

Motivation Techniques in a Cancer Detection Program

BARBARA S. HULKA, M.D., M.P.H.

AS PART of a cervical cancer detection program (1), a series of prospective studies were undertaken in Pittsburgh and Allegheny County, Pa., to evaluate the comparative effectiveness of various motivational techniques used to bring women to the clinic. The purpose of the program was to screen a population of medically indigent women by means of a pelvic examination including a Papanicolaou smear. It was anticipated that the motivational aspect of the program would be particularly difficult in view of the nature of the target population and the examination they were asked to undergo. The following report presents the results of two of the initial contact and motivational techniques: mail with telephone and home visit followup, and personal contact by the staff of health and welfare agencies.

Methods and Materials

Contact by mail. Since the medically indigent frequently are welfare recipients, it was decided to start the program by concentrating on this group. Permission was obtained from the Allegheny County Department of Public

Assistance to include a notice concerning the project with the welfare checks sent to all persons receiving public assistance in the county.

A notice was enclosed with the checks mailed during the last 2 weeks of October 1962, and a reminder notice with the checks mailed during the last 2 weeks of November 1962. Each notice was a double postcard. One section gave information about the Papanicolaou smear and examination, and the other section provided a place for requesting an appointment for the examination by filling in the name and address and mailing the card. The back of the latter section was prestamped and addressed to the cancer prevention program.

Since a large response from the mailing was not anticipated, only one clinic facility had been made immediately available, but additional locations had been inspected for future needs. The need was acute when the office was suddenly deluged with requests for appointments. More clinics were quickly organized, and 12 regular clinics were gradually established throughout Allegheny County. Additional short-term clinics were arranged in public housing projects or neighborhood centers.

Because of the initial shortage of clinic facilities, several months elapsed between the receipt of appointment-request cards and the mailing of appointment letters. To maintain interest until an appointment could be given, an explanatory letter was mailed in January 1963 to the women who had returned the cards but who had not been given an appointment. If a woman missed the first appointment, a second appointment letter was sent. A third or fourth appointment was given on request.

Dr. Hulka is a research assistant professor, department of obstetrics and gynecology, University of Pittsburgh, and director of the Pittsburgh cancer prevention program at Magee-Womens Hospital. The program is supported in part by Public Health Service grant No. 4008D65. Dr. J. J. Mowad, a retired commissioned officer of the Public Health Service, participated in the program planning and examination of patients, and J. N. Calhoun, senior health service officer, Public Health Service, was program health educator.

FOLLOWUP BY TELEPHONE: If women failed to keep two or three appointments, interviewers telephoned them to learn why they had not attended clinics and to make other appointments. Subsequently the program health educator personally undertook some of the telephoning in an effort to apply uniform, professional quality to the telephoning procedure.

FOLLOWUP BY HOME VISITS: In following up those who failed to keep appointments, home visiting was chosen as an alternative to telephoning. During the summer of 1963, a medical student was employed as a home visitor. His target population was women who had failed to keep the appointments arranged by mail and who lived in the south-east welfare district. This section of Allegheny County was chosen because the health and welfare departments in that area were especially cooperative and interested in the program. The district had no clinics nearby until that summer, when five new clinics were established within it.

When the medical student left the program in September 1963, a sizable group of women remained to be visited. Since a home visitor was no longer available, the secretary mailed appointment notices to these women, indicating the new, more convenient clinic locations.

Contact by person. In February 1963 public health nurses of the Allegheny County Health Department and Visiting Nurses Association and caseworkers of the Allegheny County Department of Public Assistance began referring patients to the program. Orientation sessions for the nurses and caseworkers were held in the districts of each agency. The American Cancer Society film "Time and Two Women" was shown and the screening program discussed.

The nurses and caseworkers were instructed to offer the cervical cancer screening service to all medically indigent women with whom they came in contact during their usual activities. Women who were unable to afford the services of a private physician were eligible as well as those receiving public assistance. Since the visiting nurses applied a fee schedule to all patient visits, only women whose income was below a certain level on the fee schedule could be referred to the cancer detection clinics.

A referral procedure and form were stand-

ardized for the use of nurses and caseworkers. The names and addresses of all women contacted were listed, with an indication as to whether an appointment was requested or refused. This procedure was chosen so that the target population could be defined.

Results

Contact by mail. Approximately 85,000 persons were receiving public assistance when the notices were mailed with the welfare checks. Among this group only the women 20 years old and over represented our target population. In order to estimate the size of the target population, the number of women age 20 and over in the caseloads of five caseworkers from each district were counted. The names of caseworkers from each district were listed alphabetically and the caseloads of the first five on each list were chosen for counting. After correcting for the actual number of caseworkers in each district, it was estimated that 23,000 women age 20 and over were receiving public assistance and that they composed the maximum potential population. However, we did not think that all of them would see the notice. A man in the family could open the envelope and dispose of the notice before any women had an opportunity to see it.

About 31.4 percent or 7,221 of the 23,000 women returned the appointment-request cards; however, only about half of that number (3,719) actually came to the clinics for examinations. The 3,719 women represented 16.1 percent of the target population.

FOLLOWUP BY MAIL AND TELEPHONE: Of the 3,719 women examined, 3,530 were examined between October 1962 and July 1963. The following tabulation shows the number and percentage of women examined during this period as a result of appointments arranged by mail and followup telephone calls.

<i>Technique used</i>	<i>Women examined</i>	
	<i>Number</i>	<i>Percent</i>
Mailed appointments :		
1 -----	2,146	60.8
2 -----	1,015	28.8
3 -----	280	7.9
4 -----	45	1.3
Telephoned -----	44	1.2
Total -----	3,530	100.0

Approximately 90 percent of the women attended a clinic after the first or second mailed appointment notice. An additional 8 percent responded to the third notice. More than 1,000 telephone calls were placed to women who had not responded to mailed notices. As a result, 44 additional women kept appointments.

The purpose of telephone calls was twofold: New appointments were made when possible, and information was obtained as to why women had ignored their appointments. This type of information was also gained from patients' calls and letters to the cancer prevention program, and from hospital records. An attempt was made to learn the reasons for failed appointments from 2,814 women; 863 responded with the following reasons.

<i>Explanation</i>	<i>Number of women</i>
Smear within past year-----	488
Magee-Womens Hospital-----	235
Other clinic or physician-----	253
Deceased (reported by family)-----	12
Illness-----	55
Complete hysterectomy-----	66
Pregnancy last trimester-----	9
Moved-----	176
Out of town (known)-----	14
Destination unknown-----	162
Transportation problem (distance)-----	35
Miscellaneous reasons (clinic during working hours, no babysitter, taking care of ill relative, and so on)-----	22
Total-----	863

The remaining 1,951 women either could not be contacted by telephone or their responses were vague, as follows:

<i>No explanation</i>	<i>Number of women</i>
No telephone-----	515
Telephone disconnected-----	173
No answer or patient not at home-----	215
Appointment made but not kept-----	113
"Will call for appointment" but did not-----	127
"Not interested"-----	808
Total-----	1,951

The health educator of the program began telephoning women who had failed to keep 2 or more appointments arranged by mail when 557 women were yet to be called. Of that number 357 women (64.1 percent) were contacted, and

268 (48.1 percent) requested appointments. However, only 57 (10.2 percent of the women to be called) actually visited a clinic.

FOLLOWUP BY HOME VISITS: In one section of Allegheny County, 287 home visits were made to women who had failed to keep 2 or more appointments arranged by mail. A total of 159 women or 55.4 percent were contacted, and 132 (46.0 percent) requested appointments; only 49 (17.1 percent of the women to be visited) kept appointments.

The reasons obtained by the home visitor as to why women failed to keep appointments were similar to those that have been presented, except that "previous smear" was an infrequent response, and "inconvenient clinic location" and "expense of transportation" were more frequently mentioned.

When the home visitor left the program, 138 women were still to be visited. Instead of visiting them at their homes, these women were mailed an additional appointment notice, which also informed them of a new, more convenient clinic location. Twenty-two women (16 percent) kept the appointment, a rather close correspondence with the 17 percent who were examined as a result of home visits.

Contact by person. The results of personal contact by nurses and caseworkers have been presented in the table. These data can be compared with the results achieved by mailing a notice with the welfare checks. More than two of every three women contacted by person requested an appointment, but less than one-third of the women who requested appointments actually kept them. After the mailing, less than one of every three women contacted requested an appointment, but more than half of those who requested appointments kept them.

The difference in the percentages of contacts that resulted in examinations was not pronounced: 22.3 percent after personal referral and 16.1 percent after mailing. However, the health department nurses not only contacted the most women but were also the most successful in influencing women to be examined. Thirty percent of their contacts resulted in examinations.

The caseworker referral percentage would have been higher had the mailing of notices with the welfare checks not preceded the per-

sonal contact by caseworkers. Of the 1,100 women contacted, 100 had already been examined at the screening clinics. These were not included with the 629 women who requested examinations and the 147 women examined (see table). Only 3 women had been examined before the visiting nurses contacted them in their homes, and 27 before the health department nurses visited them.

Certain inadequacies exist in the data obtained by this referral system. The names of all women contacted were supposed to be recorded; however, it is unlikely that this procedure was consistently followed. There may have been a tendency not to list women who refused appointments, whereas the data for women who requested appointments were quite reliable.

Discussion

How can one attract patients to a clinic service designed specifically for the detection of cervical cancer? Greater difficulties in motivation are inherent in this type of screening than in most public health programs, particularly when the target population is the "hard to reach group" of women for whom the immediate problems of living are so overwhelming that the subtleties of disease prevention are insignificant. The examination is thought by many people to be uncomfortable, distasteful, and unnecessary in asymptomatic women. The word "cancer," and even "cancer prevention," may provoke sufficient anxiety to forestall clinic attendance rather than to instigate it. Even the free-of-charge feature is incomplete, as transportation costs to and from a clinic may be appreciable. These many obstacles need to be eliminated or

minimized and positive motivating forces substituted if asymptomatic, medically indigent women are to be attracted to clinics.

The initial step is to provide information about the service and a simple mechanism whereby women can indicate their desire to obtain the service. Obviously, women will not necessarily take advantage of an existing service merely because they are informed of it; but on the contrary, they will certainly not obtain it if they are uninformed. How can information best be channeled to medically indigent women? The usual means of communication—radio, television, circulating newspapers, public placards—do not seem to be appropriate (2-5). Too, these modes of communication would attract primarily those who are able to afford the services of a private physician.

With these considerations in mind the mailing of a notice with welfare checks was chosen as an appropriate method of contact. What is difficult to explain is the rather phenomenal response of card returns (31.4 percent of the target population) since mailings alone are rarely an effective means of stimulating action. Influential factors may have been the implied pressure of association with the welfare check, a generally favorable attitude of the women toward Magee-Womens Hospital, or the irresistible quality of the notice—which is hardly likely. It is improbable that the notice had a health education effect adequate to motivate women to attend a clinic on the basis of a real understanding of an unmet health need upon which the individual should act. One suspects that factors such as status and conformity to the social mores of this particular group are more often the significant stimulus (2, 6, 7).

Results of nurse and caseworker referrals to a cervical cancer detection program, February–July 1963

Referral source	Number of women contacted	Appointments requested		Women examined		Percent of examinations to requested appointments
		Number	Percent of contacts	Number	Percent of contacts	
Health department nurses.....	1,479	1,184	80.1	447	30.2	37.6
Visiting nurses.....	143	63	44.1	13	9.1	20.6
Caseworkers.....	1,100	629	57.2	147	13.4	23.4
Total.....	2,722	1,876	68.9	607	22.3	32.4

One might speculate that more than 51.5 percent of the appointment requests would have resulted in kept appointments if the personnel and clinic facilities had been available to provide immediate service. As the time interval between the receipt of appointment requests and the mailing of appointment notices increased, the number of failed appointments also increased, and the number of appointment notices that had to be sent to maintain clinic attendance likewise increased.

The 3,719 women examined as the result of the mailing included only those women seen at the clinics of the cancer prevention program. The "grapevine" clearly informed us that many women who routinely attended clinics other than those at Magee-Womens Hospital took their cards to those clinics, where pelvic examinations and Papanicolaou smears were performed. There was no precise means of estimating the number of women who did this, but the predominant explanation given for failing to keep appointments was that they were being seen at other clinics or by private physicians, and had no need for the program's service.

Telephoning was not as effective in drawing patients to a clinic as had been expected. Perhaps the poor response to telephone calls was partially due to an unskilled telephoning technique, as a large number of women gave the response of "not interested" and the interviewer accepted this answer. The call may have been interpreted by the patient as a reprimand rather than an expression of sincere interest in her welfare.

It was with the intention of eliminating some of these inadequacies that the health educator undertook telephoning. Consequently, more women were contacted and appointments requested. However, the low percentage of appointments kept to requested illustrates a consistent pattern that has become evident in the recruitment of patients through all types of personal contact. Apparently, appointment acceptance is high because it is hard to say "No," but the number of appointments kept is low because the individual is not self-motivated in making the appointment.

The results of home visiting provided an interesting comparison with the results of telephoning since the target populations were com-

parable with one exception: women without telephones could be contacted only by a home visitor. The home visitor had an advantage in that the women he visited could attend clinics within reasonable distances from their homes. This was not true for the women contacted by telephone who lived in all sections of Allegheny County. Fewer women were contacted by home visiting than by telephoning, probably because of the greater difficulty in making a home visit as compared with a telephone call. The similarity in percentage of appointments requested was striking, although the proportion of appointments kept to those requested was greater for home visiting.

One could not ignore the cost of home visiting. Almost 2 months were spent in making 287 visits, resulting in 49 examinations. This was not considered a practical or a productive method of recruiting many patients from an extended geographic area. Home visiting has more recently been reserved for the women who do not respond to a followup contact concerning abnormal Papanicolaou smears, and for this purpose public health nurses have been effective.

If a simple referral mechanism can be integrated into the normal functions of local agencies, community involvement in the screening program is broadened. Staff members thoroughly occupied with the functions of their own agency cannot be expected to give constant attention to activities of an outside group. Nevertheless, health departments, which are primarily concerned with the prevention of disease, may consider cervical cancer detection an appropriate addition to their services. Public health nurses are effective as referral sources, perhaps because of their particular training and education.

The patients referred by health department nurses were more often ineligible (could afford the services of a private physician) than the patients referred through other sources. Health department services are primarily provided to persons with low incomes. However, the women who came to the screening clinics were probably not a representative sample of those served by the health department but rather the women of higher educational and occupational levels who were more susceptible to referral.

The Visiting Nurses Association had limited

potential as a referral source for an obvious reason: The patients seen by the visiting nurses are primarily the elderly and chronically ill, who are emotionally occupied with their existing illness and are physically unable to leave their homes.

Summary and Conclusions

Mailing a notice with welfare checks was an effective method to stimulate medically indigent women to obtain an examination in a cervical cancer control program in Pittsburgh and Allegheny County, Pa. A large number of women were contacted with a minimum of personnel and resources. Of 23,000 women contacted 7,221 or 31.4 percent returned cards requesting a clinic appointment.

Of the 7,221 women requesting appointments, 3,719 or 51.5 percent came for examination. This number might have been greater if appointments could have been arranged immediately after the requests were received. A prolonged delay in giving appointments because of limited personnel and examining facilities probably decreased clinic attendance.

If the first clinic appointment was not kept, second and third appointment notices were sent. Among all women attending clinics, 28.7 percent came in response to the second notice, and 7.9 percent in response to the third notice.

If three mailed appointment notices were ignored, a telephone call was made, but even a skilled interviewer had limited success by telephone in convincing women to attend a clinic. About 10.2 percent of total calls resulted in clinic visits.

Home visiting of nonrespondents was superior to telephoning in one respect: The most financially deprived women did not have telephones. However, a response of 17.1 percent

(49 women attended a clinic as the result of 287 home visits) hardly warranted the time and expense required for home visiting.

Nurse and caseworker referrals brought a greater percentage of the women contacted to examination than a notice with the welfare checks. Health department nurses were especially effective. Of 1,479 women contacted, 447 or 30.3 percent attended clinics, whereas the mailing technique effected a clinic attendance of 16.1 percent of the target population.

Unkept appointments were a major problem. Approximately one of every three women who requested appointments through nurses and caseworkers actually attended a clinic. Perhaps women cannot refuse when asked if they want an appointment but find it easy to ignore a mailed appointment notice.

REFERENCES

- (1) Hulka, B. S.: Detection of cervical cancer among the medically indigent. *Public Health Rep* 81: 143-151 (1966).
- (2) Rosenstock, I. M.: Why people fail to seek poliomyelitis vaccination. *Public Health Rep* 74: 98-103 (1959).
- (3) Lazarfeld, P. E., and Kendal, P.: The communication behavior of the average American in mass communications, edited by W. L. Schramm. University of Illinois Press, Urbana, 1949, p. 389.
- (4) Schramm, W. L., and White, D. M.: Age, education and economic status as factors in newspaper reading in mass communications, edited by W. L. Schramm. University of Illinois Press, Urbana, 1949, p. 402.
- (5) National Association of Science Writers, Inc.: Science, the news and the public. New York University Press, New York, 1958, 43 pp.
- (6) Hochbaum, G.: Public participation in medical screening programs. PHS Publication No. 572. U.S. Government Printing Office, Washington, D.C., 1958.
- (7) Rosenstock, I. M.: What research in motivation suggests for public health. *Amer J Public Health* 50: 295-302 (1960).