Clinical Breast Examination and Breast Self-Examination Experience in a Family Practice Population

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A patient questionnaire, chart audit, and resident questionnaire were used to assess clinical breast examination and breast self-examination experience in a family practice patient population. It was found that approximately 50 percent of the women studied reported annual routine breast examinations during a five-year study period. However, the residency program was responsible for providing or documenting annual clinical examinations in only ten percent of the population. Although 99 percent of the women knew about Breast Self-Examination (BSE), only 19 percent practiced monthly BSE. A positive association was found between the physician's active teaching of BSE and the patient's confidence in and regular practice of BSE. The low number of annual clinical examinations and low performance of BSE may be explained partially by the physician's setting too narrowly the parameters of when a clinical breast examination and BSE teaching could be done appropriately, ie, a pap smear/pelvic or general examination. A more aggressive approach by the physician may increase the number of women who get routine clinical breast examinations and who supplement them by monthly BSE.

The breast is the most prevalent site of cancer incidence and mortality among women. Indeed, breast cancer will develop in nearly 1 out of every 13 women, and it is the leading cause of all deaths among women aged 40 to 44 years. Breast cancer has a more favorable prognosis if detected at an early stage. If breast cancer is discovered before lymph node metastases have occurred, the five-year survival rate is 84 percent. Unfortunately, only about 45 percent of breast cancers are found before they have spread to the axillary nodes. When there is nodal involvement, the five-year survival rate is 56 percent.[1]

It is essential to promote methods which can help detect breast cancer in its early stages. Greenwald[2] and Foster[3] have argued that routine screening by self-examination and clinical examination lead to the discovery of breast cancer at a clinically more localized stage. Greenwald esti-

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mates that breast cancer mortality might be reduced by approximately 20 percent through self-examination and routine physical examinations, although others have not been as optimistic.[4] Shapiro's prospective study showed an advantage to periodic clinical examination and mammography.[5] A greater percentage of breast cancers were found in the localized stage among women who received periodic breast screening (63 percent) compared to those who did not (46 percent). In addition, there was a definite decrease in mortality from breast cancer in screened women over age 50 years.

The staff of Overlook Family Practice Residency wanted to determine how well their female patients were utilizing breast self-examination and routine clinical examination, as well as the residents' contribution to this utilization.

Methods

In order to assess the experience of the Overlook Family Practice female patients, the authors used three tools: a patient questionnaire, a chart audit, and a resident physician questionnaire.

A sample of 772 female patients, aged 25 to 65 years, was mailed a questionnaire surveying their knowledge, attitudes, and behavior concerning breast self-examination and routine clinical examination during the five-year period, 1974 through 1978. The sample was generated using systematic, stratified sampling, and it represents 53 percent of the population of 1,460 "regular" female patients ("regular" defined as women who have been, or whose family members have, been seen at least three times).

From the sample of 772 women, the authors randomly audited 185 of their charts for documentation of clinical breast examinations, breast cancer risk factors, and breast self-examination teaching by family practice residents. The authors also interviewed the current 18 family practice residents on their opinions concerning provision of clinical breast examination, assessment of risk factors, teaching of breast self-examination, as well as their perceptions on the care they thought the practice's patients were receiving.

Because the response rate to the mailed questionnaire was 57 percent, the authors checked to see if there were any significant differences between respondents and non-respondents. An independent t test was employed to test whether there was a significant difference between the mean age of the respondents (43 years). The difference in the ages was not significant.

When the chart audit was conducted, the authors were able to compare respondents and non-respondents on two other items: number of visits to the Overlook Family Practice and number of breast examinations performed by the resident physicians. The authors found no significant difference between the respondent's average number of visits (7.3 visits) and the non-respondent's average number of visits (6.0 visits). An independent t test was employed.

However, respondents and non-respondents differed significantly on the number of clinical breast examinations conducted by family practice residents during the five-year period. Non-respondents had significantly fewer clinical breast examinations than did respondents. The mean number of breast examinations conducted by Overlook family practice residents was low for both groups—0.96 for respondents and 0.46 for non-respondents. The difference was significant at the 0.01 level; an independent t test was used. In either case, Overlook family practice residents performed very few clinical examinations on both respondents and non-respondents. This difference and other potential differences in attitude and behavior should be kept in mind in the generalization of the survey findings to other populations. The chart review and resident interview elements would not be affected by the non-reporting bias and can be used to compare what health care the residents thought they were providing with the care they actually were providing. The authors feel that the study remains valid for identifying problems within the Overlook Family Practice Program.

The chart audit also provided the opportunity to check the reliability of each patient's responses to the survey questionnaire. There was a high degree of agreement between items in the chart and the patient's responses. For example, there was only a four percent discrepancy between responding patients and their charts on the number of clinical breast examinations performed by the residents. Further, there was only a two-percent discrepancy

between the reported situation in which the breast examination was done (eg, physical examination or a pap/pelvic examination) and what was documented in the chart. Because there was high agreement between these items, the authors feel confident that respondents could accurately recall their experiences.

Results

Patient Questionnaire

Fifty-five percent of the respondents to the questionnaire answered that they had had annual clinical breast examinations by a physician during the five-year period under study. Fifty-two percent said that an Overlook family physician had performed at least one of these examinations: most clinical breast examinations (72 percent) were performed in conjunction with a pap smear/pelvic examination. Only four percent of the respondents said they had not had a clinical breast examination during the past five years (Table 1).

Table 1. Patient Report of Number of Clinical Breast Examinations During Five-Year Period

Number of Examinations	Percent Reporting
0	4
1	7
2	12
3	13
4	9
5	55

Table 2. Percent of Patients Who Practice Breast Self-Examination

Frequency	Percent Reporting
Never practice	8
Less than 4 times/year	22
4-11 times/year	51
Every month	19

In answer to questions about breast self-examination, 99 percent of the respondents reported being aware of the procedure. They had heard about breast self-examination from a variety of sources; physicians were cited most often as a source of information. Seventy-six percent of the respondents said that a physician had discussed breast self-examination with them. The discussion usually was initiated by the physician (67 percent). Sixty-nine percent of those who had discussed breast self-examination with a physician said the physician also demonstrated the procedure. The majority (65 percent) of those who never discussed this procedure with a physician said they would like a physician to explain and demonstrate the procedure. Among those who said a physician had discussed breast self-examination but had not shown them how to perform it, half said they would like instruction.

Patients were asked to evaluate four styles of learning breast self-examination: individual instruction by a physician; individual instruction by a nurse; group instruction by a physician; group instruction by a nurse. Individual instruction by a physician was most often cited as the preferred method (64 percent of the group). Only 12 percent felt it would be an unacceptable way of learning about breast self-examination.

Despite the fact that 99 percent of the respondents were aware of breast self-examination, only 19 percent said they practice it every month. The majority said they do practice breast self-examination but irregularly. Fifty-one percent practice it at least four times a year. Eight percent said they never examine their breasts (Table 2). Of those who practice self-examination, 55 percent felt confident that they were performing it correctly.

Two factors seemed to be related to routine practice of breast self-examination. *Women whose physicians had discussed breast self-examinations with them and demonstrated the procedure were more likely to practice breast self-examination monthly.* In the group that had the procedure demonstrated, 21 percent practice self-examination monthly and only 3 percent said they never practice self-examination. Whereas, in the group with no discussion or demonstration from a phy-

Table 3. Patient Report of Reason(s) for not Practicing Monthly Breast Self-Examination (BSE)

Reason	Percent Reporting
Forget to do it every month	57
Do not know why	19
Not sure if correctly practicing BSE	18
Feel I do not have to worry	6
Too busy	5
Do not know how to do BSE	4
Think it is frightening	4
Did not know it should be done every month	2
Did not know about BSE	1
Think it is embarrassing	1
Other	7

sician, only 14 percent practice breast self-examination monthly, and 21 percent said they never practice self-examination. The group that had a physician discuss breast self-examination but who had not demonstrated it, did almost as well as the group with demonstration, with 21 percent saying they practice breast self-examination monthly and 7 percent saying they never practice breast self-examination. The differences between the two physician discussion groups and the one with no discussion in self-examination are significant at the .001 level (chi-square test).

The second factor related to routine practice of breast self-examination was confidence in one's ability to do it correctly. *Patients who were confident that they were practicing it correctly were more likely to practice it monthly.* Of those who felt confident, 35 percent practice monthly breast self-examination, while only 12 percent of those who were not confident practice monthly. The difference is significant at the .005 level (chi-square test). Furthermore, patients who were confident in performing breast self-examination were more likely to have received actual demonstration from a physician. Seventy-three percent of patients who had received physician instruction claimed confidence compared to 42 percent of patients who had not received instruction ($P<0.25$; chi-square test).

When asked why they do not practice breast self-examination monthly, 57 percent of the respondents said they "forget" to do it each month. Lack of specific knowledge or confidence in doing breast self-examination was mentioned by 22 percent of the group, (eg, "I don't know how an abnormal breast would feel"; "I expect I would find lumps when there are none") (Table 3).

Chart Audit

Respondents' answers generally were supported by the family practice chart audits. The audit documented at least one clinical breast examination in 45 percent of the charts. In the charts, 74 percent of the clinical breast examinations were performed when the patient came in for a physical examination or for a pap smear/pelvic examination. Only ten percent of the charts had documentation of annual breast examinations; annual clinical breast examinations by Overlook Family Practice were noted in nine percent of the patients' charts and in one percent of the charts there was documentation that another physician (other than Overlook Family Practice) was providing routine clinical examinations.

When the charts were audited with respect to breast self-examination, the authors found that only three percent had a notation about breast self-examination education.

In the audited charts, only about one third had notations concerning pertinent risk factors related to breast cancer. In 28 percent of the charts, there was documentation of the absence or presence of previous cancer or family history of breast cancer. Thirty-six percent of the charts had a notation about positive or negative cystic breast disease. Parity was mentioned in 33 percent of the charts,

and menstrual history was noted in 36 percent of the charts.

Resident Questionnaire

The resident questionnaire revealed that 8 of the 18 residents (44 percent) estimated that about half of the Overlook Family Practice female population receive *annual* clinical breast examinations. Seven residents (39 percent) overestimated that almost all patients receive routine clinical breast examinations.

Although almost all residents (83 percent) felt that a routine clinical breast examination should be performed at least once a year, they felt that certain factors interfered with the provision of annual examinations. The most frequent complaint (voiced by 50 percent of residents) was that residents felt most visits to the Overlook Family Practice were inappropriate for examination of the patient's breast, eg, "I feel that most patients would be surprised if they had a breast exam for a URI." They considered an appropriate situation a general or complete physical examination or a pap smear/pelvic examination, and all residents said they would perform a breast examination during these visits. However, more than half the residents did not have a systematic method to monitor if patients were getting routine clinical breast examinations.

Residents generally overestimated the number of females who regularly practice breast self-examination. Eighty-three percent of the residents thought that patients routinely practice breast self-examination. Seventy-eight percent of the residents stated that they usually teach breast self-examination to their female patients and 94 percent said they initiate the conversation. However, only 28 percent said they ask the patient to demonstrate the procedure. Sixty-one percent said they routinely ask their female patients if they are practicing breast self-examination, although only 28 percent said they have a systematic method for monitoring to see if breast self-examination is being done. Those who said they have a method, generally said they ask at each pap/pelvic or general examination.

The residents were asked what risk factors they look for when doing a breast examination. Eighty-three percent said they ask about previous or family history of cancer. Seventy-two percent said they check for a history of cystic breast disease. Fifty-six percent seek information about parity, and 61 percent ask about the patient's menstrual history.

Discussion

Active involvement by both the patient and physician is important for any preventive health measure. This also seems to be the case in the Overlook Family Practice patients' experience with routine clinical breast examinations and breast self-examinations. Although all residents thought that patients should receive routine breast examinations and more than a third thought that almost all patients were receiving routine examinations, the study showed that only 55 percent of the women actually had routine clinical examinations; moreover, the residents were responsible for only nine percent of these examinations. Thus, the residents generally overestimated their own performance in offering breast examinations to their patients and were not aware that many women do not receive routine clinical breast examinations. Also, residents rarely documented routine examinations by other physicians; this suggests that residents are not carefully monitoring their patients' preventive care. The solution to these problems involves resident consciousness raising and education as well as follow-up auditing.

The low performance rate also may be partially explained by the physician's setting too narrowly the indications for which a breast examination could be performed. Most of the residents felt that the only appropriate situations in which to do a breast examination were when the female patient came in for a physical examination or for a pap smear or for a specific breast related complaint. Under these situations, residents usually examined the patient's breasts. However, performing breast examinations only within these confines requires that the patient actively seek this preventive care. In the study, at least half the women did not actively seek preventive care from the practice nor from other physicians such as a gynecologist.

This experience is not unique. In a national survey by the American Cancer Society, only 50 percent of all women surveyed had had yearly clinical examinations during the five-year study period. Even among women who regularly saw a gynecologist, 20 percent claimed that during the five-year

study period, they had not had any breast examinations.[6]

One solution to this problem, as was suggested by the American Cancer Society, might be to have the physician examine the patient's breasts whenever she came in. Since the average person makes 3.2 visits per year,[7] more women would receive annual breast examinations. However, many of the residents felt that performing a clinical examination at every visit would be awkward and embarrassing to the patient. It may be that those residents who resist performing an examination at each visit are not responding as much to the patient's feelings as they are to their own sexual attitudes. This hypothesis should be explored further.

Residents also mentioned that the length of the visit prevented them from performing an unscheduled breast examination. Time constraint is a valid point, but the physician could deal with this problem by scheduling a follow-up visit for a clinical breast examination. This might be a more cost effective solution. The authors rarely found a notation in the plan suggesting that the patient come in for a breast examination. Some residents actually did do clinical examinations on patients regardless of the visit situation and received very little negative response from patients. If the patient is in a gown for an examination of the lungs and heart, it is a very simple matter to include a breast examination.

The authors found that the residents did not utilize the full potential of the problem oriented medical record system used in the practice. Notations or flow sheets about related risk factors, clinical examinations by other physicians, or breast self-examination education were rarely found in the charts. This lack of documentation occurred despite the fact that a majority of residents listed these factors as important on the survey. In the SOAP format, residents were not indicating in their plans future breast screening and breast self-examination instruction. If this information were included, it would be easier to keep track of the patient's behavior concerning clinical examination and breast self-examination.

Why do so few women practice breast self-examination monthly? From the results of the American Cancer Society's survey, three factors emerged: (1) ignorance of the importance of monthly breast self-examination as a necessary supplement to clinical examination; (2) lack of specific knowledge about breast self-examination and lack of confidence in how to do it; and (3) fear and anxiety.

In this study, the most frequently given reason for not practicing monthly breast self-examination was forgetfulness. This forgetfulness might have been caused by fear and anxiety; that is, fear or anxiety may have caused some women to forget or deny the seriousness of the situation. On the other hand, forgetfulness also might be explained by the patient not having sufficient anxiety to motivate her to remember to do a monthly breast self-examination. In this case, the patient might not clearly understand the importance of monthly self-examination. The reasons for patients' forgetfulness merits further study.

Lack of specific knowledge and confidence were mentioned by about a quarter of the women as reasons for not doing breast self-examination monthly. There was a positive association between confidence and regular breast self-examination practice, ie, women who were confident in their ability were more likely to do breast self-examination monthly. There was also a positive correlation between breast self-examination education by a physician and patient confidence. This suggests as an hypothesis that better instruction by inducing greater confidence would result in breast self-examination being done more regularly; conversely, the process may be self-reinforcing with more frequent practice of breast self-examination inducing yet further confidence.

The authors' results and the American Cancer Society survey strongly suggest that the physician can be very important in influencing and reinforcing the patient's behavior. The correlations between the active teaching of breast self-examination by the physician and the patient's confidence and reported practice of breast self-examination argues the importance of the physician's role. In addition, results of the patient survey clearly indicated that a majority of patients in this practice would prefer instruction and demonstration by a physician. The resident survey shows that perhaps not all residents are aware of the physician's significant teaching role, since only 78 percent routinely teach breast self-examination and only 28 percent ask the patient to demonstrate the procedure. In a family practice program, the residents need to be made aware of the significance of their involvement in patient education.

Because breast self-examination was generally taught or monitored only when a clinical examination was performed and clinical examinations were only performed during a pap/pelvic or a physical examination, it may be that the physician does not have many opportunities to monitor and reinforce the patient's behavior. Residents need to be encouraged and reminded to do routine examinations. If breast examinations were done more routinely, the physician would have more opportunity to teach breast self-examination, deal with a woman's fears and anxiety, and help her gain confidence in her breast self-examination techniques. Better utilization of the medical chart would make it easier to monitor the patient's behavior. More active teaching and monitoring by the physician might increase the number of women who practice breast self-examination.

Conclusions

The results of this survey have important implications for those who are involved in influencing physician and patient behavior in regard to breast examination and breast self-examination.

Knowledge of the importance of breast examination and breast self-examination is not a major obstacle for either patients or residents. Instead the critical elements which require attention include the following:

1. Consciousness Raising

The resident's general agreement in principle that breast examination and breast self-examination instruction should be performed must be developed into an intensely felt responsibility. The resident should feel that one of his/her highest priorities is to assure that breast examination and breast self-examination instruction are done for every appropriate patient. Similarly, the level of priority which patients give to these procedures should be enhanced.

2. Legitimacy of the Patient's Initiative

It should be conveyed to the patient that her questions and initiative in relation to breast examination and breast self-examination are valid and to be encouraged, that these are viewed as important enough to deserve the attention of the busy physician. In other words, the commitment of the practice and the individual resident should be communicated to the patient.

3. Monitoring Patient Care

The office chart should provide a simple method by which the physician, patient, or office staff can easily recognize whether breast examination and/or breast self-examination instruction remains to be done. It must also provide a convenient method for recording the procedure when it has been performed, or for planning it for a future visit. Such a system should also make feasible an independent audit, for example, by family practice faculty.

4. Psychological and Organization Resistances

Certain feelings need to be identified and accepted as legitimate (eg, the physician's sense of time pressure or his fear that the patient will resent an unsolicited breast examination, the patient's wish not be reminded of anything so unpleasant as cancer). In recognizing these feelings, their negative emotional power which causes resistance can be dealt with and diffused.

Such a comprehensive approach to health promotion is being implemented in the authors' residency program. Its effectiveness in influencing physician and patient behavior will be the subject of a future report.

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