Effecting Change in Outpatient Failed Appointments

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The problem of failed appointments was addressed in a family practice clinic. This study borrows an approach toward increasing clinic attendance that has had consistent and positive results in mental health settings: pretherapy induction. The previsit induction was intended to prepare the patient for entry into a medical system, altering erroneous and unrealistic expectations of the patient, which, if left unaddressed, can lead to patient frustration and subsequent noncompliance. Four hundred sixty patients were each randomly assigned to one of three groups. One group viewed a 20-minute videotape introducing the clinic, its staff, and services, and how to utilize the staff during and outside office hours. A second experimental group received the same information in pamphlet form. The control group received no information about clinic function except that which was requested by the patient. Eleven months after onset of the study all patient charts were reviewed. Compared with both the no-treatment control group and the pamphlet experimental group, significantly fewer new patients viewing the induction videotape missed subsequent scheduled appointments ($P < .025$). This same group had a significantly lower number of missed appointments during the study period ($P < .05$).

The medical community is well aware of the problem of failed appointments.[1] Patient failed appointment rates are quite similar to those suffered by mental health facilities, the average reported in the literature falling between 15 and 25 percent.[1-4] Initial investigations focused on patient characteristics as explanations of the failed appointment problem, yielding mixed results. For every study demonstrating a correlation between demographic or sociologic factors,[5] there are studies demonstrating no correlation between patient variables and failed appointments.[2,6]

Investigators proceeded to examine "system" variables that might be predictors of failed appointments. Gates and Colborn[7] and Nazarian et al[8] demonstrated a significant, positive correlation between failed appointments and length of interval between appointments. Hoffman and Rochart[4] found differences in failed appointment rates de-

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pending on appointment sources. Patients referred from emergency wards had the poorest attendance rate, and patients scheduled for appointments upon hospital discharge had the lowest failed appointment rate.

Ambuel and colleagues[9] examined appointment urgency as a factor in clinical attendance and found that urgent visits were most frequently kept while routine visits were most likely to be missed.

Additional factors intrinsic to medical systems that affect failed appointment rates in outpatient clinics were recognized by Hertz and Stamps.[10] The authors found the block method of appointments, a system traditionally used by large, hospital-based outpatient clinics, discourages appointment-keeping behavior. Other studies[4,11,12] have shown a significant lowering of failed appointment rates using an individualized appointment schedule. Another factor positively correlated to appointment keeping is physician continuity.[13] The appointment reminder systems using telephone calls[14] and mailed reminders[15,16] have produced significant reductions in failed appointment rates as well.

Mental health professionals have tended to take different approaches toward understanding and lowering the failed appointment problem. A common method is subsumed under the rubric of "pretherapy induction," in which patients are prepared for what will happen during subsequent appointments. Clients are helped to understand the importance of aspects of therapy that often drive clients away from mental health clinics. It was assumed if patients' prior expectations are too far removed from the reality of the therapy session, they experience too much frustration with the process and terminate. New clients have had this information presented in videotape form,[17,18] in written and verbal form,[19] or in film and written form.[20] Clients in waiting list control groups, compared with induction group members, drop out of therapy significantly more often and are perceived less favorably by their therapists. Mental health professionals have implicit and explicit expectations of clients, and it is possible, then, that many mental health system clients enter therapy with expectations quite dissimilar from what actually happens in therapy. It seems quite reasonable to assume the same problem occurs in medical clinics. If the nature of the visit is too far removed from what is expected, patient frustration and subsequent dropout may occur. This study explored the use of a preinduction videotape in a medical clinic outpatient setting to determine its impact on subsequent patient attendance.

Table 1. Points Emphasized on Videotape

1. Definition of family medicine
2. Necessity of involving the family as the unit of care
3. Effects on patients and others of not keeping an appointment
4. Effects of "doctor shopping"
5. Appropriate use of clinic telephone system
6. Reasons for delay in a clinic setting
7. Importance of collaborative relationship with physician
8. Disadvantages of using the emergency room in place of one's primary care physician
9. Role of stress in illness
10. Family physician as the coordinator of health care

Methods

In a hospital-based, outpatient, family practice clinic 460 new patients were each randomly assigned to one of three groups. One group viewed a 20-minute videotape that included, but was not limited to, an introduction to the clinic, its staff and services, how to utilize the clinic during and outside office hours, what happens when patients fail to cancel an appointment, and what patients could expect during a scheduled visit (Table 1). A second experimental group received a pamphlet including the information given in the videotape group. The control group received no information except that which was requested by the patient. For each week for the initial three months of the study, one day was designated videotape day; a second, pamphlet day; and the remaining three days were control days. Days for group assignment were randomly varied each week to prevent assigning a unique set of patients to one group, eg, those who could attend the clinic on a specific day each week.

Once all the study patients were assigned to their respective groups, the study continued for an additional seven months. The total study time was 11 months. Patient charts were identified only by a colored dot designating the group to which the

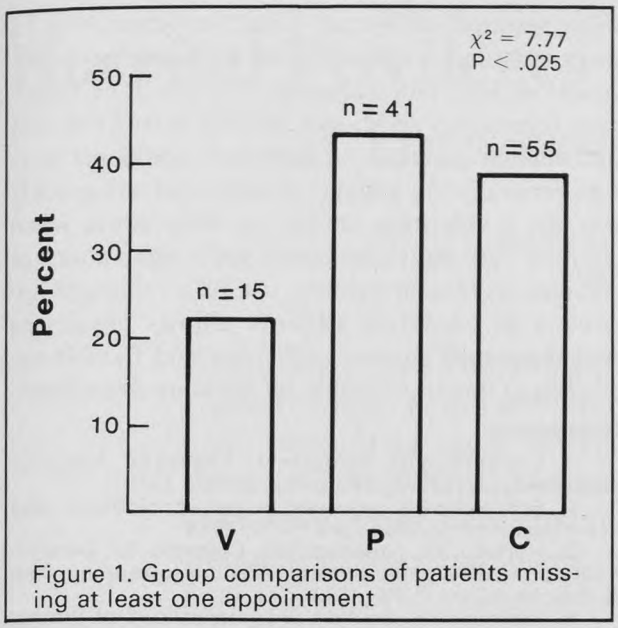

Figure 1. Group comparisons of patients missing at least one appointment

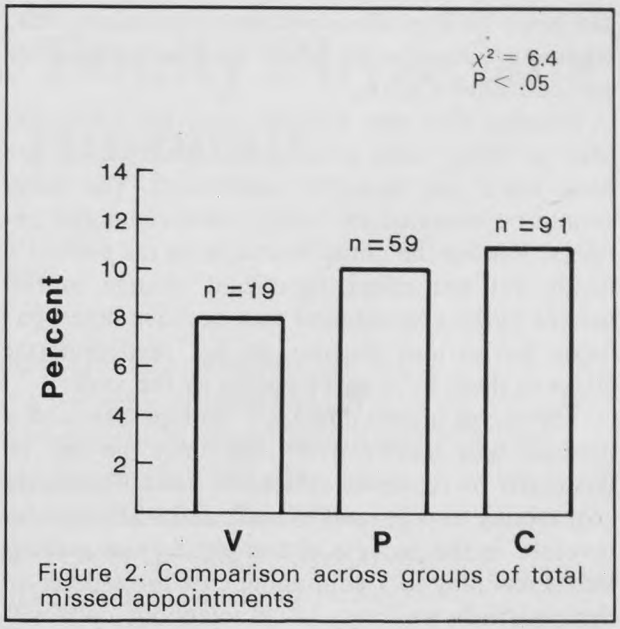

Figure 2. Comparison across groups of total missed appointments

patient was assigned. The critical datum collected was keeping or not keeping each appointment subsequent to entering the study. Data were pooled by groups and the chi-squared statistic was used to analyze any group difference in appointment keeping.

Results

Of the initial 460 patients, 143 were eliminated from the study because they had no follow-up appointments. Of the remaining 317 patients used for the study, 70 were in the videotape group, 99 in the pamphlet group, and 148 in the control group. Within the videotape group, 15 (21.4 percent) missed at least one subsequent appointment. The pamphlet group had 41 (41.4 percent) patients missing appointments, and the control group had 55 (37.1 percent) patients in this category (Figure 1) ($\chi^2 = 7.77$, $df = 2$, $P < .025$).

In addition to analyzing group differences in the number of patients missing at least one scheduled appointment, group differences were analyzed for ratio of missed to kept appointments (Figure 2). Similar results can be seen here. As with the previous analysis the percentage of missed appointments of the videotape group (5.8 percent of all scheduled appointments) was approximately one half that of the pamphlet group (9.9 percent) and the control group (11.7 percent) ($\chi^2 = 6.4$, $df = 2$, $P < .05$).

Discussion

The problem of failed appointments plagues many outpatient clinics. Patient nonattendance is not a new problem, and no medical specialty is immune. The failure of a patient to appear for a scheduled appointment has wide-ranging negative effects. Repeated failed appointments can discourage clinic staff, possibly resulting in patients' receiving cursory and less than optimal care. Sporadic attendance does not lend itself to thorough, consistent follow-up on medical problems and illnesses. Last is the matter of lost income. When a patient does not cancel an appointment, that slot cannot be filled by another patient, and the clinic loses income.

Reminder postcards and telephone calls have been demonstrated to be quite effective in lowering rates of missed appointments. This study demonstrated equally satisfying results. Unlike postcards and telephone calls, however, the preinduction videotape can be used for a wide range of potentially useful purposes. As noted in Table 1, the videotape covered a wide variety of topics medical professionals considered to be problem patient behavior. The tape gave the clinic an avenue to begin to educate patients about generally appropriate use of a medical facility and what is reasonable to expect of a clinic and its personnel. The clinic preinduction videotape, like its counterpart in the mental health setting, theoretically

can begin to alter those patient expectations that, when unrealized, can result in dissatisfied staff and consumers alike.

Insisting that new patients view the videotape prior to initial visits assures that the material has been heard and possibly assimilated. The same cannot be assumed for written material given patients. Putting the clinic pamphlet in the patient's hands did not effect significant change in the patient failed appointment rate because many patients for various reasons do not read material given to them by their physician or the staff.

The use of a preinduction videotape can cost a practice less money over time than the use of postcards or reminder telephone calls. Postcards cost money to print and to mail, and staff must be involved in the process of completing and mailing them, resulting in a continuing cost for as long as the postcards are used. Local telephone calls will not accrue cost to the clinic, but costs will accrue for all nonlocal calls as well as for the time the staff spends calling patients and following through on unanswered telephone calls.

In contrast to the above, the use of the preinduction videotape involves a one-time, fixed cost and minimal use of staff time. Readers are not invited to rush out and purchase a videotape system. If a clinic owns a video cassette deck, monitor, and camera (many residency programs do), only a blank cassette is needed to initiate a similar program. No knowledge of cinematography or theater was necessary to produce a 20-minute tape for the study's purposes. All actors were hospital "amateurs," and all taping was done in four hours over two working days. Once put into use, the only staff time necessary was escorting the patients to the machine and instructing them to stop it at its completion.

A reduction of the clinic's failed appointment rate will result in a substantial increase in clinic revenue. Assuming consistent effects by using a videotape, a consistent rate of failed appointments for control patients, and 1,000 scheduled appointments per month, one month with the tape could result in approximately 58 more patient visits. The increase in revenue will quickly cover the $20 for the blank tapes. In fact, over time, the increase in income would cover the cost of the videotape system (a good, no-frills system costs between $1,000 and $1,200).

In conclusion, the preinduction videotape was demonstrated to be an effective alternative to postcards and telephone calls for lowering family practice clinic failed appointment rate. The videotape format has additional benefits in its fixed cost and minimal demands on staff time. Additional revenue generated by a higher patient load will quickly pay for a videotape set-up. In these times when primary care physicians must see a high volume of patients to remain solvent, use of a videotape approach to educating patients affords physicians and their staff an easy, efficient, and flexible approach to impart valuable information to patients.

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