

A STUDY OF MISSED APPOINTMENTS IN A FLORIDA
PUBLIC HEALTH DEPARTMENT

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Abstract

This article presents the results of a telephone survey of 160 people missing prenatal and pediatric health department appointments. Failure to keep appointments potentially affects patients' health, disrupts the health care delivery system, and contributes to the poor utilization of resources. Further understanding of the reasons patients are unable to keep appointments can be useful in developing policy to address unmet patient needs and the effective delivery of health care services. Survey results will be presented and strategies for reducing missed appointments discussed. In particular, these data show a significant association between marital status, education level, and employment status and the inability to get a ride to the clinic, and between employment status and missing appointments because of a poorly scheduled appointment time. Findings indicate that special efforts should be made to help single, less than high school educated, non-working women and their children overcome barriers to keeping appointments.

Key words: missed appointments, barriers to care, prenatal appointments, pediatric appointments

Introduction

Access to health care is jeopardized when patients miss scheduled appointments. Consequences of missed appointments include the delay of needed care, disruption of the health care delivery system for other patients, interference in the provider-patient relationship and lost chances for patient and family health education (Pesata, Pallija, and Webb 1999, Smoller, McLean, Otto, and Pollack 1998). Ultimately, missed appointments result in the inefficient use of limited health care resources. Further understanding of the reasons patients are unable to keep appointments can be useful in developing policy to address unmet patient needs and the effective delivery of health care services.

Literature Review

Margolis, Carey, Lannon, Earp, and Leininger (1995) devised a four-component model of access to personal health services, consisting of barriers, use of services, mediators, and outcomes. According to the model, barriers may impede the use of services (like appointments), and such services may be limited by mediators (such as quality of providers and patient adherence) that ultimately affect health outcomes. Therefore, various barriers may block the use of services, like scheduled appointments. A missed appointment is likely to be affected by three kinds of barriers: personal, structural/organizational, and financial.

Personal barriers consist of factors like attitudes toward health care, education level, and various demographic characteristics. Barron (1980) examined personal characteristics that might contribute to unkept appointments in inner city and community health centers, and university medical centers and found the patients most likely to miss

appointments were young, from a low socioeconomic group, from a large, unstable family background, and had previously broken appointments. Smith and Yawn (1994) analyzed computer scheduling data and chart audits of 2,500 patients and found the rate of appointment keeping higher for patients who were older, Asian or Caucasian, had private or managed care insurance, and who had a longer distance to travel to the clinic. Mirotznik, Ginzler, Zagon, and Baptiste (1998) found that among 153 Systemic Lupus Erythematosus (SLE) patients surveyed, greater general health motivation, and greater perceived severity of SLE indicated a greater intent to keep appointments and resulted in more kept appointments.

Structural barriers such as transportation, clinic hours, and the way providers organize their services can also impede access to appointments. Blankson, Goldenberg, and Keith (1994) interviewed women within 24 hours of missing an appointment with a high-risk obstetric clinic. The four main reasons for missing appointments given among them: difficulties with transportation, unsuitable appointment time, forgot appointment was scheduled, and being sick at the time of the appointment. Campbell, Chez, Queen, Barcel, and Patron (2000) also interviewed women with missed appointments from a high-risk obstetrics clinic and found similar reasons for missing appointments: lack of transportation, scheduling problems, overslept or forgot, presence of a sick child or relative, and lack of child care. Freed, Ellen, Irwin, and Millstein (1998) conducted a survey to determine whether or not satisfaction with the health care provider led to a greater likelihood of keeping appointments among adolescents. They found perceptions about the provider's style of behavior a strong predictor of satisfaction with the health care visit among the 124 patients surveyed (who attended a university-based general

adolescent medical clinic). Satisfaction with previous healthcare visits was found to be associated with the intention to keep scheduled follow-up appointments. However, the presence of the intention to keep an appointment did not result in the greater likelihood of actually keeping the appointment. Pesata, Pallija, and Webb (1999) interviewed 101 families who had a history of missed appointments and identified transportation problems, wait times, and not knowing the reason for the appointment as barriers to keeping appointments.

Various financial barriers can also affect a patient's ability to keep appointments. Kiefe and Harrison (1993) conducted a study of follow-up appointment keeping among patients discharged from a hospital general medicine inpatient service (75 percent of the patients had no public or private medical insurance). Among the 60 percent of patients who kept their appointments the following factors were associated with appointment keeping: no copayment requirement, a single follow-up appointment, apartment dwelling, and non-primary care clinic appointment.

Research Question

The purpose of this study was to discover patients' reasons for missing pediatric or obstetrical appointments in a Florida public health department. A missed appointment was defined as an appointment for which the client did not show up, call in to cancel or reschedule.

Methodology

Setting

The county health department in this study is located in the state of Florida and serves a metropolitan and rural area population of approximately 940,000. The health

department is the main Medicaid provider in the area and also serves those without insurance on a sliding fee scale basis. The missed appointment rate for the health department ranges from 23-48 percent depending on clinic site.

Sample

Surveyors attempted to contact 841 prenatal and caretakers of pediatric clients who missed an appointment during February 1999 to conduct a telephone survey. A total of 160 respondents completed the questionnaire, 91 prenatal and 72 pediatric (some respondents answered for both kinds of missed appointments). Respondents ranged in age from 13 to 67, with a median age of 27.7. The racial and ethnic make-up of the respondent pool was as follows: 29 percent white, 31 percent black, 33 percent Hispanic, and 6 percent other. About half of those surveyed (42.7 percent) had not completed high school or its equivalent. Forty-three percent of the respondents were married or living with a partner, 40 percent had never married.

Instrument

A questionnaire was developed by the researchers to collect data. Subjects addressed in the questionnaire included satisfaction with overall past clinic experience, quality of health care, and attitudes toward going to the doctor whether feeling sick or well. A list of 19 items found to be reasons for missed appointments in previous studies (Barron 1980, Kiefe and Harrison 1993, Mirotznik, Ginzler, Zagon, and Baptiste 1998, and Pesata, Pallija, and Webb 1999) were identified and administered to respondents who were asked to select yes or no based on their most recently missed appointment. Demographic information, and information regarding health insurance coverage, HMO membership, and health clinic used most often was also collected. Research faculty and

health department clinicians reviewed the questionnaire items for content validity, completeness, and relevance. The initial version of the questionnaire was field tested for one week, in part to revise it into a final format, and in part to help train the interviewers. The questionnaire took about 10 minutes to complete. Surveyors field-tested the questionnaire, 1-12 April 1999, interviewing potential respondents; however, interviews completed during the field test were not calculated in the final data analysis.

Procedure

Four graduate students were hired and trained to administer the questionnaire. Each surveyor attended a two-hour training orientation session, and an additional two hours in one-on-one training with the lead researcher, practicing administering the questionnaire and inputting answers into the computer database. Surveyors gained additional practice during the field-testing of the questionnaire.

Among the attempts to contact the initial 841 potential respondents, 209 (25 percent of available numbers) were disconnected or no longer in service. This left 632 potential respondents to contact, and calls were attempted a second time with these numbers. Of those available 632 numbers, 160 completed an interview for a response rate of 25 percent. Seventy-five of the potential 632 respondents (approximately 12 percent) could not complete the interview because they were non-English speakers. Seven percent (47) of the sample refused outright to conduct the interview; 55 percent of the call contacts resulted in unanswered phones, answering machines, the respondent no longer living at that number, or the respondent not home at the time of the call. Calls were made from university offices, 1p.m. -9p.m., Monday through Friday, 12 April-6 May 1999.

Analysis

Data were analyzed using quantitative and qualitative methods. Quantitative analyses included descriptive statistics and the computation of odds ratios stratified on demographic factors. Qualitative analysis consisted of an interpretive content analysis of the responses to the open-ended survey questions.

Quantitative Analysis

Fully 75 percent of those responding expressed satisfaction (answering either good, very good, or excellent) with the health care they received from the health department clinics. There was no significant difference in satisfaction levels based on insurance status or HMO membership. Among all respondents who said they missed either a prenatal or pediatric appointment at a health department clinic in February 1999, the top three most frequently given reasons were:

1. Forgot an appointment was scheduled
2. Did not have a ride
3. Appointment was scheduled at a bad time (tie)

The third category tied for different reasons depending on the type of appointment missed. For prenatal appointments, the other third place reason was it is hard to get to the clinic because the respondent lived far away from it. For pediatric missed appointments the third place reason was when it was time for the appointment the child wasn't sick anymore. Table 1 gives the frequencies for each reason by appointment type.

(Table 1 about here)

Respondents were also asked to rank in order of importance the reasons they missed their most recent appointment. The most important reasons given for missing appointments by *prenatal clients* (n=91) were:

1. Didn't have a ride
2. Forgot appointment was scheduled
3. Could not take time off work

The most important reasons given for missing *pediatric* appointments (n=72) were:

1. Didn't have a ride
2. When it was time for the appointment the child wasn't sick anymore
3. Forgot an appointment was scheduled

An examination of the impact of demographic factors on the reasons for missing appointments was conducted. Each of the top three reasons for missing appointments among prenatal and pediatric clients was broken down by the following demographic factors: age, race, marital status, education, and employment status; sex was not examined since virtually all respondents were female. Age and race played a negligible role in the variation of responses for missing appointments. Marital status, attained education level, and employment status, however, did seem to affect variation of responses in reasons for missing appointments.

Marital status appears to be associated with transportation availability for patients who miss both prenatal and pediatric appointments. These data demonstrate that single women are four times more likely to report being unable to get a ride to the clinic as a

barrier to keeping an appointment as compared to their married counterparts [Odds Ratio= 4.12; p-value 0.002].

Similarly, level of education appears to affect access to transportation for patients who miss prenatal appointments. These data demonstrate that women who did not attain a high school diploma or its equivalent are almost three times more likely to report being unable to get a ride to the clinic as a barrier to keeping a prenatal appointment as compared to women with at least a high school diploma or equivalent [odds ratio=2.81; p-value 0.02].

Employment status also appears to be linked with transportation problems in missing appointments. Among women missing *prenatal* appointments, those who are not working (looking for work, unable to work, or unemployed) are five and a half times more likely than employed women to report being unable to get a ride to the clinic as a barrier to keeping an appointment [odds ratio=5.58; p-value 0.0003]. Women not working are over ten times more likely than their employed counterparts to report being unable to get a ride to the clinic as a barrier to getting their children in for *pediatric* appointments [odds ratio=10.37; p-value 0.0002].

Unemployment status of the mother or female caretaker of children appears to be associated with missing pediatric appointments due to a poorly scheduled appointment time. Women who are not working are over four and a half times more likely to report that the appointment was scheduled at a bad time as a barrier to getting their children to the clinic for appointments than women who are employed [odds ratio=4.64; p-value 0.01].

Missing an appointment due to forgetting one was scheduled or not being able to take time from work does not appear to be affected by respondent marital status, education level, employment status, or other demographic factors.

Qualitative Analysis

Within the missed appointments questionnaire were a series of open-ended opportunities for respondents to provide reasons for missing appointments not given as a choice on the 19-item possible reasons list. Respondents were also asked “Is there anything else you can think of that would make it easier for you or your family to get to the clinic when you have an appointment scheduled?” One hundred-seven of the 160 respondents provided answers to one or more of these open-ended queries.

In general, the respondents’ answers fall into one of three general barrier categories outlined by Margolis et al (1995): personal, organizational, and financial impediments to keeping appointments. Many individuals reiterated the findings from the quantitative analysis, in particular, requesting assistance with personal transportation to the clinic. Some respondents noted that bus routes do not go near their health clinic, making even the availability of the bus unhelpful for getting to needed health care. A couple respondents reported being unable to get a response from the Medicaid transportation telephone line.

Organizational impediments to keeping appointments with the clinic included the unavailability of the clinic, the poor location of clinics, waiting at the clinic, and lapses in organizational rules and procedures (on the part of either clinic staff or the client). Respondents reported using the emergency room as an alternative to waiting for service or to scheduling an appointment at the clinic. Many respondents also reported problems

with trying to schedule appointments, whether it was waiting a number of days or weeks to get an appointment, problems trying to change an appointment, or even reaching the clinic by phone.

Waiting at the clinic was cited by many of the respondents as an impediment to keeping appointments. This was particularly the case for those who said they were working or going to school. Individuals noted arriving at the clinic early, only to wait two or more hours to see a provider, or waiting over an hour even with a scheduled appointment. Others mentioned the difficulty of waiting while trying to deal with a sick child; for many of these individuals, the emergency room was the most expedient alternative.

Respondents also related missing appointments due to clinic rules and procedures. A few respondents mentioned being stuck in traffic or otherwise late to an appointment and then being denied their appointment or told to reschedule. A grandmother told of a clinic refusing to treat her three grandchildren because she did not have a notarized letter from the children's mother allowing her to bring them to the clinic. Another respondent, who specifically took off time from work, arrived at the clinic only to find that her appointment was cancelled because the doctor could not make it to the clinic that day.

Financial issues seem to play a large role in preventing individuals from keeping appointments. A couple of the respondents noted that their HMO health plan was no longer being accepted by the clinics, so they were unable to keep their appointment. A few individuals noted problems with managed care companies changing eligible providers forcing them to go from one clinic location to another. One person noted their HMO assigned them to one clinic while their children were assigned to another. Even

though it did not come up as one of the top reasons for missing appointments, respondents noted in the open-ended responses that they had trouble paying for health care. Many individuals noted that they or their children had no insurance and they simply could not afford to pay for their scheduled appointment.

Discussion

Clearly, remembering when an appointment is scheduled, and then, trying to find transportation to get there are important factors contributing to missed appointment rates in this and other studies (Pesata, Pallija, and Webb 1999, and Campbell, Chez, Queen, Barcelo, and Patron 2000). Finding transportation to keep appointments is a major problem for single, less than high school educated, non-working respondents and their children. Each of these factors is an indicator of lower socioeconomic status, and supports that fewer monetary resources have a detrimental effect on a person's ability to get a ride.

Not working appears to create a hardship for getting transportation to any type of appointment, but especially for pediatric appointments. It is not immediately clear why not working should prevent finding transportation to the clinic, making it twice as difficult to keep pediatric appointments as it is to keep prenatal appointments. One hypothesis that warrants further exploration is that women bringing in children for pediatric appointments might already have more than one child to contend with, so they must balance the need and effort to take a child to the clinic with caring for the other children. Alternately, these women may lack motivation for and understanding of the benefits of well-child health care, so taking children to the clinic for such appointments may be less of a priority. Also, women scheduling prenatal appointments get involved in

a very specific calendar of care that allows for advance planning of visits as opposed to rearranging a schedule to bring in a sick child.

The lack of a ride to the clinic is both a personal and structural problem. Individuals lacking adequate means to get to the clinic experience the transportation problem at a very personal, isolated level. Such personal level problems are further exacerbated structurally by less than accessible bus transport and limited Medicaid-funded transportation. Currently, the health department studied does not provide any written materials about available transportation options to their patients. According to the Medicaid transportation telephone line in the county, an individual who lives on a bus route is not eligible for the transportation service, but can receive a 30-day bus pass to cover bus fare. However, the Medicaid transport service schedules rides up to 30 days in advance, and those seeking bus passes must call at least 5 working days before they will need it, exacerbating transportation problems for those with emergency situations. While Medicaid transportation service and bus passes are available to health clinic clients, the level of response from survey respondents needing transport suggests there is not enough information about its availability.

Interestingly, women not working report difficulty with keeping appointments for their children because those appointments are scheduled at a bad time. While this result seems counter-intuitive (one would expect, for example, that working women would have greater difficulty scheduling appointments around work duties), such individuals might have more demands on their time in the form of child and elder care duties, school, and even looking for work. In the state of Florida, people who previously qualified for welfare cash assistance must actively seek work or be involved in job training activities

to receive this assistance. Individuals who are working might have employer-sanctioned time to visit the doctor as part of their benefits, making it easier for them to keep appointments. Factors not considered in this study, such as depression or low self-esteem among these women might also confound this result, and future examination of them is warranted. But again, it is unlikely that such confounding factors explain all of the association. Making it easier to reschedule appointments in a timely fashion is one strategy that might reduce the problem of poorly scheduled appointments for women and children.

The long wait to schedule an appointment, difficulties in changing appointments, and the length of time waiting at the clinic for a scheduled appointment suggest that the system for scheduling appointments needs to be made more flexible. A system that responds to client needs and schedules should be one that better facilitates keeping appointments. Extending clinic hours (to accommodate those who go to school, work, or are looking for work), leaving open more slots for walk-ins (to help reduce trips to the emergency room), and not penalizing late arrivers should be cornerstones of that system. Adaptability in the system is especially important for pediatric appointments, since respondents indicated that one of the top three reasons they missed these appointments was because the child was no longer sick. While missing an appointment because the child got well on his or her own might be considered a positive thing, one has to wonder how the length of time waiting to schedule or be seen for an appointment affects keeping well-child appointments.

Forgetting an appointment had been scheduled was cited as a top reason for missing both prenatal and pediatric appointments in spite of current health department

policy to phone clients with scheduled appointments the day before to remind them of the appointment. The day-to-day duties of the clinic staff, however, might make reminding patients of appointments a task that gets put aside if the clinic is too busy or short-staffed. Adoption of a reminder and/or recall (R/R) system, found to be effective in helping people keep appointments at an immunization clinic (*Morbidity and Mortality Weekly Report*, 1998), could be used in a public health department setting as well. An R/R system consists of a phone or mail reminder sent out about past missed appointments, and another reminder about the upcoming appointment.

The financial difficulties experienced and associated with keeping appointments are complex. Current health department policy is to not turn away anyone needing medical care, even if they are unable to pay for it. Sliding scales are already in place for those that are able to pay something. One respondent suggested the clinic find a way to bill her or take her payment out of her paycheck; she noted, “especially with cutting welfare and making us work [paying for appointments] is hard to do, and the kids do get sick.” A part of the problem for some respondents in this study is HMOs that switch available providers or that are no longer accepted by the clinics. Appointing a dedicated staff person or hiring an outside contractor to deal with patient financial and insurance matters would be a first step in addressing this multifaceted problem.

Implications

Findings of this study imply that policies related to customer service are especially significant in dealing with missed appointments. Subjects expressed satisfaction with the health care received but implied dissatisfaction with extended waiting periods to see the providers by failure to keep appointments. Long waiting times

can be addressed through flexible scheduling and appointment reminder policies. Cancelled clinics and lack of knowledge of clinic policies such as the need for notarized statements can be addressed through specific clinic policies dealing with patient education and satisfaction. Individual HMO and Medicaid policies for HMO's should be examined in relation to communication and timing of notification of enrollees of changes in eligible providers and of cancellation of contracts to avoid interruptions of access to care.

Among personal level obstacles, the lack of paid work outside the home placed women and mothers/caretakers of children in this study at increased risk for missing appointments. Health care providers and clinic staff possibly assume that this subset of clients are able to attend the clinic at any time when, indeed, they may have the greatest need for assistance in accessing care. Further study of this subpopulation, with emphasis on factors that may exacerbate barriers to care such as mental health and lack of understanding of well-child care is warranted. Policies that target health education efforts, especially regarding the preventive benefit of well-child visits for children, and case management that focuses on health promotion for women might begin to tackle this subpopulation's disparity in keeping appointments.

Some of the structural barriers to keeping appointments cited by unemployed women, particularly transportation, can be addressed by increasing client's awareness of available options. Consistent and comprehensive training of clinic staff about available Medicaid transport, and access to printed brochures are two easily implemented policy ideas. A question that begs additional study, however, is whether client awareness is a marketing problem, an informational problem or both. It may be that the needs of the

low-income population are not met simply by providing information. Better effort to understand how this group uses health promotion materials is an avenue worth exploring.

Reducing financial barriers will go a long way toward allowing low-income women and their children to prioritize and keep appointments. The results of this study support the need to expand the child health insurance program to cover more children, and perhaps low-income adults who cannot qualify for other insurance.

The factors behind missed appointments are manifold. Low-income women and mothers/caretakers of low-income children clearly encountered numerous personal, structural, and financial obstacles to keeping appointments and accessing needed health care. A thorough attempt to address these barriers and related policies that contribute to individuals missing scheduled appointments can be the starting point of a plan to improve the effective delivery of health care services.

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Table 1.

Most Frequently Given Reasons for Missing Appointments, Prenatal and Pediatric

Reason	Prenatal	Pediatric	Total
Forgot scheduled appointment	41	22	63
Did not have a ride	37	19	56
Appointment scheduled at a bad time	22	16	38
Live too far away	22	x	22
Child wasn't sick anymore	x	16	16