Factors influencing default at a hospital colposcopy clinic

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Abstract

**Objective** — To identify factors reducing compliance at diagnosis, treatment, and review stages among women referred with abnormal cervical smears to a hospital colposcopy clinic.

**Design** — Retrospective analysis of sociodemographic data from hospital notes of the attenders and defaulters during one year (1989–90) and prospective collection of information by structured interviews of a sample of defaulters and attenders during five months (May–September 1990).

**Setting** — One hospital colposcopy clinic.

**Patients** — 238 women defaulting on two consecutive occasions and 188 attending regularly (retrospective analysis) and a subset of 40 defaulters and 24 attenders (interview sample).

**Main measures** — Sociodemographic data and interview responses about attitudes, behaviour, choice, accessibility, cultural understanding, communications, and emotional response.

**Results** — 22(12%) women defaulted at diagnosis, 24(13%) at treatment, 39(21%) at the first check up after treatment, and 84(45%) at the review stage; 19(10%) defaulted from the first check up after diagnostic examination revealed no need for treatment. Age and social class differed between the two groups. 181(76%) defaulters were under 30 compared with 91(48%) attenders; 14(6%) compared with 41(23%) were over 40 (p < 0.001). The proportion of women in social classes 4 and 5 was 33%(20/60) for defaulters and 21%(25/120) for attenders (p < 0.05) and unemployed was 66%(158/238) and 36%(68/188) respectively. 63(28%) defaulters were pregnant compared with 11(6%) attenders (p < 0.001). More defaulters came from gynaecology or antenatal clinics. Most defaulters (93%) had child care responsibilities and they knew and understood less about colposcopy. Their explicit reasons for defaulting included child care commitments and fear and their implicit reasons lack of understanding, inaccessibility of information, and staff attitudes.

**Conclusions** — Compliance may be improved by promoting women’s understanding of treatment and encouraging health professionals to develop a service more sensitive to the various needs of women in different socioeconomic groups. (Quality in Health Care 1992;1:236–240)

Introduction

The effectiveness of follow up and treatment of women with abnormal smear test results is essential if the cervical screening programme is to succeed. Clinicians providing the local district colposcopy service had expressed concern about the amount of defaulting from clinics: 31% of 3067 colposcopy appointments for diagnosis, treatment, or review in a 12 month period had not been kept.

Published work has concentrated on the organisation of cervical screening rather than efficiency and effectiveness of follow up of women with abnormal smear test results.1 Posner and Vessey2 and Quilliam3 recently indicated that emotional responses such as fear, embarrassment, stigmatisation, anger, and guilt play a greater part in women’s response to colposcopy than previously suggested. Marteau et al reported very high anxiety levels in women referred for colposcopy.4 Analysis of attendance at this district colposcopy clinic by age group had indicated that defaulting was more likely in younger age groups, but little else was known about the pattern of defaulting or its reasons.

This study aimed at identifying the factors influencing non-attendance of new and returning patients at this colposcopy clinic so that necessary service changes could be implemented to reduce defaulting. It was approved by the local ethical committee.

**Methods**

The women in the study had been referred to the colposcopy service, which provided most diagnostic and treatment facilities for the local district health authority population of 270 000 as well as for referrals from adjacent health authorities. The dedicated clinic suite is based in the gynaecology department of Newcastle General Hospital and provides three afternoon outpatient sessions weekly. At any one clinic there are three nurses, a consultant, a registrar, a senior house officer, and a clinical medical officer.

The research design used both qualitative and quantitative methods of investigation and included a retrospective analysis of sociodemographic information from the case notes of women who defaulted and regular attenders during 1989–90 and a prospective study entailing interviews with a small sample of...
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women who defaulted at different stages of diagnosis, treatment, and review and with a sample of women who attended regularly through to discharge.

The clinical policy was for colposcopic examination with a cervical smear and biopsy at the first visit; a visit for treatment shortly afterwards; and visits for checks at four, 10, 16, and 26 months. When no treatment was required women were reviewed once at six months.

**RETROSPECTIVE STUDY**

Some defaulting may occur because an appointment coincides with a woman’s menstrual period. Our intention was to identify other reasons for non-attendance. Hence defaulting from two consecutive appointments (without an explanation from the women) was used to define non-attendance. These women were identified from a default register for 1989 held by the director of public health. A control group of regular attenders was identified through discharge letters sent during 1989 by the consultant gynaecologist to general practitioners. A sample representing two thirds of the default sample population was randomly allocated from this source.

Sociodemographic data (including age, marital status, employment status, education after age 16 years, occupation of women and spouse or partner, and postcode of residence), source of referral, and pregnancy status were extracted from the notes for the default and control group and analysed with the statistical package for the social sciences (SPSS). In addition the women’s addresses were checked against the current address held by the family health services authority ( FHSA).

**PROSPECTIVE STUDY**

A prospective study was carried out to compare the attitudes and views of defaulters and attenders.

During five months starting in May 1990 the names and addresses of women who defaulted from two consecutive appointments were identified by the receptionist at each clinic. Women defaulted at four stages: diagnosis, treatment, first check up after treatment, and review.

A sampling technique stratified default using the proportions from the four categories of the retrospective study. However, all women who were identified as having defaulted at the diagnosis, treatment, and first check up stages were included, firstly, because of the few women in these categories which required all to be interviewed to obtain an adequate sample and, secondly, because they were seen to be at greater risk of disease. A further sample of women who attended their clinic appointments regularly through to discharge were selected as controls from those currently being discharged from the clinic to their general practitioners. Women who had defaulted on one occasion several times during care were excluded.

Women selected for interview were sent a letter requesting a home interview by CC. Interviews were structured and based on a questionnaire which contained both closed and open questions (box). They were tape recorded and their content analysed, according to the following major themes: attitudes, behaviour, communication, accessibility, emotional responses, sensitivity, choice, and cultural understanding. Women were asked their reasons for not attending the clinic. Their initial responses were considered the explicit reasons for default; other reasons expressed later during the interview were considered implicit reasons.

Some of the sociodemographic variables (age, source of income, marital status, employment status, and education after age 16 years) and number and age of children were examined by $\chi^2$ distribution. Significance was taken at the 5% level. Information on postcode was used to identify each woman’s local authority ward of residence, which allowed a different estimate of socioeconomic status, by using the ward deprivation index.

**Results**

**RETROSPECTIVE STUDY**

A total of 251 women were identified in the default register; 13 files could not be found and the study was therefore based on information about the remaining 238 women who defaulted. Of 236 attenders identified, 21 were excluded because they had defaulted...
from one appointment and the files of a further 27 could not be traced. This gave a final sample of 188 women.

Most defaulting occurred at the review stage or during follow-up; however 12% occurred at diagnosis, 13% at treatment, and 21% at the first check up four months after treatment (table 1). A further 10% of defaulters occurred at first check up after diagnostic examination had revealed that no treatment was required (false positives to cervical screening programme).

The addresses of defaulters at the diagnosis and treatment stages for women who lived within the main district health authority for referrals were checked against the FHSA register, which was known to be reasonably accurate. Within six to 12 months 38%/22/56) of women were found to have changed their address.

Table 2 shows the sociodemographic details of defaulters and attenders. Defaulters were younger than attenders (181, 76%, defaulters v 91, 48% attenders aged under 30) and were more likely to be unemployed or be housewives: two thirds of defaulters did not work outside the home whereas two thirds of regular attenders were in paid employment. These results are based on the women’s own occupation. An analysis based on their partners’ occupation showed similar results but at a higher level of significance (p < 0.001). Marital status also showed a different distribution with slightly more single women among the defaulters than attenders (53% v 46%), though more attenders were separated or divorced (16% v 13%). The age difference of the two groups may explain these variations. Pregnancy status was recorded for all but 13 defaulters. A minority of both groups were pregnant at the time of referral for colposcopy but the rate was higher among defaulters than attenders (63/225, 28% v 11/188, 6%). Analysis of postcode information found that a greater proportion of defaulters lived in the two most deprived groups of local authority wards than did regular attenders. Women attending the most deprived group of referral was general practice followed by the genitourinary clinic, but a larger percentage of defaulters than attenders were referred by the antenatal (15% v 4%) and gynaecology or well woman (13% v 6%) clinics (table 3).

Logistic regression analysis of these variables suggested that the main discriminating variables for attendance and default were age, pregnancy, and the women’s social class.

PROSPECTIVE STUDY

The results of this study were based on interviews from 40 defaulters, whose distribution by stage of default was broadly similar to that of the larger retrospective group (table 1), and 24 regular attenders. Tracing women who had defaulted for interview was difficult: out of 88 women traced, 23 (25%) had moved, 17 (20%) failed to respond, and eight (9%) refused to participate. In contrast, change of address was uncommon in the regular attenders occurring in only 10% (2/24).

The characteristics of the defaulters were similar to those in the retrospective study. In addition, information was available about children and their age. In all, 37/93%) defaulters had children compared with 67% of attenders; 35/88%) defaulters had children aged under 16 years (including 12/30%) with children aged under 5 years) whereas less than half the attenders had children aged under 16 years and only 17% had children of pre-school age. Fifteen (38%) defaulters and three (13%) attenders were single parents living alone with children. Seven (29%) regular attenders had received further educational training after 16 years of age compared with only one (3%) defaulter.

Table 4 shows the explicit reasons for defaulting. Problems with child care were considered to be made worse by the lack of child care facilities at the clinic and the
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Table 4 Explicit reasons given for defaulting by 40 women at interview (categories not mutually exclusive)

<table>
<thead>
<tr>
<th>Reason</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear</td>
<td>14(35)</td>
</tr>
<tr>
<td>Child care</td>
<td>14(35)</td>
</tr>
<tr>
<td>Clinic waiting time</td>
<td>4(10)</td>
</tr>
<tr>
<td>Transport costs</td>
<td>3(8)</td>
</tr>
<tr>
<td>Forgetfulness</td>
<td>3(8)</td>
</tr>
<tr>
<td>Attends general practitioner (not arranged</td>
<td>3(8)</td>
</tr>
<tr>
<td>by clinic)</td>
<td></td>
</tr>
<tr>
<td>Pregnancy</td>
<td>5(13)</td>
</tr>
</tbody>
</table>

Table 5 Choice of male or female doctor for general or gynaecological examinations. Figures are numbers (percentages) of women

<table>
<thead>
<tr>
<th></th>
<th>General examination</th>
<th>Gynaecological examination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Defaulters (n = 40)</td>
<td>Attenders (n = 24)</td>
</tr>
<tr>
<td>Male doctor</td>
<td>16(40)</td>
<td>1(4)</td>
</tr>
<tr>
<td>Female doctor</td>
<td>24(60)</td>
<td>18(75)</td>
</tr>
<tr>
<td>No preference</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Most women in both groups did not mind consulting a male or female doctor about general medical problems, but for gynaecological problems over half in both groups preferred a female doctor (table 5). A sensitive, understanding approach was the particular attitude women were looking for in a gynaecological consultation and if this was present the women stated that the doctor’s sex was a less important consideration.

Most favourable comments on the doctor’s care came from the regular attenders, who felt that doctors had kept them informed during the care process whereas negative comments about lack of communication came from the defaulters. Most women interviewed (both attenders and defaulters) could not pronounce the word colposcopy and did not know its meaning.

Discussion

Women defaulting from the colposcopy clinic differed in several ways from those who attended through to discharge. Generally, they were younger, with more responsibility for child care, were more often pregnant, and had a lower socioeconomic status. Evidence is growing that health screening facilities are used less by people in poorer socioeconomic circumstances and their knowledge of health is poorer. This study confirms this observation. Being in paid employment seemed to make clinic attendance more likely.

Attenders were more likely to seek information about colposcopy, resulting in understanding the preventative nature of the procedure. The booklet provided by the clinic, although detailed, was found too technical (despite efforts by the consultant in charge to ensure its readability). The importance of providing information appropriately for different recipients has been described by Bernstein and Hogart.7

Discussion of these results with the providers of the clinical service has focused on presenting the information in different written styles, use of other media (for example, audio information for those who cannot read) and also by improving the oral communication skills of all clinical staff, which is particularly important to working class women with whom doctors may spend less time and give less explanation. Cartwright and O’Brien showed that the average consultation between doctors and middle class patients is longer because this group of patients ask more questions and expect more explanation.8 Most women interviewed in the prospective study did not know what colposcopy meant. Posner and Vessey reported a similar result.2 Both the amount of information received9 and the amount of explanation provided10 affect compliance with medical advice. Personal advice and explanation supported by written information improves the amount of advice remembered.11 In addition, the need for specific education aimed at pregnant women with an abnormal smear test result was identified in this study as well as elsewhere.2,12,13 Thus health professionals in
the colposcopy service need to see themselves as part of the screening programme with good liaison and provision of information to other referral points within health care rather than as a discrete hospital service.

The role of primary health care teams is of considerable importance as they are often the source of the initial referral. However, once referred for treatment, women were unlikely to see their general practitioner about this medical problem and so advice had to come from the hospital clinic. Since more than half of patients are referred from general practice this could be the initial point for providing information. Personal communication either within primary care at referral or before treatment may improve understanding and offer reassurance. Also there is the question whether all women need to have a hospital review especially when this is by a cervical smear. It may be more convenient for patients to attend general practice. However this raises issues of communication, shared protocols, and the need for mutual trust in clinical follow up between medical professionals and clinical teams. Guidelines for management and follow up of women with abnormal smear test results have now been agreed within the district and have been circulated to all primary care teams. However, the hospital consultants still prefer to follow up routinely for two years all women with cervical abnormalities.

The women felt issues such as possible pain and adverse emotional reactions to the procedures should be explained in a leaflet. Egbert et al have indicated the beneficial effects of warning patients about pain after surgery; such patients needed less treatment to control pain and recovered more quickly, physically and emotionally, than those who were not warned. Since a substantial number of women found biopsy painful an effective local anaesthetic or other anaesthetic treatment should be offered routinely beforehand, and is now accepted as normal clinical practice.

Fear was a key issue in non-attendance but also was present among attenders. Marteau et al highlighted the anxiety associated with colposcopy. More attention should be paid to reducing patients’ stress before the consultation. An explanation from a nurse trained in communication can result in reduction in the stress experienced by patients. Posner and Vessey’s study pointed out the need for women to receive nursing support, reassurance, and a period of recovery before being expected to leave the hospital. Greater emphasis on the counselling and supporting role of nurses in colposcopy clinics should be considered.

Since the study was completed clinical practice has changed and the introduction of loop diathermy has allowed both diagnosis and treatment at one visit for some women, a useful development for improving efficiency in follow up and reducing inconvenience to women.

The study highlighted problems in keeping track of women’s addresses. Small numbers of defaulters are highly mobile and move from one temporary address to another. Follow up by health visitors is a possibility, but recent experience in Liverpool indicates that even when a woman is traced she may still not comply with medical follow up. Nevertheless, women need to be encouraged to keep the clinic informed about changes of address, through correspondence and in posters within the clinic. In addition, better communication between the clinic and the FHSA over notified recent changes of address may help.

Since the NHS and Community Care Act all clinical services are striving to become more consumer orientated. The process of service delivery is important. Not only should clinics be provided at times suitable for women who care for children but they must be attuned to women’s holistic needs and not just to the presenting medical problem. The benefits of cervical screening will exceed the costs (monetary and non-monetary) only when effective treatment is taken up by all those with abnormal smear results.

This study identified some of the barriers to treatment which are seen by women and provides a baseline for audit of the service. It shows that health professionals have a key role in reducing the barriers for women and thereby improving quality of care, through health education, promoting women’s understanding of the treatment process, process improvements, and modifying their behaviour to develop a service more sensitive to the various needs of women in different socioeconomic groups.

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