

A Special Purpose Health Education Program: Breast Self-Examination

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OVER FOUR YEARS of experience with a public education program designed to establish breast self-examination as a health practice among women indicate that the program is and will continue to be definitely worthwhile in promoting the early detection of breast cancer. This is said with the realization that a full assessment of its value is not yet, and may never be, possible. It is known, however, that public reception of the program has been uniformly favorable, that the program has reached directly some 7 million women, and that evaluation studies have shown encouraging results.

The program, a joint activity of the National Cancer Institute of the Public Health Service and the American Cancer Society, was initiated for the purpose of alerting the public to the problem of breast cancer, its extent, and the possibility of control, with the ultimate objective of reducing mortality from this disease. Although it is recognized that the possibility of using self-examination does not exist in all health fields, it is believed that certain of the educational means used in this program, such as the "saturation" techniques, may be found applicable to other public health problems.

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The Problem and the Approach

The prevalence of breast cancer is a matter of grave concern in the United States. It is the second most common form of malignant disease among women. Statistical studies indicate that, according to present rates, 4 percent of all women who reach the age of 35 years will die of this disease. Although it occurs in an organ readily accessible to direct examination, only 2 of every 5 cases are diagnosed while the growth is localized. Nearly 19,000 women died of breast cancer in this country in 1950, many of them perhaps needlessly. Since there is a correlation between the time of onset of the disease and, to some extent, the size of the growth and the final prognosis, a program of public education to establish a health habit contributing to early diagnosis was strongly indicated.

The program was conceived as having the double objective of emphasizing the value of periodic examination of the breasts as a routine health habit and of demonstrating a medically approved, easily applied procedure for self-examination of the breasts.

The motion picture was selected as the principal medium for the educational project since it would insure uniform presentation of technically accurate information. It was supplemented by printed materials containing diagrams and directions for the approved examination procedure and information about the film. These materials are made available for distribution in connection with showings of the film, and additional information is provided through talks by physicians and nurses.

Production of Materials

Production of the motion picture, Breast Self-Examination, was authorized by the National Cancer Institute and the American Cancer Society in 1949, each agency financing half the total cost. The film was designed to portray a situation in which nonprofessional groups

could have a role in cancer control, and, at the same time, to instruct the individual woman in the proper examination procedure. Care was taken to avoid presenting any of the material in a manner which would cause an adverse reaction or produce cancerophobia.

The film shows an actual demonstration of the breast self-examination procedure to a patient by her physician, followed by scenes in which the woman is carrying out self-examination according to his instructions. A practicing physician assumed the role of the physician in the film and also acted as one of the technical consultants in the production of the picture.

The film emphasizes the importance of this health practice to the control of breast cancer. In the story, the patient is first seen at a woman's club listening to a physician lecture on cancer of the breast. The gravity of the breast cancer situation and the importance of early diagnosis are brought out. It is emphasized that any abnormalities discovered through self-examination should be referred immediately to a physician. Women are advised not to think of cancer too much or examine themselves too frequently, but to be alert to the problem.

Distribution of the Materials

The film had its premiere before the Nurses' Biennial Convention in San Francisco in May 1950. About the same time, it was shown in Paris during the Fifth International Cancer Congress. The first general viewing by the medical profession in the United States was at the annual convention of the American Medical Association in San Francisco in June 1950, where it played to a "standing room only" audience.

Meanwhile, State health departments, State divisions of the American Cancer Society, medical and nurses organizations, schools of nursing and national women's organizations were supplied with the informational materials on breast self-examination which supplement the film.

During the summer of 1950, showings of the film were arranged, first, for employees of the Federal Government, beginning with those of the National Institutes of Health and others in the Department of Health, Education, and

Welfare (then the Federal Security Agency) and, later, for similar employee groups in the health departments of the States. Selected leaders of women's organizations, such as the General Federation of Women's Clubs, which is listed as representing some 6,000,000 women, had a special preview. By October 1950, Breast Self-Examination had been distributed to all State and Territorial health departments from Maine to Hawaii, to large professional groups such as the American Public Health Association, and to staffs of colleges and universities throughout the United States.

The film was released for general showings in the autumn of 1950. Veteran's organizations, large industrial plants—the Owens-Illinois Glass Company and Douglas Aircraft, for example—student groups, women's clubs, and women's farm organizations were enlisted in the effort to give Breast Self-Examination the widest possible use. After its Paris preview, it was shown outside the United States at film festivals in Venice and Gardone, Italy, throughout sections of Germany, at the film festival in Montevideo, Uruguay, and in such an isolated spot as a lonely airbase in Newfoundland. The United States Department of State placed prints of the film in 30 embassies in Europe, the Near East, the Orient, and Latin America. Through the United Nations Educational, Scientific, and Cultural Organization and the United States Foreign Operations Administration and its predecessor agencies the film has been shown in areas as remote as the island republic of Indonesia. A team of scientists with the World Health Organization showed the picture in the cities of New Delhi, Madras, and Bombay, India.

At all meetings where the picture is shown, physicians, nurses, or other well-informed persons discuss the subject of breast cancer and answer questions from the audience. Records of such questions have been kept, and they have proved to be valuable indexes of the level of information about breast cancer and cancer in general in the populations represented.

The publicity which the film has received, in magazines of national circulation, in special publications such as *Public Relations News* and *Business Screen Magazine*, and in metropolitan newspapers, has been uniformly favor-

able. Communications from organizations which have seen special showings of the film have been equally commendatory. The photography, narration, and presentation have been judged outstanding—clear enough to be understood by lay audiences but still interesting to physicians (1).

The Iowa "Saturation" Project

Constituting a new approach to this kind of educational effort was the project in Iowa in which the entire State was "saturated" with showings of Breast Self-Examination. Participating in the project were the National Cancer Institute, which allocated funds in the amount of \$20,000, the Iowa State Department of Health, the Iowa division of the American Cancer Society, the Iowa Medical Society, and practicing physicians in the area. Dr. Edmund G. Zimmerer, then director of the division of cancer control, Iowa State Department of Health, and now Iowa State commissioner of health, headed the program.

Iowa is largely rural, but it has a number of fairly large cities and many small towns. Except for the large cities, the campaign was organized by counties. In the larger communities, it was often necessary to have several simultaneous showings. The American Cancer Society assisted in scheduling meetings where Breast Self-Examination could be shown.

The 1950 census for Iowa indicated that, out of a total population of 2,600,000, there were 590,000 women in the State over 35 years of age and 300,000 over 45 years of age. Since breast cancer is most prevalent in women over 45, the figure 300,000 was set as the goal to reach in the film showings.

"A life a day saved" became a slogan for the project. It was based on the premise that it should be possible to save 360, or 90 percent, of the 400 victims of breast cancer in Iowa annually, or approximately 1 each day of the year, since it is generally accepted that this percentage of breast cancer patients can be saved if the cancers are found and treated early enough.

The project was under way by early autumn of 1951. In the large cities, business firms became enthusiastic in their cooperation. The

Meredith Publishing Co. in Des Moines arranged for 17 showings of the film. The city papers, the *Register* and the *Tribune*, combined their staffs for a showing. County fairs booked Breast Self-Examination as a major attraction. The Iowa State fair showed the picture every hour each day for 10 days. This fair, one of the largest livestock and agricultural shows of the country, draws people not only from the State but also from a large surrounding territory.

For almost 2 years the film was shown in Iowa. When snows blocked the roads in the winter of 1951, women rode farm tractors to schoolhouses and halls to see it. The executive director of the Iowa division of the American Cancer Society appraised the project as the greatest educational program ever experienced in the field.

A total of 289,000 women saw the film—96 percent of the 300,000 goal, or 49 percent of the total female population over 35 years of age in the State of Iowa. Forty-eight percent of them were 45 years of age or older.

About a year after the showings, an evaluation of the Iowa project was made (2). Questionnaires were sent to a sample 3,000 women who had voluntarily registered. Over 1,300 replied, representing 13.6 of every 10,000 women in the State over 35 years of age. The proportion of women between 35 and 54 in the sample was larger than the proportion in the general population; hence, the percent at risk was somewhat greater. Eighty percent of the sample group responding were housewives, and the same percentage were married. Twenty percent lived in the city; 40 percent, in smaller towns; and 40 percent, in the country.

Ninety-two percent of the 1,300 women stated that they had examined their breasts as a result of seeing the film, 47 percent stating further that they had continued the practice. Nine percent said they had detected some abnormality, and in this group seven cancers were found. When the women were asked if they thought this educational program, and especially the film, worthwhile, 94 percent replied in the affirmative and only 0.4 percent in the negative. The others failed to respond.

These answers are evidence that the film succeeded in projecting its two basic ideas: the

establishment of breast self-examination as a health habit and the teaching of a simple technique for self-examination.

Two Evaluation Studies

Another evaluation of the film was made by members of the staff of the Yale School of Public Health in cooperation with the local cancer society in 1952 (3). For this study, a sample of 600 women in New Haven, Conn., a city of 250,000, was selected. The investigators were interested in who saw the film, what they learned, what they did as a result of learning, and how the film contributed to case finding. Of the 600 women, 547 agreed to answer a questionnaire and 225 actually did so. Admittedly, the people selected were women usually approached on civic problems, and the group was heavily weighted in favor of the higher economic and cultural levels.

Eighty-six percent of the 225 women who replied were married. Seventy-seven percent stated that they had practiced breast self-examination at least once, and 60 percent reported that they did it as a regular health habit. The results in case finding were not conclusive, since for each 5-year period since 1940, the number of patients with breast cancer coming to hospitals in New Haven while the growth was still localized had increased. Although this might be interpreted as indicating a trend toward earlier detection, the fact remains that 77 percent learned the technique of breast self-examination, and 60 percent established the practice as a regular habit after seeing the film.

A similar study was undertaken by a group of physicians in Baltimore, Md. (4). Approximately 6 months after a series of showings of the film in that city in 1952, interviews were conducted with nearly 2,400 women who had seen the picture and participated in the ensuing discussion with the attending physician. The composition of this group as to color and age was approximately the same as that of the adult female population of the city. The women were employees of the several divisions of the Federal Security Agency located in Baltimore. Five trained women interrogators were used in the project, and careful internal checks of one

answer against another measured the validity of the replies.

The answers given by these women indicated that only 7.8 percent examined their breasts before seeing the film, whereas 80.7 percent, or 1,900 of the 2,400, had done so occasionally or frequently since seeing it; 33 percent of these 1,900 women practiced breast self-examination monthly as recommended. Married women, nonwhite women, and women with the highest educational attainments responded best to this educational technique. Women who had a previous history of breast disease were less responsive. Acceptance of the principles and practice of self-examination was highest in early adult life and lowest in later life. The importance of early detection and the method of examination were rated by the group as the most valuable lessons. Only 6 percent of the women said they had learned little or nothing from the film. Three percent discovered abnormalities through self-examination, and 24 percent consulted their physicians after seeing the film. Only 110 of the 2,400 had had breast operations prior to seeing the picture, but within 6 months after seeing it, 15 were deemed by their physicians to have conditions warranting surgery. Fortunately, most of these women were found to have benign tumors. Three cancers of the breast were discovered, an incidence three times greater than expected for a group of this size over this period.

The conclusion of the investigators was that the showing of the film with the associated physician-audience discussion was an effective method of teaching the public the principles of early detection of breast cancer by self-examination.

Conclusion

It is too early to evaluate the case-finding possibilities of this program to promote breast self-examination as a health habit among women. The evaluation studies which have been made, limited though they are, indicate, however, that a number of women who have seen the film and participated in the discussions following its showing are practicing breast self-examination.

Over 7 million women have seen the film in the past 4½ years, four times as many people as have seen any other health film, and, in what seems to be an upswing of interest during the last year and a half, 1½ million women saw it in 1953. The total influence upon these people and upon others with whom they may associate, of course, can never be calculated. In the certainty that Breast Self-Examination can profoundly effect efforts toward the successful control of breast cancer, this educational material will continue to be offered to the women of this and other countries.

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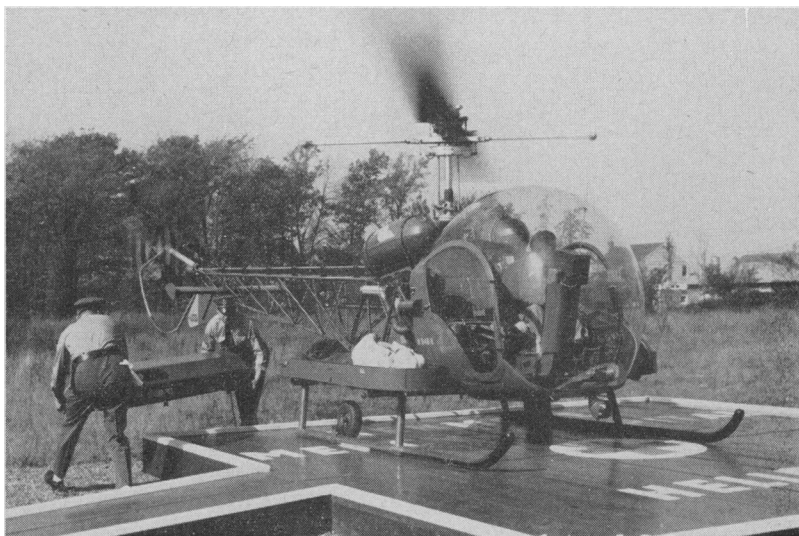
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Helicopter Ambulance Service

BUFFALO, N. Y. Kenmore Mercy Hospital in Kenmore, N. Y., a suburb of Buffalo, is one of the two hospitals in the United States that now has helicopter emergency ambulance service. A temporary heliport, a 20-foot square wooden platform, has been constructed a few feet from the emergency entrance to the hospital, and a helicopter is on call any time of the day or night.

The service was instituted last fall with an offer by the Bell Aircraft Corporation to make available one of its helicopters for use in rushing critically sick or injured patients to the hospital. Physicians in this highly industrialized area of approximately a million people estimate that the helicopter will be used for at least 8 to 10 patients annually—perhaps a stricken sailor aboard a lake freighter miles from port, or an expectant mother in a remote, snowbound farmhouse, or a wounded hunter along a wooded trail.

A call to the hospital or the corporation for the service is immediately referred to the company physician, who dispatches the helicopter if conditions warrant its use. All the company's medical personnel



A trial run with an "accident victim" officially opened the new heliport at Kenmore Mercy Hospital. Note that even before the helicopter's rotor blade stopped turning, the top was lifted from the helicopter litter.

and guards have been given instruction on the handling of litters.

Used extensively during the Korean conflict to evacuate injured fighting men and civilians, the helicopter has proved its usefulness in removing injured persons from areas inaccessible to other forms of vehicular transportation. During floods in Holland, avalanches in the Alps, and earthquakes in the Ionian Islands off the coast of Greece, rotorcraft performed formidable rescue feats.

Helicopter ambulance service was first established in the United States

at a hospital in Santa Monica, Calif. Here a rooftop platform serves as a landing area, and helicopters are made available by rotorcraft firms in the Los Angeles area. Arrangements are now being made for the construction of a heliport in the Dallas-Fort Worth area.

It is not practical from an expense standpoint for a hospital to maintain and operate a helicopter. It might be practical, however, for local governments to own rotorcraft since they could be used to augment the services of a number of municipal agencies.