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COMPARISON OF SHOW-RATES FOR TELEPHONE AND WALK-IN REFERRALS
FOR SUBSTANCE ABUSE SERVICES

by
Rebecca C. LaFleur

A Thesis

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Approved by

Professor

Date Approved 5/6/02

ABSTRACT

Rebecca C. LaFleur

COMPARISON OF SHOW-RATES FOR TELEPHONE AND WALK-IN REFERRALS FOR SUBSTANCE ABUSE SERVICES

2001/02

Dr. MaryLouise E. Kerwin

Master of Arts in Applied Psychology

The investigator attempted to determine if individuals who make in-person (walk-in) referrals would be more likely to keep their initial appointment with a substance abuse counselor at an outpatient mental health clinic than will individuals who refer themselves over the telephone. Participants were 40 adults who had been ordered to undergo a substance abuse evaluation by the legal system between July and December 2001. The walk-in group consisted of 18 males and 2 females (mean age 34.04). The telephone-in group consisted of 18 males and 2 females (mean age 35.67). The investigator saw all participants for the initial appointment. The list of walk-in referrals' attendance was compared to records of attendance for phone-in referrals during the same time period. Chi-square analysis revealed that participants in the walk-in group were not more likely to show up for the initial appointment than participants in the telephone-in group ($\chi^2 = .476, p = .490$). The results indicate that meeting with the counselor prior to the initial appointment does not decrease no-show rates.

MINI-ABSTRACT

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The investigator attempted to determine if individuals who make in-person (walk-in) referrals would be more likely to keep their initial appointment with a substance abuse counselor than individuals who refer over the telephone. Chi-square analysis revealed no difference in show-rate between the two groups ($\chi^2 = .476$, $p = .490$).

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Chapter 1

INTRODUCTION

Clinics today face a number of challenges in caring for patients. One problem researchers are working to address is the number of missed initial appointments or “no-shows.” By finding out why patients miss appointments and developing strategies to address those reasons, clinicians hope to reduce no-shows, thus being able to do their jobs more efficiently.

Reducing the no-show rate will benefit both the clinician and his or her patients. For the clinician, fewer no-shows may result in an increased ability to service patients, a more efficient workload and cost-savings due to fewer reschedules. Patients will benefit from shorter wait-lists and perhaps a better health outcome due to compliance with their program.

To solve the problem of no-shows, researchers have studied several factors that might be associated with the problem. Some of the factors include sociodemographic variables, wait-time, orientation programs, client efforts prior to appointments, treatment obstacles, appointment reminders, and the client-therapist relationship. These major areas of past research on show-rates will be reviewed below.

Chapter 2

LITERATURE REVIEW

Who misses appointments?

Researchers have been interested in finding out what sociodemographic or diagnostic information best predicts show rate. Campbell, Staley, and Matas (1991) had physicians at a psychiatric clinic record information about 25 consecutive appointments made by psychiatric patients. It was found that appointments were most likely to be missed by younger individuals (mean age of 32.3), individuals with a history of missed appointments, individuals scheduled for a routine appointment, or individuals living farthest from the clinic.

Carpenter, Morrow, Del Gaudio, and Ritzler (1981) had similar results. Individuals who did not keep their initial appointment at the psychiatry department of a medical center were contacted by telephone and asked for a reason. The responses of those who missed appointments were compared to those who did not miss appointments. Age was the only statistically significant demographic. A longer wait period between referral and initial appointment also resulted in a higher no-show rate (Carpenter, Morrow, Gaudio, & Ritzler, 1981).

Rees, Beech, and Hore (1984) collected the following information from each referral: sociodemographic information, self-report of drinking problem and need for help, the Hilton questionnaire (a measure of severity of drinking problem), attendance difficulties, and the Eysenk Personality Questionnaire (a measure of personality

variables). None of these variables had a significant impact on show-rates to initial appointments. The only significant finding was the longer a patient had to wait between referral and appointment, the higher the no-show rate (Rees, Beech, & Hore, 1984).

Finding reasons why patients fail to show up for initial appointments could help reduce these no-show rates. In a study of adults addicted to cocaine, Festinger, Lamb, Kountz, Kirby, and Marlowe (1995) looked at the effect of a number of independent variables on no-show rates. These variables included days between first telephone contact and scheduled appointment, personal characteristics of the caller, substances used, characteristics of the operator taking the call, and characteristics of the therapist to be seen. Only number of days between referral and initial appointment had an effect on no-show rates. Fewer days between referral and appointment resulted in lower no-show rates.

Some researchers focused on specific problems associated with show-rate. In a study conducted at a community mental health center, Allan (1988) examined referral information and found that individuals with alcohol-related problems had the highest no-show rate. Dubinsky (1986) found similar results for clients with substance abuse issues by looking at records over a six-month period. In addition, individuals who were unemployed were more likely to miss initial appointments than individuals with any other demographic variable.

In attempting to identify who misses appointments, researcher have found that younger individuals and those with substance abuse issues are most likely not to show. However, in conducting these studies of demographic variables, many have inadvertently

found that wait-time had a significant effect on show-rates. Longer wait-times often result in higher no-show rates.

Wait-time between referral and initial appointment

While studying other variables, many researchers found that the time between the initial telephone call and the initial scheduled appointment had a significant effect on show-rates. Miyake, Chemtop, and Torigoe (1985) studied the effects of waiting time on appointment compliance with psychiatric patients referred to a day-treatment mental health center. The purpose was to determine noncompliance rates when initial appointments were scheduled within three days of referral. Participants were assigned to one of two groups. Group one had an average referral to appointment delay of 5.44 days, while group two had an average delay of 1.67 days. Group two had a significantly lower no-show rate than group one.

Similarly, first-time patients at a community mental health center were randomly assigned to one of three groups. Group one was scheduled within 3 days of referral. Group two, 6-8 days, and group three within 16-19 days of referral. Group one was most likely to show for initial appointment (Folkins, Hersch, & Dahlen, 1980).

Benjamin-Bauman, Reiss, and Bailey (1984) first compared the difference in show-rate between one-week delay versus the normal three-week delay for a family planning clinic. There was a significantly lower no-show rate for the one-week group, and those individuals who waited one day were more likely to come to the initial appointment than those individuals in the two-week wait condition. Finally the one-week wait group was compared to the one-day wait group. There was no significant difference,

suggesting that decreasing wait time to less than one week may not be necessary (Benjamin-Bauman, Reiss, & Bailey, 1984).

Most researchers have found that wait-time is a significant variable in the study of no-show rates. Results indicate that the fewer days between referral and initial appointment, the lower the no-show rate. However, it may not be necessary to decrease wait-time to less than a week.

Orientation programs

In an effort to lower no-show rates some clinics have implemented experimental programs where potential clients are given orientation meetings on services offered, and told what to expect from those services. Wenning and King (1995) designed one such meeting to clarify parents' expectations of the therapy process at a children's psychiatric clinic. The meeting was also expected to motivate parents to attend the first evaluation appointment. Intake appointments were given only to children whose parents attended this orientation meeting. This group's attendance at first appointments was compared to intakes scheduled during the eight-month period prior to orientation meetings being implemented. Wenning and King (1995) found that the orientation meeting significantly improved attendance at intake.

Olkin and Lemle (1984) assessed whether requiring newly referred individuals at alcoholism treatment facility to attend a pre-intake group would lower the percentage of no-shows at intake. Individuals in the pre-intake group met for one hour and received information on the program, filled out a personal history questionnaire, and were given an appointment for the following week. They were also able to talk about their alcohol

problem with the group. Another group was given an intake appointment upon referral. The pre-intake group had significantly fewer no-shows than the intake group.

Requiring potential clients to attend orientation meetings prior to entering treatment has been shown to lower no-show rates. Taking the mystery out of the therapy process may make individuals more apt to comply with treatment. Also, individuals who show up for orientation meetings also may be more motivated for treatment.

Client effort prior to initial appointment

A number of studies have assessed the effect of patient effort on show-rates. Parents who filled out a checklist prior to their child's first appointment at a community mental health clinic had a lower no-show rate than those who did not (Deane, 1991). Westra, Boardman, and Moran-Tynski (2000) sent out detailed information packets about the group program at a mental health clinic to individuals referred to a cognitive-behavioral group. If these individuals were interested, they were asked to contact the clinic to set up an intake appointment. This particular clinic lowered its no-show rate from 30% to 0%. Requiring referees to send in a general information form prior to scheduling the first appointment also lowered the no-show rate at a teenage health center (Neinstein, 1982).

MacLean, Greenough, Jorgenson, & Couldwell (1989) hypothesized that reminder letters or forms requiring completion and return would lower initial appointment no-show rates compared to rates from clinic appointments that do not require completion of forms. They also hypothesized that individuals who complete the form and send it back, and receive an appointment reminder letter would have the lowest no-show rate. To test these hypotheses, referred clients at a community mental health

center were randomly assigned to one of five groups. Group one received a reminder slip requesting contact with the clinic if the appointment needed to be changed. Group two received a warning reminder indicating the possibility of losing their place on the waiting list should the appointment be missed. Group three combined the conditions of the first two groups. Group four was required to send back an appointment confirmation in the mail and group five was required to fill out and return basic information forms. It was found that any type of reminder reduced initial appointment no-show rates. No-show rate was lowest for those returning the general information form and receiving the appointment reminder letter.

Potential clients who fulfill some requirements prior to being scheduled an initial appointment are more likely to show for that appointment. Requiring preliminary tasks of potential clients may help clinicians identify who is motivated for treatment.

Identifying obstacles to treatment

Other researchers focused on identifying some of the obstacles to keeping initial appointments and ways to overcome them. In one study, parents whose children had missed an initial evaluation at a child behavior management clinic gave the following reasons for missing appointments: health problems (theirs or their child's), lack of transportation, other responsibilities, or sudden crisis (Kolko, Parrish, & Wilson, 1985). The most frequently noted obstacle was lack of transportation (Kolko, Parrish, & Wilson, 1985).

Warzak, Parrish, and Handen (1987) helped parents problem-solve foreseeable obstacles that might hinder attendance at initial appointment. Potential patients at a child behavior management clinic were assigned to one of four treatment conditions to assess

the effect of various telephone intake procedures on initial appointment attendance. Condition one callers were asked for general sociodemographic information. Condition two callers were asked for the standard information of condition one and then told what to expect at the initial appointment. In condition three, callers were given problem-solving assistance by the scheduler. They were given suggestions for overcoming many possible obstacles to attendance at the first appointment. Condition four consisted of conditions two and three together. Problem-solving assistance, with or without program information, significantly increased the number of kept initial appointments (Warzak, Parrish, & Handen, 1987).

Kidd and Euphrat (1971) theorized contacting potential clients after missing a scheduled appointment would decrease no-show rates to a subsequently scheduled appointment. They thought that a brief telephone conversation would enhance problem-solving and serve as a motivator, increasing the likelihood that the client would keep his or her initial appointment. Individuals contacted by telephone after missing an appointment were not more likely to attend the rescheduled appointment. However, calling substance abusing clients who missed initial appointments in order to reschedule resulted in a 10% increase in show rate over initial show rate at another outpatient clinic (Gottheil, Sterling, & Weinstein, 1997).

Past research has identified a number of obstacles to keeping appointments. Clients often cite such things as a lack of transportation, sudden crises, or other unexpected problems. Assisting clients in finding the skills to cope with these situations can lower no-show rates. However, once clients miss an appointment, contacting them to reschedule is not often successful.

Appointment reminders

Methods for reminding clients of scheduled appointments have been studied for effect on show-rates. Kourany, Garber, and Tornusciolo (1990) compared the effect of various types of reminders on show rate at an outpatient child psychiatry clinic. Researchers compared an orientation letter, telephone prompt, combined orientation letter and telephone prompt, and no contact. They found that any type of contact had a better show rate for initial appointments than no contact at all.

Stasiewicz and Stalker (1999) found the opposite results when they compared four different groups at a substance abuse clinic. Group one was scheduled within 48 hours. Group two was scheduled more than 48 hours after referral, but given a reminder call 24 hours before scheduled appointment. Group three was scheduled more than 48 hours after referral, given a clinic brochure, and received an appointment reminder card in the mail 24 hours before the scheduled appointment. Group four received no intervention. Individuals whose intake was scheduled within 48 hours of referral were more likely to show. Appointment reminders made no difference when compared to the no contact group.

While these studies had conflicting results, the intervention in the study conducted by Kourany, Garber, and Tornusciolo (1990) was aimed at the parents of children who were potential patients at a psychiatry clinic. It is possible that these parents were more motivated to meet their children's needs than individuals seeking services for themselves. Further, those parents who received information in the mail were told what to expect at the intake process. These factors could have contributed to the success of the reminder letters in this study. Stasiewicz and Stalker (1999) studied individuals with substance

abuse issues. This population has been shown to be more likely to miss appointments than individuals seeking treatment for other reasons (Allen, 1988). The substance abuse group also did not receive information on what to expect during the intake process.

Campbell and Szilagyi (1994) thought that patient-specific reminder cards might be more effective in increasing show-rates than generic post card reminders at well-baby visits. The patient-specific cards explained the interventions the child would receive and described the benefits of immunizations and screening tests. The generic post-card had only the appointment time and date. There was no difference in show rate between the two groups.

Reminder calls the day before a scheduled intake at an outpatient substance abuse clinic only produced better show rates if the initial appointment was scheduled within one week of screening (Gariti et al., 1995).

Results have been conflicting in the study of the effect of appointment reminder methods on no-show rates. Stasiewicz and Stalker (1999) found that reminders had no significant effect on no-show rates. Instead, wait-time was found to be the significant variable. Similarly, Gariti et al. (1995) found that reminders only reduced no-show rates when waiting times were shorter.

Client-therapist relationship

It has been theorized that contact with the therapist prior to scheduling an intake may decrease no-show rates. A few researchers have tested this hypothesis. In one such study, Golberg, Muller, Ries, Psaty, and Ruch (1991) introduced potential patients to a drug and alcohol counselor prior to scheduling an intake appointment. The meeting had no impact on show-rate. Further, when intake staff directly asked clients to keep intake

appointments out of respect for their counselor or suggested that the client's problem would be of interest to the counselor, show rate did not increase for an Employee Assistance Program (Shih, 1997).

Summary

Past research on show-rates has focused on who misses appointments by studying various demographics. Younger individuals and those with substance abuse issues are most likely to miss appointments. While examining these variables, the issue of wait-time and its effect on show-rates has repeatedly come up. Studies on wait-time alone have consistently found that the longer the wait-time, the higher the no-show rate.

Methods for effectively lowering no-show rates have also been studied. Orientation programs to clinic services have shown some promising results, as has requiring clients to fill out forms or questionnaires prior to scheduling an intake appointment. Providing problem-solving techniques to potential clients in order to facilitate attendance to appointments has also decreased no-show rates while appointment reminders have had inconsistent success. Finally, contact with the therapist to be seen prior to scheduling the initial appointment was found to have no effect on show-rate.

Present Study

Researchers have tested whether client-therapist contact prior to initial appointment would decrease no-show rates. Goldberg, Mullen, Ries, Psaty, and Ruch (1991) found that client therapist contact prior to initial appointment had no effect on appointment compliance. Similarly, Shih (1997) found that attempting to obligate a client to the therapist had no effect on show-rate. However, in these studies, potential clients did not refer themselves to the agency. Participants in the current study will be

required to seek drug and alcohol counseling independently for legal reasons. The present study will attempt to determine if individuals who make in-person referrals at their own initiation will be more likely to keep their initial appointment with a substance abuse counselor than will individuals who make the referral over the telephone.

Like a study by MacLean, Greenough, Jorgenson, and Couldwell (1989), this hypothesis is based on cognitive dissonance theory. Once potential clients come into the agency and meet with a substance abuse counselor, who will fill out the referral form and give an intake appointment, they will be compelled to keep that appointment in order to avoid an uncomfortable feeling of dissonance (Deaux & Wrightsman, 1984).

Individuals with substance abuse issues have been shown to have lower no-show rates than rates than individuals seeking mental health services for other reasons (Allen, 1988). Because orientation meetings have been effective in reducing no-show rates for intake appointments, it is useful to study the effect of an in-person referral process on no-show rate.

Wait-time is also an important variable. In the present study, wait-time for the two groups will be no more than 2 weeks. Individuals who self-refer by telephone will have a longer wait period because the referral process requires more steps than the in-person referral process. However, the average wait-time for each group will be no more than one week. Benjamin-Bauman, Reiss, and Bailey (1984) have found that wait-time need not be less than one week in order to have a positive effect on show rate.

Finally, all participants in the present study will be scheduled for an intake with the investigator and none will receive an appointment reminder.

Chapter 3

METHOD

Participants

Participants were adults who had been ordered to undergo a substance abuse evaluation at an outpatient mental health clinic by the legal system. All participants were court ordered to receive an evaluation as a condition of probation or parole for drug-related charges, or for a drunk driving charge. All participants had a history of drug or alcohol abuse. Forty-two subjects met the criteria for this study. The experimental group consisted of 20 of the 21 (18 male 2 female; mean age: 34.04) walk-in self-referrals who came into the clinic requesting a court-ordered substance abuse evaluation between July and December of 2001. Because one participant had to wait 20 days until the initial appointment (10 days longer than anyone else in the group), this participant's data was eliminated from further analyses. The control group consisted of 20 telephone self-referrals (18 male 2 female; mean age 35.67). These were the first 21 telephoned-in self-referral forms, received by the investigator, of individuals seeking court-ordered substance abuse evaluations between the months of July and December of 2001. Similar to the experimental group, the data from 1 subject was eliminated in order to control for wait-time. This subject had a wait-time of 29 days, 14 more than the longest wait-time in the control group.

Procedure

A list of walk-in referrals was kept by the investigator, a substance abuse counselor at the outpatient mental health clinic where the study was conducted, between the months of July and December 2001. During that time the clinic allowed individuals who were court ordered to receive substance abuse services to refer themselves in person each Wednesday between 9 a.m. and 11 a.m. Individuals could call in a self-referral any day of the week. This information was made known to the various referral offices, such as county probation, the Division of Youth and Family Services, the Intoxicated Drivers Resource Center, and state parole to which the counselors report to on a monthly basis about the progress of clients also involved with those services. These agencies often informed clients of the referral process when reminding them of their obligation to seek a substance abuse evaluation.

Subjects who walked-in for a referral were greeted by the counselor and escorted to a private office where referral information could be obtained. Each was asked for the following information: name, address, age, date of birth, social security number, telephone number, reason for referral, type of service requested, and whether or not evaluation was court ordered. An intake appointment was scheduled at that time if the subject was able to do so. All participants were able to schedule an intake appointment at the time of the referral. The counselor then briefly explained the intake procedure. Each was told who to ask for at the front desk upon arrival for the appointment, approximately how long the evaluation would take, and that type of treatment would depend on the results of the evaluation.

This list of walk-in referrals was compared to records of the first 21 telephone self-referrals received by the investigator during the same time period that were also court ordered for a substance abuse evaluation. Telephone referrals could be taken by any clinician in the agency. Similar to the referral procedure for walk-in referrals, individuals making telephone referrals were asked for name, address, age, date of birth, social security number, telephone number, reason for referral, type of service requested, and whether or not the evaluation was court-ordered. Telephone referrals taken by clinicians who would not be providing the requested services were submitted to the unit director of the department from which services were being requested, and then given to the clinician who would provide the services. That clinician then called the client to schedule the appointment. Because of this 3-step process, individuals who refer by telephone may have a longer wait-time than those who refer in-person. Once the appropriate counselor received the referral, the potential client was contacted by telephone and scheduled for an intake appointment. At that time they are briefly told what to expect at the intake process. They are told who to ask for at the front desk upon arrival for the appointment, approximately how long the evaluation would take, and that type of treatment would depend on the results of the evaluation.

For the walk-in group, the investigator recorded attendance at the initial appointment. Attendance for the control group was taken from written and computer records available to any clinical staff at the mental health clinic. The investigator saw all participants for their initial appointment.

Chapter 4

RESULTS

Participants

Clients who made walk-in referrals between July and December 2001 (n=20) were compared to those clients who telephoned-in referrals (n=20) during the same period. The walk-in group consisted of 18 (90%) males and 2 (10%) females with a mean age 34.04 (SD = 7.5). Of these 15 (75%) kept the initial appointment and 5 (25%) did not. The telephone-in group consisted of 18 (90%) males and 2 (10%) females with a mean age of 35.67 (SD = 8.6). Of these 13 (65%) kept the initial appointment and 7 (35%) did not.

Frequency of no-shows

A chi-square analysis was conducted to test the hypothesis that the frequency of no-shows would be greater in the telephone-in group than in the walk-in group. The clients in the walk-in group were not more likely to show up for the initial appointment than clients in the telephone-in group ($\chi^2 = .476$, $p = .490$).

Show-rate by condition and age

A logistic regression was conducted in order to assess whether show-rate could be predicted from condition and age. The regression equation was not statistically significant. Show-rate was not significantly correlated with condition ($r = .109$, $p = .503$).

Show-rate and age were not significantly correlated ($r = .071$, $p = .663$). An independent samples t-test revealed that show-rate did not vary by age ($t(38) = -.606$, $p = .548$). There was no significant difference in age between the two groups ($t(38) = .141$, $p = .889$).

Wait-time

The mean wait-time for the walk-in group was 3.75 days ($SD = 2.67$). For the telephone-in group, the mean wait-time was 6.8 days ($SD = 4.06$). An independent samples t-test revealed that wait-time was significantly different between the walk-in referral group and the telephone-in referral group ($t(38) = -2.81$, $p = .008$). Those participants who telephoned in waited significantly longer for an appointment than those who made their initial appointment in person.

Chapter 5

DISCUSSION

This study was designed to determine if individuals who made in-person referrals would be more likely to keep their initial appointment with a drug and alcohol counselor than would individuals who referred themselves over the telephone. The results indicated no significant difference in show-rate between the two groups.

The two groups were similar in composition. Each group contained the same number of men and women and there was no significant difference in age between the two groups. Age and show-rate were not correlated; suggesting that whether or not a client would show for the initial appointment could not be predicted by his or her age. However, there was a significant difference in wait-time between the two groups. Benjamin-Bauman, Reiss, and Bailey (1984) had suggested that wait-time need not be less than one week in order to decrease no-show rate. The lack of a significant difference in show-rate between the groups supports this. Although the mean wait-time for the telephone-in group was almost twice as long as the walk-in group, the mean wait-time for both groups remained under one week.

The referral process for individuals who walked-in to the agency in which the study was conducted facilitated scheduling because the counselor could schedule the initial appointment on the spot. For the telephone-in group, the referral went through a number of channels before reaching the appropriate clinician. Interestingly, although the

telephone-in group had a longer wait-time; they were not more likely to miss the initial appointment as was hypothesized.

The results support prior research on client-therapist contact prior to the initial appointment. It appears that potential clients need not meet a clinician in-person prior to scheduling an appointment in order to decrease no-show rates. However, research in this area is limited and the sample size was very small. In the present study, the investigator had theorized that individuals who met the clinician in person would feel that they had already begun the process of treatment and had made a preliminary commitment to the counselor. According to cognitive dissonance theory, these individuals would be more likely to follow through in order to avoid conflicting actions and beliefs (Deaux & Wrightsman, 1984). The results of the study did not support this theory.

There are a number of additional limitations to the present study. The walk-in referral process was a new procedure and was only in place for six months. Conducting the study after the referral process had been in place for a longer period of time may have yielded different results. Further, all of the participants, both in the walk-in and the telephone-in groups, were court ordered to seek a substance abuse evaluation. This variable alone could have been the reason for similar show-rates between the groups. Perhaps testing the same hypothesis using individuals who were not seeking treatment for legal reasons would also yield different results. Finally, the lack of a computer program that would search referrals by source resulted in the need to sort through referrals by hand in order to collect data for the telephone-in group. It is possible that some qualified referrals could have been missed due to human error.

Past research in the area of self-referrals has been conflicting. Carpenter, Morrow, Del Guado, and Ritzler (1981) found that patients referred by a clinic or physician were more likely to keep their initial appointment than individuals who referred themselves. However, according to Miller (1985) individuals who self-refer are more likely to comply with treatment than those referred by others, unless there is a contingency for seeking treatment. To test if in-person referrals are worth clinicians' time, future studies would need to isolate that variable.

The present study focused on individuals with substance abuse issues, so it is difficult to generalize to other populations. However, the results support prior research and raise some new questions for future study. For example, would individuals with substance abuse issues who met the counselor keep the first appointment if treatment were not court-ordered? Also, would individuals who refer themselves for substance abuse treatment have a higher show-rate than individuals who are referred by other sources? Further research may help clinicians identify those potential clients who are less likely to attend scheduled sessions so that interventions can be planned accordingly.

REFERENCES

- Allan, A. T. (1988). No-shows at a community mental health clinic: a pilot study. *The International Journal of Social Psychiatry*, 34 (1), 40-46.
- Benjamin-Bauman, J., Reiss, M. L., & Bailey, J. S. (1984). Increasing appointment keeping by reducing the call-appointment interval. *Journal of Applied Behavioral Analysis*, 17 (3), 299-301.
- Campbell, B., Staley, D., & Matas, M. (1991). Who misses appointments? An empirical analysis. *Canadian Journal of Psychiatry*, 36 (3), 223-225.
- Campbell, J. R., & Szilagyi, P. G. (1994). Patient-specific reminder letters and pediatric well-child-care show rates. *Clinical Pediatrics*, 33 (5), 268-271.
- Carpenter, P. J., Morrow, G. R., Del Guadio, A. C., & Ritzler, B.A. (1981). Who keeps the first out patient appointment? *American Journal of Psychiatry*, 138 (1), 102-105.
- Deane, F. P. (1991). Improving attendance at intake in children's out-patient services of a community mental health center. *Child: Care, Health, and Development*, 17, 115-121.
- Deaux, K., & Wrightsman, L. S. (1984). *Social Psychology in the 80's*. (4th ed.). Monterey, CA: Brooks/Cole.
- Dubinsky, P. (1986). Predictors of appointment non-compliance in community mental health patients. *Community Mental Health Journal*, 22 (2), 142-146.

- Festinger, D. S., Lamb, R. J., Kountz, M. R., Kirby, K. C., & Marlowe, D. (1995). Pretreatment dropout as a function of treatment delay and client variables. *Addictive Behaviors*, 20 (1), 111-115.
- Folkins, C., Hersch, P., & Dahlen, D. (1980). Waiting time and no-show rate in a community health center. *American Journal of Community Psychology*, 8 (1), 121-123.
- Gariti, P., Alterman, A. I., Holub-Beyer, E., Volpicelli, J. R., Prentice, N., & O'Brien, C. P. (1995). Effects of an appointment reminder call on patient show rates. *Journal of Substance Abuse Treatment*, 12 (3), 207-212.
- Goldberg, H. I., Mullen, M., Reiss, R. K., Psaty, B. M., & Ruch, B. P. (1991). Alcohol counseling in a general medicine clinic. *Medical Care*, 29 (7), 49-56.
- Gottheil, E., Sterling, R. C., & Weinstein, S. P. (1997). Outreach engagement efforts: are they worth the effort. *American Journal of Drug & Alcohol Abuse*, 23 (1), 61-66.
- Kidd, A. H., & Euphrat, J. L. (1971). Why prospective outpatients fail to make or keep appointments. *Journal of Clinical Psychiatry*, 27 (3), 394-395.
- Kolko, A. H., Parrish, J. M., Wilson, F. E. (1985). Obstacles to appointment keeping in a child behavior management clinic. *Child & Family Behavior Therapy*, 7 (1), 9-15.
- Kourany, R. F., Garber, J., & Tornusciolo, G. (1990). Improving first appointment attendance rates in child psychiatry outpatient clinics. *Journal of the American Academy of Child & Adolescent Psychiatry*, 29 (4), 657-660.
- MacLean, L., Greenough, T., Jorgenson, V., Couldwell, M. (1989). Getting through the front door: improving initial appointment attendance at a mental-health clinic. *Canadian Journal of Community Mental Health*, 8 (1), 123-133.

- Miller, W. R. (1985). Motivation for treatment: a review with special emphasis on alcoholism. *Psychological Bulletin*, 98 (1), 84-107.
- Miyake, S. M., Chemtob, C. M., & Torigoe, R. Y. (1985). The effect of decreasing delays in appointments on patients' failure to keep appointments. *International Journal of Partial Hospitalization*, 3 (2), 131-135.
- Neinstein, L. S. (1982). Lowering broken appointment rates at a teenage health center. *Journal of Adolescent Health Care*, 3, 110-113.
- Olkin, R., & Lemle, R. (1984). Increasing attendance in an outpatient alcoholism clinic: a comparison of two intake procedures. *Journal of Studies on Alcohol*, 45 (5), 465-468.
- Rees, D. W., Beech, H. R., & Hore, B. D. (1984). Some factors associated with compliance in the treatment of alcoholism. *Alcohol & Alcoholism*, 19 (4), 303-307.
- Shih, J. S. (1997). Interventions to reduce missed telephone appointments at an employee assistance program. *Employee Assistance Quarterly*, 13 (2), 55-68.
- Stasiewicz, P., & Stalker, R. (1999). A comparison of three "interventions" on pretreatment dropout rates in an outpatient substance abuse clinic. *Addictive Behaviors*, 24 (4), 579-582.
- Warzak, W. J., Parrish, J. M., & Handen, B. L. (1987). Effects of telephone intake procedures on initial appointment keeping in a child behavior management clinic. *The Journal of Compliance in Health Care*, 2 (2), 143-154.
- Wenning, K. (1995). Parent orientation meetings to improve attendance and access at a child psychiatric clinic. *Psychiatric Services*, 46 (8), 831-833.

Westra, H. A., Boardman, C., & Moran-Tynski, S. (2000). Re: the impact of providing pre-assessment information on no-show rates. *Canadian Journal of Psychiatry*, 45 (6), 572.