the study included staff changes, relocation, or lack of time to participate.
Study Design

Implementation took place over approximately 13 months. Physicians completed two questionnaires, a baseline survey and post-intervention survey. The surveys were administered in-person by an American Cancer Society cancer control staff person trained as a primary care implementer (PCI). Three formal intervention visits occurred throughout the 13-month period of the study. For the intervention group only, an additional three informal visits occurred over a six-month period.

The Intervention Visits: One, Two and Three

Visit One/Phase I

During Phase I of the study, baseline questionnaires were administered in-person by a trained PCI at the medical practice site during a scheduled, 30-minute visit. During this 30-minute visit, the PCI met with the physician and/or office manager and administered the baseline survey. The physician and/or office manager reported answers to the survey questions asked by the PCI. The baseline questionnaire focused on the practice's familiarity with the ACS screening guidelines, current screening recommendations, and the status of cancer control activities within the practice. These types of questions formed the main body of the questionnaire (see Appendix A). The questionnaires were structured using a combination of Likert-type items and checklist items. Included in the baseline questionnaire was an information sheet, which identified the interviewer, practice ID, contact information, and practice characteristics such as the number of physicians and nurses.

After the survey was administered, Visit Two was scheduled with the practice.
Visit Two/Phase II

Within two weeks after completing the baseline survey (Visit One), all participating practices (n=25) had an assessment visit conducted by two PCIs (Visit Two). During Visit Two, the PCIs met with the physicians and their staff during a scheduled lunch visit to present them with their Early Detection Assessment (EDA), which was based on findings from the baseline study. The assessment identified the cancer control activities the practice currently provided. The PCI then provided a list of recommendations for achieving an optimal standard in the early detection of cancer that was developed from previous research findings. From the list of recommendations, the practices chose from one to three cancer control activity goals to be implemented over the next nine months. Also during the visit, all practices were provided with a learning tool, the Prevention Resource Guide from the Cancer Screening in Primary Care Program. The Prevention Resource Guide included: a sample of patient education materials and an order form, ACS screening guidelines and rational, ACS screening guideline wall posters, ACS brochure holder, a pad of cancer specific flow chart sheets, information about a recall system, and information sheets about the Connecticut Breast and Cervical Cancer Early Detection Program (CBCEDP). At the conclusion of the visit, the practice identified a contact person for future communications with the PCI.

Three Additional Intervention Group Visits/Phase II

During Phase II, the intervention practices (n=13) received three additional in-person visits, approximately three months apart. A contact person from the practice met with the PCI during these additional intervention visits to review the prevention goals set during
Visit Two and to monitor achievement of the goals. These three additional intervention visits were informal and approximately 20 minutes in length.

**Control Group Follow-up Phone Call/Phase II**

The control group (n=12) received a follow-up phone call from a PCI two weeks after Visit Two. The follow-up phone call was intended as a courtesy call to the practice. The call was intended for the contact person identified during Visit Two. During the call, the contact person was asked whether he/she had any questions about the materials or information provided during Visit Two and whether the practice wanted to order a supply of American Cancer Society educational materials such as brochures and videos.

**Visit Three/Phase III**

In phase III, the practices (n=25) were scheduled to receive a 30-minute, post-intervention visit. During the visit, a post-intervention questionnaire was administered in person by the PCI with a contact person and/or physician. However, if these individuals were not available for the post-survey, the individual most aware of the practice's cancer control activities was asked to participate. The post-intervention questionnaire focused on the practice's familiarity with the ACS screening guidelines, current screening recommendations, status of cancer control activities within the practice and practice characteristics such as the number of physicians and nurses. These types of questions formed the main body of the questionnaire (Appendix).

**Description of Data Collection Instruments**

The evaluator developed quantitative data collection instruments for this study to answer the key evaluation questions. The instruments utilized were assessed for face
validity by a faculty member at the University of Connecticut Health Center, the Vice-
President of Cancer Control at the former Connecticut Division of the ACS, and the
Director of Research and Evaluation at the former Massachusetts Division of the ACS.
No other measures of validity or reliability tests were performed.

**Phase I-Baseline and Phase III Post-Intervention Questionnaires**

The baseline and post questionnaires each consist of 53 items: one open-ended
question, 11 close-ended questions and an information section (see Appendix A).
Questions 1a and 1b address the practices' current screening recommendations and assess
the practices' familiarity with the ACS screening guidelines. Question 1a asks the study
participants, in an open-ended format, what they currently recommend to their patients
with respect to early detection screening (e.g., mammography, Pap test, prostate
screening, sigmoidoscopy, and skin exam. Question 1b, with its close-ended format
(yes/no), asks if the physician and the office staff are familiar with the ACS cancer
screening guidelines for: mammography, pap test, prostate, sigmoidoscopy, and skin
exam. Questions 2-9 address whether the practices are utilizing the established optimum
prevention activities. Question 2a and 2b inquire about whether the practice has a formal
written protocol for early detection screenings and whether a copy of the protocol is
available to the interviewer. Questions 3a-3h address whether the practice performs chart
audits to measure early detection screening activities; if yes, which activities do they
audit and how often they are performed? Questions 4a-4k address whether the practice
has early detection activity goals for a recall system, chart audits, flow charts, increase in
screening referrals or make patient education materials available, and whether a copy of
these goals is available for the interviewer. Questions 5a-5h address whether a cancer
specific flow chart is used in patient charts, whether it is regularly up-dated, and which cancer specific items it includes. Questions 6a-6c address tracking systems for test results, abnormal follow-up, and patient non-compliance. Questions 7a-7g address patient reminder systems (recall systems), how they are utilized, whether they are paper driven or computerized, and how frequently the reminders are generated. Questions 8a-8b address whether the practice has an office leader for early detection and identify the staff involved. Questions 9a-9d address patient education materials in terms of availability, accessibility, and whether a patient self-selects or is encouraged by the physician to read the information at home.

Questions 10 through 12 are not a part of the optimal standards for prevention but address other important behavior change factors. Questions 10a-10c address the practice's readiness for change. They ask whether the practice made any recent changes in its activities, if they were successful, and whether they were considering any changes in how they deliver cancer early detection practices. Questions 11 and 12 address the practice's knowledge of community-based low cost or free resources for eligible patients. Question 12 specifically asks whether the practice is knowledgeable/aware of the CBCCEDP, which offers free or low cost mammograms and pap tests at numerous sites within Connecticut. The final information section addresses the practice characteristics including the number of physicians and other health care providers in the practice.

**Data Management**

Baseline and post-intervention surveys were collected from the PCIs at the beginning and end of the evaluation study. Each participant's baseline and post surveys were assigned a two or three digit code numbered sequentially in the order in which the
practice was recruited into the study. Baseline and Post surveys were matched by name and then by digit code number.

**Quantitative Data Analysis Management**

Quantitative data from the questionnaires were entered by the evaluator into an excel spreadsheet. Questionnaire files were created for baseline and post-intervention data. To minimize for data entry errors, check files were utilized. Quantitative data files were then transferred into SPSS format and SPSS files of the quantitative data were created.

The open-ended responses for question 1 were analyzed and then re-coded into dichotomous scores: "1" = performed (follows ACS screening guidelines) and "2" not performed (does not follow ACS screening guidelines) or "9" not applicable to the practice.

The response categories for questions 2 through 12 were re-coded into dichotomous scores: "1", "2", or "9". Yes, always, in progress, and most of the time were combined and re-coded into a new score of "1". No and rarely were combined and re-coded into a new score of "2". Don't know/not sure was re-coded into a new score of "9".

**Description of Data Analysis & Procedures**

The primary care practice was the unit of analysis. Descriptive statistics, such as frequencies, were used to examine the practice's level of prevention activities in Phase I and in Phase III. Inferential statistics, such as Chi square tests of significance, were calculated on 2x2 tables to look at relationships between the prevention activity variables. Cumulative scores of the activities were calculated using Analysis of Variance (ANOVA), Independent and Dependent T-tests to compare group mean scores across the
phases. The null hypothesis being tested was that the primary care practices in the intervention group did not differ significantly from the practices in the control group with regard to the range of variables. Also tested was the null hypothesis that the practices would not adopt additional prevention practices at post-intervention. Data were analyzed using the SPSS software. All inferential statistical tests were performed at the .05 level of significance.

**Comparison of Proportion of Activities between Groups**

A comparison of the proportion of activities (all variables) between the intervention and the control groups at baseline was conducted using a Pearson chi-square analysis. The analysis indicates whether the difference for each activity (variable) at baseline was statistically significant. When expected cell count was less than 5, the Fisher's Exact Test was reported.
Chapter IV

Results

Description of the Study Sample

Of the 25 practice participants who completed the information section, 80% (20) had up to two physicians in the practice, and 23% (6) had three to five physicians in the practice. In regard to the number of non-physician health care providers in the practice, which included physician assistants and nurse practitioners, 69% (18) had at least one, 31% (8) had more than two, and 7% had none (2).

Table 1 shows the percentage of physician self-report of cancer control activities provided for patients at baseline, by study group. Four of the activities (utilizing cancer flow sheets, performing chart audits, established formal protocols and review of cancer control activities) were performed more frequently by the intervention group, although a chi square analysis indicates that only two of these activities were significantly different at baseline, (performing chart audits, p=.011 and review of prevention activities, p=.011) an independent t-test indicated that no differences were found in a comparison of the mean values of each group in regard to proportion of cancer control activities performed at baseline. This t-test indicates that the cancer control activities for the intervention and control groups were comparable at baseline, 65% and 53% respectively. In the intervention practices, the most common cancer control activities performed were chart audits, review of activities, established protocols and prevention goals, educational materials available, guided use of educational materials, office leader for prevention, and tracking systems for test results. In control practices, the most common cancer control activities performed were established prevention goals, educational materials available,
guided use of educational materials, office leader for prevention, tracking systems for abnormal test results and familiarity with American Cancer Society screening guidelines.

**Table 1. Physician self-report of performance of cancer control activities by study group at baseline**

<table>
<thead>
<tr>
<th>Activity Performed</th>
<th>Intervention (n=13)</th>
<th>Control (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer Flow Chart</td>
<td>46.2</td>
<td>15.4</td>
</tr>
<tr>
<td>Chart Audits</td>
<td>61.5</td>
<td>7.7</td>
</tr>
<tr>
<td>Prevention Goals</td>
<td>84.6</td>
<td>61.5</td>
</tr>
<tr>
<td>Educational Materials Avail</td>
<td>76.9</td>
<td>69.2</td>
</tr>
<tr>
<td>Guided Patient Materials</td>
<td>84.6</td>
<td>61.5</td>
</tr>
<tr>
<td>Office Leader for Prevention</td>
<td>76.9</td>
<td>61.5</td>
</tr>
<tr>
<td>Formal Protocol</td>
<td>38.5</td>
<td>7.7</td>
</tr>
<tr>
<td>Recall System</td>
<td>53.8</td>
<td>30.8</td>
</tr>
<tr>
<td>Computerized Recall System</td>
<td>38.5</td>
<td>15.4</td>
</tr>
<tr>
<td>Tracking System Abnormal Results</td>
<td>84.6</td>
<td>76.9</td>
</tr>
<tr>
<td>Tracking System Non-Compliance</td>
<td>53.8</td>
<td>46.2</td>
</tr>
<tr>
<td>Tracking System Results</td>
<td>69.2</td>
<td>61.5</td>
</tr>
<tr>
<td>Review of Activities</td>
<td>61.5</td>
<td>7.7</td>
</tr>
<tr>
<td>Aware of CBCCED</td>
<td>53.8</td>
<td>46.2</td>
</tr>
<tr>
<td>Familiar ACS Screening Guidelines</td>
<td>53.8</td>
<td>61.5</td>
</tr>
</tbody>
</table>

Table 2 summarizes the rate of goal achievement by study group (intervention, n=13; control, n=12). The intervention group practices achieved 69 percent of goals.
attempted in comparison to an achievement rate of 67 percent for the control group practices. A chi-square test indicated no difference in the achievement of goals. This comparison indicates that the two groups were similar at follow-up in terms of the proportion of goals they achieved.

**Table 2. Comparison of rate of goal achievement**

<table>
<thead>
<tr>
<th>Goal Achievement</th>
<th>Intervention (n=13)</th>
<th>Control (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean % goals achieved</td>
<td>69.0</td>
<td>67.0</td>
</tr>
<tr>
<td></td>
<td>P=ns</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows the written list of 11 goals shown to participating practices at the assessment visit (Visit #2). An examination of the proportion of goals met indicates that between the baseline and end-of-study surveys, 17 out of 25 practices (68%) achieved all of the goals they attempted. Four goals had the highest failure rates including implementing a computerized recall system (57.1%), review prevention activities (50%), establishment of formal screening protocols (40%), and conducting chart audits (33.3%). This table indicates that increasing mammography recommendations and increasing awareness of the CBCCED program were the two goals chosen most frequently by both groups and showed the highest rates of achievement, 90 and 100 percent, respectively.

Overall, the 13 intervention practices attempted 31 goals and achieved 25 goals and did not achieve 6 goals, while the control group practices attempted 24 goals, achieved 18 goals and did not achieve 6 goals.
Table 3. Goals achieved by group

<table>
<thead>
<tr>
<th>Goals</th>
<th>Intervention</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Attempted n=13</td>
<td>Achieved Cumulative</td>
</tr>
<tr>
<td>#1 Increase Mammo Rec.</td>
<td>46.2% (7)</td>
<td>85.7% (6)</td>
</tr>
<tr>
<td># 2 Familiarize Staff Screening Guidelines</td>
<td>15.4% (2)</td>
<td>100% (2)</td>
</tr>
<tr>
<td># 3 Screening Protocol</td>
<td>23.1% (3)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td>#4 Chart Audits</td>
<td>38.5 (5)</td>
<td>80% (4)</td>
</tr>
<tr>
<td>#5 Review Activities</td>
<td>15.4% (2)</td>
<td>50% (1)</td>
</tr>
<tr>
<td>#6 Cancer Flow Charts</td>
<td>15.4% (2)</td>
<td>100% (2)</td>
</tr>
<tr>
<td>#7 Comprehen. Tracking System</td>
<td>15.4 (2)</td>
<td>100% (2)</td>
</tr>
<tr>
<td>#8 Recall System</td>
<td>30.8% (4)</td>
<td>75% (3)</td>
</tr>
<tr>
<td>#9 Office Leader Prevention</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>#10 Educational Materials</td>
<td>7.7% (1)</td>
<td>100% (1)</td>
</tr>
<tr>
<td>#11 CBCCEDP</td>
<td>23.1% (3)</td>
<td>100% (3)</td>
</tr>
</tbody>
</table>

Table 4 shows a comparison of the mean proportion of cancer control activities performed at baseline compared to the proportion of cancer control activities performed at the end-of-study survey. A dependent t-test found a significant difference between the proportion of activities that were performed at baseline and post-intervention p=.001. The test indicates that overall, 17% more activities were provided by the practices at post-intervention. At baseline the practices were performing 60% of the cancer control activities compared to performing 77% of the activities at the end-of-study survey.
Table 4. Comparison of proportion of cancer control activities performed at baseline with activities performed at post-intervention.

<table>
<thead>
<tr>
<th>Baseline Activities</th>
<th>60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-Intervention Activities</td>
<td>77%</td>
</tr>
<tr>
<td></td>
<td>P=.001</td>
</tr>
</tbody>
</table>

Table 5 describes physician self-report of cancer control activities provided for patients for all practices (n=25) at baseline and then at the end-of-study survey. At baseline the practices were performing 60 percent of the cancer control activities compared to performing 77 percent of the cancer control activities at the end-of-study survey. An increase in performance is indicated for all of the cancer control activities. The greatest increases in the rate of performance by the practices are shown in utilizing a cancer specific flow chart (55%), making staff aware of the CBCCED program for low cost or free mammograms and pap tests (54%), and physician familiarity with the ACS recommended screening guidelines (59%).
Table 5. Physician Self-Report of Cancer Control Activities at Baseline and Post-Intervention

<table>
<thead>
<tr>
<th>Activity</th>
<th>Baseline (n=13)</th>
<th>Post Study (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer Flow Chart</td>
<td>30.8</td>
<td>56.0</td>
</tr>
<tr>
<td>Chart Audits</td>
<td>34.6</td>
<td>52.0</td>
</tr>
<tr>
<td>Educational Materials Avail</td>
<td>73.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Guided Patient Materials</td>
<td>73.1</td>
<td>96.0</td>
</tr>
<tr>
<td>Office Leader for Prevention</td>
<td>69.2</td>
<td>72.0</td>
</tr>
<tr>
<td>Formal Protocol</td>
<td>23.1</td>
<td>48.0</td>
</tr>
<tr>
<td>Recall System</td>
<td>42.3</td>
<td>60.0</td>
</tr>
<tr>
<td>Computerized Recall System</td>
<td>26.9</td>
<td>52.0</td>
</tr>
<tr>
<td>Tracking System Abnormal Results</td>
<td>80.8</td>
<td>84.0</td>
</tr>
<tr>
<td>Tracking System Non-Compliance</td>
<td>50.0</td>
<td>64.0</td>
</tr>
<tr>
<td>Tracking System Results</td>
<td>65.4</td>
<td>80.0</td>
</tr>
<tr>
<td>Review of Activities</td>
<td>34.6</td>
<td>52.0</td>
</tr>
<tr>
<td>Aware of CBCCEDP</td>
<td>50.0</td>
<td>92.0</td>
</tr>
<tr>
<td>Familiar with ACS Guidelines</td>
<td>57.7</td>
<td>96.0</td>
</tr>
</tbody>
</table>
Chapter V

Discussion

Cancer control prevention activities at baseline included 13 self-reported activities. The most common activities were established prevention goals, 73% of practices; educational materials available, 73%; guided use of educational materials, 73%; office leader for prevention, 69.2%; tracking systems for test results, 65.4%, and tracking systems for abnormal results 80.8%. However, the majority of prevention activities were being performed by a small percent of the practices: the use of cancer specific flow charts, 30.8%; chart audits, 34.6%, established formal protocols for screening recommendations, 23.1%; computerized recall systems, 26.9%; reviews of prevention activities, 34.6%, and tracking systems for non-compliance, 50%.

At baseline, 58 percent of the practices were familiar with three out of five ACS screening guidelines pertaining to this study (mammography, pap test, prostate exam, sigmoidoscopy, and skin exam) and 50 percent of the practices were aware of the Connecticut Breast and Cervical Cancer Early Detection program (CBCCEDP).

As indicated earlier on page 26, a chi square analysis reveals only two activities were significantly different in the proportion of activities performed by each group at baseline, performing chart audits, p=. 011, and review of prevention activities p=. 011. However, the intervention group was notably more active in performing four of the activities at baseline. At this time, the intervention group was performing 65% of the prevention activities compared to 53% performed by the control group.

During Visit Two, all practices were provided with a list of recommended cancer control activities for their practice and asked to choose from one to three goals to
implement over the study period of nine months. An increase in mammography recommendations was chosen by 40% (10) of the practices, followed by increase in staff knowledge of the CBCEDP by 32% (8), implementing a recall system by 28% (7), performing regular chart audits by 24% (6), familiarize staff with the ACS screening guidelines by 20% (5), develop screening protocol for the practice by 20% (5), utilizing cancer specific flow charts by 16% (4), implement a comprehensive tracking system for results and non-compliance by 12% (3), guided use of educational materials by 12% (3), assigning an office leader for prevention activities by 8% (2), and review of prevention activities by 8% (2). Analysis of the end-of-study survey indicated that of the 11 possible goals, four goals, familiarize staff with screening guidelines, assign an office leader for prevention, guided use of educational materials, and awareness of the CBCED, had a 100% success rate. Practices that chose an increase in mammogram recommendations had a 90% success rate; use of cancer flow charts, 75%; comprehensive tracking and performing chart audits, 66.7%; implement screening protocol, 60%; review of prevention activities, 50%; and implement recall system, 43%.

An examination of the proportion of goals met indicates that 17 out of 25 practices (68%) achieved all of the goals they attempted. Four prevention goals with the lowest rate of achievement were implementing a recall system (57.1%), review of prevention activities (50%), development of a formal screening protocol (40%), and perform chart audits (33.3%). In the intervention group, implementing a recall system and developing formal screening protocols were the goals with the lowest achievement rates. In the control group, performing chart audits and implementing a recall system were the goals with the lowest achievement rates. Increasing mammography recommendations and increasing
awareness of the CBCCED program were the two goals chosen most frequently by both
groups and showed the highest rates of achievement, 90 and 100 percent, respectively.
Overall, the 13 intervention practices attempted 31 goals and achieved 25 goals and did
not achieve 6 goals, while the 12 control group practices attempted 24 goals, achieved 18
goals and did not achieve 6 goals.

A major finding of this study was that there was no difference in the
achievement of goals between the intervention and the control groups. A chi-square test
was used to compare the proportion of practices in each group that achieved their goals
and indicates that 69% (9) of practices in the intervention group succeeded in
implementing their attempted goals compared to 67% (8) in the control group (p=ns).
Thus, the two groups were similar in terms of the proportion of goals achieved. Although
the two groups were similar at follow-up, the groups were somewhat different (not
significant) at baseline. The intervention group was more active at baseline, which
indicates that the control group achieved a greater increase in activities from baseline to
follow-up. These findings suggest that the three additional visits provided to the
intervention group did not impact the practices' achievement in implementing their goals.
This suggests that the three visits with the primary care implementers (PCI) did not
appear to be more effective than surveying, contracting goals and revisiting the practice.

Many authors (Bandura, 1986; Crabtree et al., 1998; Gann et al., 1993; Miller et
al., 1998; Schwartz & Cohen, 1990; Wender, 1993) have described the multiple factors
that influence a practice's ability to implement changes within the primary care setting.
These authors concur that an educational intervention alone does not guarantee change in
the primary care setting with regard to the implementation of cancer control activities.
They argue that the environment of the practice, whether it supports or values prevention oriented activities, will greatly influence whether the practice will adopt the prevention activities. I would argue that two forces influenced this study's outcome of no difference in achievement by the intervention group. First, the three additional visits provided to the practices in the intervention arm of the study were designed to be brief (20 minutes) and monitor achievement of the practice's contracted goals. These additional visits were not designed to provide the practice with specific training on how to develop and implement the goals chosen. Hence, the individual skills required to perform these changes such as implementing a computerized recall system and developing formal protocols were not developed among the practice staff, which resulted in lower achievement rates of certain prevention goals. According to Bandura's Social Learning Theory, adequate resources such as training and education must be provided for each recommended behavior change. Without the training and knowledge, the physicians and practice staff did not have the skills or the self-efficacy to implement or perform the cancer control activity. Second, organizational factors such as resistance to change, lack of environmental support and encouragement, and priority given to acute illness may have influenced whether the practice invested the time and resources required for implementation of the prevention goals. According to Bandura's construct of reciprocal determinism, the environment must support the change and provide encouragement to sustain the change. This theory suggests multi-level changes in the environment and the individual and office staff. Bandura (1986) suggests that the environment can affect behavior without a person being cognitive of it and that the professional and physical environment guides and influences the types of behavior that the intervention is attempting to change. Miller (1998) argues
that while it is unclear why most approaches to changing physician behavior are not successful, understanding organizational forces may provide insight:

All the education and protocol-type strategies assume that the knowledge of rational information or the creation of a better tool will result in change. This reflects the high value our culture places on scientific rationality and technology and the associated belief that physicians will respond to good evidence. These change strategies also assume linearity; they assume that a change or intervention in A will directly and predictably lead to a change in B. This has not been consistently the case (p. 370).

Hence, although increased knowledge and new technology may encourage change, they are not a sufficient means for a sustained change within the primary care practice.

A second major finding was that there was a significant difference between the proportion of cancer control activities that were performed at baseline and at post-intervention. A dependent t-test indicates that at baseline, practices were performing 60% of the activities, whereas at post-intervention the practices were performing 77% of the prevention activities, p= 001. Overall, the rate of cancer control activities being performed by the 25 practices increased by 17 percent. This increase in prevention activities at post-intervention suggests that primary care practices in a community setting can adopt prevention activities when environmental support is coupled with sufficient self-efficacy and knowledge to perform the prevention activities. In particular, practices were more successful at achieving their goals when the activity was easily implemented, did not require a system change, and when adequate information, skills, and training were
provided to the practice. For example, the practices achieved an increase in mammography recommendations and increased staff familiarity with the ACS guidelines when they were provided with information such as the ACS screening guidelines and rationale, and wall posters of the guidelines at Visit Two, through both discussion and written material. Practices also received written information and a staff discussion about the Connecticut Breast and Cervical Cancer Early Detection Program and were successful (100% achievement) in increasing staff awareness about the program. A 75% success rate was also achieved in using cancer specific flow charts to prompt screening recommendations. Supplies of flow charts were provided to the practices at no cost along with a demonstration of how to fill in the charts with documentation. Conversely, the practices had much lower success rates, ranging from 42% to 66%, in implementing formal protocols, performing chart audits, or implementing comprehensive tracking and/or recall systems. A minimal amount of training, if any, was provided to the practices for those goals and activities that received lower rates of achievement.
Chapter VI

Recommendations

Based on the study findings, the New England Division of the American Cancer Society can improve the Primary Care Cancer Screening Program in Connecticut by further development of the intervention's educational components. A greater change in behavior and significant achievements in cancer control activities could be achieved through an enhanced intervention program which provided technological assistance in implementing office systems for recall and tracking, training in the development of office protocols, and guidance in performing chart audits.

In regard to the three additional visits, unless these visits were redesigned to provide the practices with the training and resources required for implementation, I would not recommend the additional visits for future planning. The visit, currently designed as a brief 20-minute meeting intended to merely monitor success, is not cost effective. Further recommendations include:

1) Provide for incremental changes in the implementation of cancer control activities. According to Bandura's Social Learning Theory (SLT), the implication for intervention suggests incremental steps to behavior change with an emphasis on the desired change. For example, an intervention, targeted at the systematic practice of prevention activities being performed by primary care physicians within a primary care setting, should be introduced in a step by step process, coupled with structured goals toward implementation. The physicians should be encouraged to achieve their goals within a specified
time period (e.g., setting a goal of implementing one prevention activity at a
time while monitoring for results).

2) Provide the training and resources necessary for implementation of a cancer
control activity. The SLT suggests adequate resources such as training and
education be provided for each recommended behavior change. Thus, for each
prevention activity that is recommended to the practices, sufficient education
and resources should be provided by the program through on-site office
training or by outside facilitators (e.g., Recall System vendors).

3) Assess the readiness of the practice to implement cancer control activities.
The SLT suggests that environmental support for the desired behavior change
(adoption of prevention activity) be assessed prior to the intervention. The
practices' readiness to change includes both physician and staff interest in
addition to leadership support.
Chapter VII

Conclusion

The study showed that the intervention group was not more successful than the control group in achieving set goals and thus the efficacy of the intervention was not improved by the three additional visits. However, the increase in prevention activities (17%) as a result of the initial visit during phase II indicates that the Primary Care Early Detection Program can be effective. This increase indicates that the initial intervention alone, without the three additional visits, can be an effective means of educating and training primary care physicians to implement certain prevention activities.

The limitations of this study include reliance on self-report in interviews and the small number of practices. Also, a factor to consider is the practices were volunteer practices that were self-selecting to improve cancer control activities in their offices. They are not a random sample of practices in the community. We can assume that these practices were more highly motivated than a random sample given that they understood that the study focused on enhancement of cancer control activities. The Connecticut region of the American Cancer Society should revisit these practices to see whether there has been further development based on the intervention we provided them and measure whether they have been able to sustain changes and improvements after a period of one to three years.

In summary, the strengths of the Primary Care Early Detection Screening Program includes achievement of cancer control activities in both the intervention and control groups with limited resources. By providing recommendations for change and then a choice of cancer control enhancements to these community primary care practices,
we were able to identify their preferences among those choices. We were also able to study the variable levels of success for the choices of cancer control prevention enhancements. Further, the program's various educational components, physician prompts, and screening resource lists address many of the prevention barriers described by previous studies (Ackermann, 1994; Flocke, 1998) such as physicians' lack of knowledge about screening recommendations and forgetfulness, lack of resources for screening and cost barriers.
References


Use of mammography-United States. MMWR 621:627-630, September 14, 1990.


Appendix: Baseline and Post Questionnaire

Primary Care Evaluation

BASELINE SURVEY (INSTRUCTIONS: Read questions as written, circle appropriate number)

1a. What do you recommend to your patients with respect to early detection screening for:
   Mammography _____________________________________________
   Pap test _________________________________________________
   Prostate Exam _____________________________________________
   Sigmoidoscopy _____________________________________________
   Skin Exam ________________________________________________

1b. Are you and your office staff familiar with the ACS cancer screening guidelines for:
   Mammography 1= Yes 2= No
   Pap test 1= Yes 2= No
   Prostate Exam 1= Yes 2= No
   Sigmoidoscopy 1= Yes 2= No
   Skin Exam 1= Yes 2= No

2a. Does your office have a formal (WRITTEN) protocol for early detection cancer screenings?
   1=Yes
   2=No--GO TO QUESTION 3a
   9=Don't Know/Not sure

2b. Can I have a copy of your early detection/prevention protocol?
   1=Yes
   2=No/Not written
   3=No/For staff use only
   9=Don't know/Not sure

3a. Does your office perform chart audits to measure early detection cancer screening activities?
   1=Yes
   2=No ----GO TO QUESTION 4
   9=Don't Know/Not sure ---- GO TO QUESTION 4

3b. For which activities? [Read list. Fill in each space using key below]
   [Key = 1=Yes, 2=No, 9=Don't know/Not Sure]
   3c. ___ Mammography
   3d. ___ Pap smears
   3e. ___ Prostate exam
   3f. ___ Sigmoidoscopy
   3g ___ Skin exam

3h. How often are early detection cancer screening activities reviewed through chart audits?
   1=Monthly
   2=Quarterly
   3=Yearly
   4=Other
   9=Don't Know/Not sure

4. Does your office have goals for the following early detection activities:
   a. Implementing a recall system for cancer screening
b. Chart audits for cancer screening
   1=Yes  2=No  3=Already have in place

c. Flow charts for cancer screening
   1=Yes  2=No  3=Already have in place

d. Increase cancer screening referrals
   1=Yes  2=No  3=Already have in place

e. Patient education materials for cancer screenings
   1=Yes  2=No  3=Already have in place

For which of the following items do you have specific cancer screening goals?
[Read list. Fill in each space using key below]
[Key: 1=Yes, 2=No, 9=Don't know/Not sure

4f. __Mammography
4g. __Pap smear
4h. __Prostate Exam
4i. __Sigmoidoscopy
4j. __Skin Exam

4k. Can I have a copy of your early detection goals?
   1=Yes
   2=No/Not written
   3=No/For staff use only
   9=Don't know/Not sure

5a. Is a cancer screening flow sheet used in patient charts?
   1=Yes
   2=No (none)-- GO TO QUESTION 6a
   3=Some/Not all
   9=Don't know/Not sure-- GO TO QUESTION 6a

5b. Is the flow sheet up-dated on a regular basis?
   1=Yes
   2=No
   9=Don't know/Not sure

Which of the following items are included on the flow sheet?
[Key: 1=Yes 2=No 9=Don't Know/Not sure

5c. __Mammography
5d. __Pap smear
5e. __Prostate Exam
5f. __Sigmoidoscopy
5g. __Skin Exam
5h. __Clinical Breast Exam

6a. Does your office have a tracking system to ensure that results from early detection screening activities have been received?
   1=Yes
   2=No
   9=Don't know/Not sure

6b. Does your office have a tracking system to ensure that appropriate follow-up is performed on abnormal results?
   1=Yes
2=No  
9=Don't know/Not sure

6c. Does your office have a systematic way of tracking patient non-compliance of screenings?
   1=Yes  
   2=No  
   9=Don't know/Not sure

7a. Does your office have a patient reminder system that generates cancer screening reminders?
   1=Yes  
   2=No--- GO TO QUESTION 8a  
   3=In progress  
   9=Don't know/Not sure-- GO TO QUESTION 8a

What do you use? [Fill in each space using key below]  
[Key= 1=Use 2=Not Used 9=Don't know/Not sure]

7b. ___ Postcards
7c. ___ Letters
7d. ___ Phone messages
7e. ___ Any others? __________________________

7f. How is your patient reminder system generated?
   1=Computer  
   2=Paper  
   9=Don't know/Not sure

7g. How often are appropriate patient reminders generated?
   1= always (automatically generated)  
   2= only sometimes  
   9= rarely or not at all

8a. Is there an office leader for prevention/early detection?
   1=Yes  
   2= No--- GO TO QUESTION 9a  
   3= Don't know/Not sure--- GO TO QUESTION 9a

8b. Who is it? [CIRCLE ONE]
   1=Physician  
   2=Nurse practitioner  
   3=Physician's Assistant  
   4=Office Manager  
   5=Nurse  
   6=Medical Assistant  
   7=Front desk secretary  
   8=Other __________________________
   9=Don't know/Not sure

9a. Does your office have cancer screening educational materials available for patients?
   1=Yes  
   2=No ---GO TO QUESTION 10a  
   3=Don't know/Not sure --- GO TO QUESTION 10a

9b. Where and how are they displayed? [CIRCLE ONE]
9c. How do patients obtain these educational materials
1 = Self selection
2 = Physician
3 = Nurse
9 = Don't know

9d. Do physicians encourage patients to read the appropriate screening information?
1 = Yes (all the time)
2 = Most of the time
3 = Some of the time
4 = No (Never)

10a. Have you made any recent changes in how your office operates with respect to early detection practices/services?
1 = Yes
2 = No -- GO TO QUESTION 10c
9 = Don't know/not sure -- GO TO QUESTION 10c

10b. Were these changes successful?
1 = Yes Why
2 = No Why Not
9 = Don't know/Not sure

10c. Have you been considering any changes in how you deliver cancer early detection services?
1 = Yes Describe
2 = No
9 = Don't know/Not sure
11. Are you and your office staff knowledgeable about free cancer screening resources that are available for eligible patients?
   1=Yes
   2=No
   3=Don't know/Not sure

12. Are you and the office staff aware of the Connecticut Breast and Cervical Cancer Early Detection Program, which offers free mammograms and Pap test available at 16 locations in Connecticut?
   1=Yes
   2=No
   3=Don't know/Not sure

END INTERVIEW

*** END OF SURVEY***

Thank you for your time. We are very pleased to work with you and the staff. If you have any questions, please call Lori Belle-Isle at (203) 234-3900.

Date of Interview _______________ Practice ID#____________________
Name of Practice________________________________________________
Person Interviewed/Title___________________________________________
Practice Head (physician)__________________________________________
Number of Physicians in practice___________________________________
Number of health care providers in the practice_______________________
Interviewer:_____________________________________________________
Unit ___________________________________________________________
Assessment Date _________________________________________________
Appendix: Letter of Introduction

March 19, 1998

Dear Physician:

The American Cancer Society, in collaboration with the State Department of Public Health, is very pleased to be providing you with the Primary Care Program, which is designed to enhance your office systems for early detection cancer screening. The program will be implemented by Zana Baruch, Primary Care Coordinator, with an American Cancer Society Cancer Control staff person and, when available, a volunteer physician.

As of March 1, 1998, a research project directed by Lori Belle-Isle, Regional Director of Cancer Control for the American Cancer Society and MPH Candidate at the University of Connecticut Health Center, School of Medicine, will be implemented to evaluate the impact of the Primary Care Program and its intervention strategies for the early detection of cancer. During your initial visit, the program implementers will meet with you to assess your current use of cancer screening systems such as protocols, flow charts, recall systems and tracking systems, and patient education. During a subsequent visit, the office assessment will be reviewed and, you and your staff, together with program implementers, will develop a plan to enhance the system and tools for early detection in your office. You will be provided with a Primary Care Resource Guide of early detection materials. All information from each office will be kept strictly confidential and will be available only in aggregate for study purposes.

Please review the enclosed consent form and if you agree to participate, please return the form in the self-addressed stamped envelope provided. If you have any further questions regarding the Primary Care Program and its research project, please contact Lori Belle-Isle at (203) 234-3900.

Best Regards,

Bernard Greenberg, M.D.
Chair, Primary Care Physicians Task Force
American Cancer Society of Connecticut, New England Division
Appendix: Consent Form

Practice/Providers Name
Address
Phone
Fax

Please return to:
Lori Belle-Isle
American Cancer Society
127 Washington Avenue/P.O.Box 188
North Haven, Connecticut 06473-0188
Phone # (203) 234-3900 ext. 24
Fax   # (203) 234-3901

My practice/I consent(s) to participate in the Primary Care Program research project co-sponsored by the American Cancer Society and the State Department of Public Health. This evaluation research will study the impact of intervention strategies on the early detection of cancer in primary care practices.

The identity of patients, practices, physicians, providers, and staff will be kept in strict confidence. All identifiers will be coded. Data will be collected by ACS staff at baseline and 9 months post-intervention. All data will be kept in aggregated coded form. Reports will give results in the aggregate so that no practice, patient, physician, provider, or staff can be identified.

The practice is free to withdraw from the program at any time. The practice will be provided with results of its evaluations. The American Cancer Society and the State Department of Public Health are funding the program and the evaluation research.

The practice/I give(s) the American Cancer Society permission to collect data from my practice and present the information for research purposes only.

Signature: ____________________________ Date ____________________
**Appendix: Early Detection Assessment (EDA)**

**AMERICAN CANCER SOCIETY/CT**  
**EARLY DETECTION ASSESSMENT**

| Practice Name: ___________________________ | ID# ___________________________ |

1 = Performed and/or utilized  
2 = Not Performed and/or Utilized  
9 = Not assessed or Not Applicable

**SCALE**

| 1. Follow ACS screening guidelines  
  (1a) compliance = ______ of 5 sites= ___________________________ |
| 2. Familiar with ACS screening guidelines  
  (1b) sites= ___________________________ |
| 3. Prevention/Early Detection Protocol  
  (2a) |
| 4. Chart audits  
  (3a-g) |
| 5. Review cancer screening activities  
  (3h) |
| 6. Has early detection screening goals  
  (4a-k)areas action needed |
| 7. Cancer screening Flow Sheets  
  (5a-h) |
| 8. Tracking system  
  (6a-c) needed: results/ abnormal follow-up/ non-compliance |
| 9. Recall system  
  (7a-g) computerized yes/no |
| 10. Office leader for early detection  
  (8a-b) |
| 11. Guided use of educational materials  
  (9a-c) available yes/no  
  self select yes/no |
| 12. Aware of resources for screenings  
  (11-12) cbccedp yes/no |

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