Patient Waiting Times In A Nurse Managed Clinic

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Citation

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Abstract

This study evaluates the waiting times experienced by patients in a primary care nurse managed clinic in a large southern metropolitan area over a two week period of time in October and two week period in December of 1995. The waiting times include: waiting room, examination room, time spent with the nurse practitioner, and total elapsed time in clinic. Subjects included all patients who had scheduled appointments with the nurse practitioners during the study period. The patient groups served by this primary care clinic are adults who are students or employees of a university and private patients who are members of managed care organizations.The mean time interval from arrival in clinic to being placed in an examination room was 13.75 minutes. The nurse practitioners spent an average of 22.8 minutes with each patient and the patients were in and out of clinic in 49.05 minutes.This is the first study to document waiting times specifically in a nurse managed clinic.It is significant in that it documents that a nurse managed clinic waiting times and provider care times are dramatically better than national norms for clinics other than those managed by nurse practitioners.

INTRODUCTION

The amount of time a patient waits to be seen is one factor which affects utilization of health care services.1,2 Patients perceive long waiting times as a barrier to actually obtaining services. Moreover, dissatisfaction with care has been linked to long waiting times.3

In a competitive managed care marketplace, patient waiting times play an increasingly important role in a clinic's ability to attract new business as it is difficult to sell services if individuals are dissatisfied with waiting times. Thus, clinics which negotiate contracts and depend on contracts as part of their business must be sensitive to the amount of time patients wait to be seen. Additionally, wait times become a factor in retaining current users of the service. Patients who are satisfied with services obtained are certainly an excellent source of referral.

Although waiting times have been investigated related to emergency rooms, outpatient departments, large medical clinics, and physician offices, little information is available about the amount of time a patient waits to be seen in nurse managed clinics. Therefore, the purpose of this study was to describe patient waiting times and flow times through a nurse practitioner clinic in a large southern metropolitan area.

LITERATURE REVIEW

The Institute of Medicine recognizes the problem of prolonged waiting times. This group has recommended that at least 90% of scheduled patients should be seen within 30 minutes of their scheduled appointment time.4

In one study, Kurata compared patient and provider satisfaction with medical care and waiting time in a large family practice residency program. While 97% of patients were satisfied with their medical care, approximately 8% of patients and 22% of providers were dissatisfied with waiting times. An estimate of waiting times by dissatisfied patients was 41.8 minutes.3

Emergency rooms are notorious for long waiting times. Fernandes found that while 90% of patients are willing to wait up to one hour, 60% of the study patients cited prolonged waiting time as the major reason for leaving without being seen by a provider.1 In one pediatric emergency room study dos Santos found that 62% of patients who left without seeing a provider left because of a long waiting time (188 minutes).2 Another pediatric emergency room study by Hanson confirmed this finding and stated that "the waiting time was presented as the main reason for walking out".5 The average waiting time reported by Bamgboye in the emergency room department was 148 minutes.6

Cupit reported that 55% of all clients seen in one ambulatory care setting waited more than one hour to see the provider.7 Reti studied similar patient waiting time characteristics. Reti looked at the effect of 407 patient arrival times on patient waiting times to see a family physician. Ten percent (10%) arrived on time, 66% were early, and 24% were late for their appointments. The 10% of patients who arrived on time for their appointment waited an average of 17.58 minutes. The 66% of patients who were early waited an average 23.30 minutes compared to a corrected early waiting time of 15.20 minutes. The 24% of patients who were late waited an average 14.56 minutes. Early arrivals were on average 10.39 minutes early, with 33% more than 15 minutes early and 3% more than 30 minutes early. Late patients were on average 9.47 minutes late with 33% more than 15 minutes late, and 4% more than 30 minutes late. Booked patients waited an average 20.68 minutes compared to acute patients waiting an average 24.39 minutes.8

SETTING

Since February, 1991, The University of Texas-Houston Health Services (UTHS) has provided primary health care services to the University and greater Houston community. These services are provided to students and employees of the University (52%) as well as private patients (48%). Private patients access UTHS via contracts and agreements for service with community businesses, fee for service customers, and managed-care contracts. Many of these private patients are employed by companies which contract with UTHS to deliver occupational health care. UTHS currently has some 24 contracts/service agreements with outside organizations. Last year UTHS had over 14,500 patient encounters for the usual problems encountered in a primary care setting.9

UTHS is staffed by a clinic director who is a nurse practitioner with doctoral preparation, and one full-time and one part-time nurse practitioner, and a .20 full time equivalent (FTE) physician who is certified in internal, occupational, and pulmonary medicine. This physician treats patients on a referral basis and provides medical back-up services for the nurse practitioners. Two licensed vocational nurses (LVN), a medical assistant, two receptionists, a business manager, a tuberculosis surveillance nurse, and an administrative assistant are also on staff. Additionally, a full-time health educator and a .20 FTE doctorally prepared nurse researcher are employed. The majority of patients (96.4%) are seen by one of the nurse practitioner providers. The remaining 3.6% of patients are seen by the consulting physician.

UTHS is located in the University's administration building on the edge of campus. The 4,000 sq. ft. clinic has a large waiting room, receptionists' area, 10 examination/treatment rooms, a nurses' station, 5 large offices, and a conference room.

PROCEDURE

Data for this project were collected for two continuous weeks in October 1995 and for two continuous weeks in December 1995. These weeks were chosen because the full complement of practitioners and ancillary staff were present in the clinic. A convenience sample was used during each of the two week periods and included all patients who had been scheduled appointments with the nurse practitioners. Subjects excluded from the sample were those who (a) did not have scheduled appointments, (b) were scheduled to receive care from one of the physicians, and (c) were at the clinic for immunizations or to have blood work drawn.

When patients who were scheduled to see the nurse practitioner arrived at the registration desk to sign in a time flow slip was initiated by the receptionist. The receptionist documented the person's time of appointment and actual arrival time into UTHS. Additional times documented were (a) when the patient was placed in an examination room, (b) when the nurse practitioner came into the examination room to see the patient, (c) when the nurse practitioner exited the examination room, and (d) when the patient left the clinic. Time flow slips were collected by the receptionist when the patient left the clinic.

Data were entered into the computer from the time flow slips. The amount of time elapsed was then calculated for each of the following: arrival to placement in the examination room (this includes the time spent by the LVN obtaining vital signs and interacting with the patient), placement in the examination room until the nurse practitioner entered the room, nurse practitioner entry into the room until the nurse practitioner left the room, nurse practitioner exit from the room until the patient left the clinic. Total time in the clinic was calculated from entry into the clinic until exit from the clinic. The Statistical Package for the Social Sciences (SPSS) was used to produce descriptive statistics.

RESULTS

Table 1 highlights time intervals for all patients. For both October and December, the mean time interval from arrival

in the clinic to being placed in an examination room are nearly identical (13.8 and 13.7 minutes, respectively). Variation was found in the mean time interval from being placed in an examination room until being seen by the NP and the number of minutes seen by the NP. Total time in the clinic was 48.8 minutes in October and 49.3 minutes in December.

Figure 1

	October 1995			December 1995	
Time Interval (In Minutes)	Range	M		Range	M
Wait for room	0-53	13.8		0-60	13.7
Wait for NP after placed in room	0-85	14.3		0-60	10.2
Time spent with NP	0-60	20.1		5-75	25.5
Total time in health service	15-135	48.8		20-115	49.3

Time intervals for patients who were late for their scheduled appointment are shown in Table 2. In October, 1995, patients were 1 to 50 minutes late, with a mean time of 13.7 minutes late. In December 1995, patients were 3 to 26 minutes late, with a mean time of 10.1 minutes late.

Figure 2

Time Interval (In Minutes)	October 1995			December 1995	
	Range	M		Range	M
Wait for room	0-53	13.8		0-60	13.7
Wait for NP after placed in room	0-85	14.3		0-60	10.2
Time spent with NP	0-60	20.1		5-75	25.5
Total time at health service	15-135	48.8		20-115	49.3

Note: n = 31 (33.7%) for October 1995 and 18 (32.7%) for December 1995.

Time intervals for patients who were early for their scheduled appointment are shown in Table 3. In October 1995, patients 1 to 47 minutes early, with a mean time of 14.8 minutes. For December 1995, patients were 4-140 minutes early, with a mean time of 19.7 minutes.

Figure 3

Time Interval (In Minutes)	October 1995			December 1995	
	Range	M		Range	M
Wait for room	3-39	14.0		0-60	16.1
Wait for NP after	1-85	16.2		5-60	10.9
placed in room	1-60	19.2		5-45	22.0
Time spent with NP	15-135	50.1		20-110	49.0
Total time at health service					

Note: n = 52 (56.5%) for October 1995 and 26 (47.3%) for December 1995.

Finally, time intervals for patients who were on time for their scheduled appointment are shown in Table 4. Within the categories of being late, early, or on time for the appointment, there are minimal differences in total time in the clinic for patients seen in October as compared to those seen in December, 1995 . Those people who were on time, spent longer in the clinic (55.2 and 56.1 minutes) than those who were late (48.8 and 49.3) or early for their appointment (50.1 and 49.0). For each of the categories of being late, early, or on time for the appointment, variability also exists between the October and December data collection times for the amount of time a person waits for the nurse practitioner after being placed in a room and the time spent with the nurse practitioner. Individuals who were late for their appointment waited the same amount of time to be placed in a room in October (13.8 minutes) and December (13.7 minutes). Individuals who were early or on time for the appointment waited different times to be placed in a room in October and December.

Figure 4

Time Interval (In Minutes)	October 1995			December 1995	
	Range	M		Range	M
Wait for room	5-30	12.2		5-50	5.5
Wait for NP after	2-45	23.0		2-20	10.0
placed in room	8-51	20.0		12-72	30.6
Time spent with NP	25-111	55.2		27-115	56.1
Total time at health service					

Note: n = 9 (9.8%) for October 1995 and 11 (20%) for December 1995.

DISCUSSION

The times patients wait during various phases of seeking health care were examined in this project. In October and December, the amount of time patients waited in the waiting room was 13.8 and 13.7 minutes, respectively. Patients waited 14.3 minutes in October and 10.2 minutes in December after being placed in an examination room until being seen by the nurse practitioner. During this time, the LVNs are obtaining vital signs, recording chief complaints, and obtaining urine and blood specimens. Patients are also changing into gowns for their examination during this time. Nurse practitioners spent 20.1 minutes with the patient in October and 25.5 minutes in December. These times exceed the 15 minute interval used to schedule patients. Thus, patient flow may be enhanced at UTHS by scheduling patients for every 20 minutes rather than every 15 minutes. Changing schedule patterns to every 20 minutes warrants further investigation to determine its effect on patient flow. Patients spent a total time of 48.8 minutes at UTHS in October and 49.3 minutes in December. These total times in the clinic are less than the times reported by Bamgboye and Cupit that patients waited to see a practitioner.6,7

This study found that in October 33.7% of patients were late for the appointment while 56.5% were early and 9.8% were on time. In December, 32.7% were late, 47.3% were early and 20% were on time. In a family clinic, Reti reported that 24% were late, 66% were early, and 10% of patients were on time.8 The results of this study differ from those of Reti and may reflect the different study samples.8 The current study contains students who may make an appointment and then find that they have class commitments that preclude arriving on time. Moreover, individuals who are seen as part of contracted care often leave from their work place to drive to the UTHS. Work commitments may interfere with leaving work on time and traffic is often unpredictable resulting in late arrivals.

Patients who were late in the study conducted by Reti were 9.47 minutes late.8 At UTHS, patients who were late were 13.7 minutes late in October and 10.1 minutes late in December. Thus, the average length of time that patients were late at UTHS is consistent with the time reported by Reti.8 Similarly, Reti reported that patients who were early arrived an average of 10.39 minutes early.8 At UTHS, early patients arrived 14.8 minutes early in October and 19.7 minutes early in December. Thus, patients who were early arrived earlier at UTHS than those reported by Reti.8

At UTHS, patients waited in the waiting room an average of 13.8 minutes in October and 13.7 minutes in December. These waiting room times are less than those reported by Cupit who noted that patients waited more than 60 minutes to see a provider at an ambulatory care clinic.7 Waiting room times at UTHS are also less than those reported by Reti who noted that scheduled patients waited 20.68 minutes and acute patients waited 24.39 minutes at a physician's office.8 The waiting room wait times at UTHS are much less than those reported in the literature. These short waiting times in the waiting room may result from efficient patient and provider scheduling; concerted staff efforts to see patients as closely to their scheduled times as possible; and/or a relatively low no-show and low walk-in patient population.

There is minimal difference in the waiting room times between those who are late, early, or on time for their appointment. This finding is similar to that of Reti.8 The caveat here is that patients arriving late are seen as quickly as those arriving early or on time. The potential exists that patients who are late receive the message that arriving late is acceptable when in fact late arrivals actually disrupt the flow at UTHS.

Additional investigation is needed to determine how these wait times affect patient satisfaction with the system of care and satisfaction with health care provided by nurse practitioners. Kurata found that waiting times by dissatisfied patients was 41.8 minutes.3 Although overall wait times at UTHS are less than those reported in the literature, evidence that patients are satisfied with these times is needed. Additional information is needed to determine the reasons that individuals are late for their appointments as this information may be useful in planning contracted care. When negotiating contracts, it may be that the contracting organization needs to plan more appropriately for release of individuals from work to arrive for health care on time.

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