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A Multihospital Screening and Early Detection Program in Kansas City

by Ronald D. Deisher, M.P.A.H.

The Cancer Institute of Health Midwest coordinates the cancer programs and services of seven hospitals in the ten-county Kansas City metropolitan area of approximately 1.5 million people. These seven hospitals and The Cancer Institute are part of Health Midwest, a thirteen-hospital system with more than 2,000 affiliated physicians, 11,000 employees, and an annual budget in excess of \$1.5 billion. In 1994 The Cancer Institute of Health Midwest registered about 2,700 new cancer cases.

Since its inception in 1990, The Cancer Institute of Health Midwest in Kansas City has had a major focus on cancer prevention and early detection. Right from the start, The Cancer Institute's Steering Committee, consisting of physicians and senior administrative staff from each of the seven member hospitals, made a commitment to develop and support a coordinated network of cancer screening sites for the purpose of early detection and improved patient

outcomes. This commitment fit well with The Cancer Institute's mission of "strengthening and sharing cancer-care resources and services for patients and their families."

Today, a coordinated multihospital screening and early detection network is in place. The network includes up to eleven different screening sites for each of the eight to ten major community cancer screening programs conducted each year. Screenings take place over a period that varies from several days to several weeks or months.

Comprehensive education and screening services are provided for the early detection of breast, colorectal, prostate, and skin cancers. From 1991 through March 1995, The Cancer Institute of Health Midwest conducted 35 major community screening programs for these four major cancers and screened more than 83,000 asymptomatic people (Table 1 on p. 19). A total of 427 cancers were detected. In a random follow-up on a sample of these cases, more than 74 percent were early stage cancers. The activities and reimbursement generated by the screenings and direct referrals have more than offset the considerable expenses of a major community cancer screening program.

THE APPOINTMENT

Whenever clients call for an appointment, they are mailed a letter of confirmation, information related to the type of screening to be received, and a consent form. Having clients bring completed forms and a brief medical history to the screening helps speed up the intake process.

The time required for the appointment varies depending on the type of screening. Screening for breast cancer and education about self-examination techniques take about 15 to 20 minutes. Prostate screening, which includes a blood draw and examination by a urologist, takes about 20 to 30 minutes. Skin cancer screening usually takes about 20 to 30 minutes and does not require scheduling an appointment.

Screening for colorectal cancer is done in the privacy of the home. Each screenee is mailed a fecal occult blood test (FOBT) kit and instructions. The six slides in each kit are mailed back in a preaddressed envelope. A master code and labeling system for up to 40,000 kits allow staff to identify screenees even if they forget to put their name on the test.

Coordinating a network of cancer screening sites for the purpose of early detection and improved patient

outcomes is a time-consuming process. Two oncology nurses at The Cancer Institute work as screening coordinators to plan the logistics of all screenings, follow-up, and data collection that take place throughout the Health Midwest system. The screening coordinators work with a coordinator at each hospital to ensure a smooth screening process. The coordinators' tasks include scheduling multiple physicians at multiple sites, arranging for supplies, and making sure clinical space and rooms are available.

NOT WITHOUT VOLUNTEER SUPPORT

Given the multitude of tasks required to ensure successful and effective large-scale screening programs, and the limited amount of reimbursement available for screening services, volunteer contributions and support are absolutely essential. Volunteers can:

- answer phones and take screening appointments
- help with intake and screening processes
- distribute and explain educational and prevention information
- assemble and prepare screening materials.

For each major community-wide colorectal cancer screening campaign, volunteers contribute several thousand hours in assembling and numbering FOBT kits, staffing phone banks of 15 to 20 phones over a several-week period, processing returned FOBT kits, mailing cards to screenees who show negative results, and recordkeeping for all aspects of the program.

Volunteer health professionals can assist with or perform some screening procedures. Under the supervision of board-certified dermatologists, third-year family practice residents and nurses with special training act as frontline screening

SUPPLEMENTAL RESOURCES

Several commercially available resources, including personalized cancer risk profiles, are available to help administrators involved in cancer screening and prevention programs.*

CanScreen was developed by the Preventive Medicine Institute/Strang Clinic, New York, N.Y., and is marketed by Carepoint Marketing Associates, Dunwoody, Ga. CanScreen incorporates a multisite, history questionnaire with a screening physical exam and selected lab tests, including hemocult, microhematocrit, urine check for blood, and Pap smear for women. A prostate specific antigen (PSA) blood test is available for men over age 50 or at high risk for prostate cancer.

Used in conjunction with CanScreen—or frequently just by itself—is **The Cancer Awareness and Risk Assessment Program (CARA)**, which is also available through Carepoint Marketing Associates. CARA is a computerized program designed to assess individual risk factors and is used by more than 180 hospitals and cancer programs. The program consists of a multifactor risk assessment questionnaire and software designed to generate reports with personalized information for each participant. Data from each questionnaire are entered into the computer and individualized participant reports are printed out with educational messages and lifestyle suggestions for reducing each identified risk factor. An optional interactive version allows an individual to complete the questionnaire on a computer and to generate his or her own report in minutes. The cost of CARA ranges from \$595 to \$1,400, depending on the options.

The Personal Wellness Profile (PWP) survey and software system is a cost containment and health promotions tool that

provides administrators with aggregate, targeting, and marketing data. PWP offers participants an easy-to-read health appraisal that lists practical assessment information and personalized recommendations for improving health and reducing risk factors.

In addition to the questionnaire and personal report features, PWP's Group Statistical and Corporate Reports generate the group aggregate and risk identification and targeting data. The modules provide percent distribution graphs in up to forty-six different health factors. A medical claims graph shows the prevalence of multiple high-risk factors and their corresponding relationship to future high-cost claims experience for the group. A summary section looks at the health risks of the group as a whole. The section prioritizes more than ten recommended health action programs for the group and gives an estimate of preventable medical claims savings that could be achieved by lowering modifiable risk factors through an effective, ongoing wellness program.

National Health Enhancement Systems, Inc., of Phoenix, Ariz., offers the **LifeTest program**, which includes screening for cancer as well as for diabetes, blood pressure, heart disease, and a number of other conditions. Computer software allows patient tracking and analysis of such data as revenue source and use of inpatient versus outpatient services.

Some hospitals customize the LifeTest program for their own screenings. Trinity Medical Center in Moline, Ill., for example, customizes the program for its skin cancer screening, using a format that includes the LifeTest's custom multiple choice questions and the Center's own series of yes/no questions. Participants answer questions about predisposing

continued on page 18

* These resources do not represent nor imply endorsement or use by the author or by ACCC.

factors, such as number and extent of blistering burns. The Center supplements these questions with a skin spot check map, which patients use to indicate on their own bodies the location of spots larger than a pencil eraser. Patients also document the size, color, and whether the spots appear to have altered in any way. Completed skin maps are reviewed by a dermatologist.

—Cara Egan
ACCC editorial assistant

RESOURCE LIST

CanScreen and Cancer Awareness and Risk Assessment Program

Bob Bonner
Carepoint Marketing Associates
2312 Delverton Dr.
Dunwoody, GA 30338
404-452-8011

Personal Wellness Profile

Wellsource, Inc.
Forrest Knudson
P.O. Box 569
Clackamas, OR 97015
1-800-533-9355

LifeTest

National Health Enhancement Systems
John Hoban
Vice President of Product Development
Suite 1750
3200 North Central Ave.
Phoenix, AZ 85012
1-800-345-3342

resources for skin cancer. A consultation booth staffed by volunteer dermatologists is available to review all suspicious findings. A staff of twelve to eighteen physicians and an equal number of nurses can screen between 1,200 to 1,600 people in one weekend.

All physicians participate in the screenings as volunteers or with a significant reduction in their normal fees. Nineteen gastroenterologists, seventeen urologists, fourteen radiologists, seven dermatologists, numerous other specialists, and more than twenty-five oncology nurses regularly participate in the cancer screening programs and clinics.

Since the beginning of the community cancer screening program in 1991, volunteers have been active in all thirty-five screening programs and have donated more than 26,000 hours of their time. Their support is vital to the success of the program.

FOLLOW-UP

The Cancer Institute of Health Midwest emphasizes strong follow-up and support services to all who participate in the screening programs. Participants in the prostate and skin cancer screenings receive their clinical results plus follow-up information and educational materials during an exit interview with oncology nurses.

With the exception of mammography screening, those with positive findings or symptoms that indicate the need for further testing and diagnostic procedures receive at least three follow-up contacts. Within seven to ten days after a screening or the availability of laboratory results, e.g., prostate specific antigen (PSA) or FOBT results, each participant with positive findings receives a letter from the oncology nurse screening coordinator. The letter explains the findings and restates the

need for the individual to contact his or her primary care physician, or if necessary, an appropriate specialist. Individuals with "significant" positive results, such as having an FOBT with more than three slides positive or both a positive digital rectal exam and an elevated PSA, receive the initial letter followed by a phone call from an oncology nurse. This personal contact is made to provide additional information and support and to reinforce the importance and benefits of follow-up and early detection.

About eight to ten weeks after the initial letter and telephone contacts, all participants with positive results receive a second letter, which again stresses the need for follow-up. The letter is similar to the first but also includes a follow-up report that screening participants are asked to complete. They are requested to provide details about the location and type of diagnostic procedures and any subsequent treatments. Returned forms often contain very positive remarks about the value of the screenings and the knowledge that someone cares.

More than 90 percent of these follow-up reports are returned. Thanks to such careful follow-up, more than 1,900 direct referrals have been made to participating physicians. About 19-21 percent of those screened indicate that they do not have a regular physician for follow-up.

For those participants who do not have a regular physician, both letters offer help in finding appropriate follow-up resources. The Cancer Institute will find appropriate resources based on the individual's preferences, geographic location, and insurance limitations. Sometimes this action results in a referral to a volunteer primary care or specialist physician.

Finally, about a year after each

**Table 1. Cancer Screening Summary
1991-1995 (March)**

Number of Screenings	35
Number of Patients Screened by Site:	
Breast	15,165
Prostate	9,215
Colorectal	52,033
Skin	7,053
Total Screened	83,466
Cancers Detected by Site:	
Breast	57
Prostate	153
Colorectal	63
Skin	154
Total Cancers	427
Physician Referrals by Site:	
Breast	639
Prostate	693
Colorectal	309
Skin	302
Total Referrals	1,943
Volunteer Hours Contributed	26,081

screening is completed, screenees who are at highest risk by age or other factors receive a mailer inviting them to return for another free or discounted screening.

EFFECTIVE MARKETING AND PROMOTION

Besides rigorous follow-up on all those who have positive findings or symptoms and hard work by lay and professional volunteers, intense marketing and promotion efforts are important to the success of screening and early detection efforts. The effectiveness of marketing and promotion techniques has varied by type of cancer screening. For example, television advertising has helped to reach large numbers of asymptomatic people for colorectal or skin cancer screenings.

Key educational messages are easily and effectively disseminated via television. When a television station agrees to cosponsor a cancer screening program, it usually offers to air a series of public service announcements that promote the screening and offer an educational message. In all, ten to twenty minutes of air time spread over several weeks is typical. In exchange for this free air time, the television station is listed as the cosponsor on all educational brochures and promotional materials. Because a television station frequently airs screening messages during nonprime hours, buying some prime-time space can strengthen your promotional efforts.

Higher risk individuals can be targeted by demographic characteristics (age, sex, socioeconomic status, and race) and geographic locations via direct mail campaigns. In one highly successful targeted mail campaign, for example, 36,000 postcards for a breast cancer screening at multiple sites were sent to females, ages 50 and older, in zip codes surround-

ing the screening sites. In an environment where screening resources are limited or where screenings are performed by multiple competitors in the same geographic area, we have found that targeted mailings work better than radio or print advertising, especially for breast and prostate screenings. An appealing postcard mailer tends to receive more attention than a newspaper announcement, which may be buried on a page of advertising. Print and radio advertising, however, can be helpful as a supplement to direct mail.

Placing screening announcements and educational messages in newsletters that reach seniors can be effective in targeting older, higher risk populations. Announcements in church bulletins, posters in barbershops and beauty salons, and ads on radio stations with large minority audiences can be effective in reaching at-risk minorities.

The Cancer Institute has specifically targeted minority populations in the Kansas City area. In 1991, when the screening program began, about 2-4 percent of screenees were from minority groups. Today about 7-9 percent are minorities. Cultural attitudes about screening and economic barriers remain difficult to overcome.

EVALUATING THE PROGRAM

Clinical records that indicate screening results and potential signs and

symptoms for follow-up, as well as follow-up reports on referrals and tests/procedures resulting from those referrals, come back to the cancer screening coordinator's office. A summary report of screening results is assembled and provided to the administration of each hospital as well as to the board of The Cancer Institute.

About five to seven months after each screening, a summary profile of all positive screenees and referral results is presented to the business office of each hospital, which is requested to submit inpatient and outpatient billings and reimbursements for each screenee. This process allows accurate tracking of the revenue generated by the screenings.

Because capitated managed care plans bring a new way of looking at reimbursement, The Cancer Institute is beginning to look for ways to document the potential savings from a screening and early detection program. Eventually, screening programs will have to be justified not only by how much revenue they bring in, but also by the money they save through early detection and reduced utilization of health care resources. ■