

Patient and Physician Perceptions of Timely Access to Care

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BACKGROUND: Timeliness of care is 1 of 6 dimensions of quality identified in *Crossing the Quality Chasm*. We compared patient and physician perceptions of appropriate timing of visits for common medical problems.

METHODS: This study was conducted at 2 internal medicine clinics at the University of Colorado Health Sciences Center. Adult patients and companions, and outpatient General Internists were surveyed. The survey contained 11 clinical scenarios of varying urgency. Respondents indicated how soon the patient in each scenario should be seen. Responses ranged from that day to 1 to 3 months. Responses were analyzed using the Mann-Whitney *U* test.

RESULTS: Two hundred and sixty-two patients and 46 of 61 physicians responded. For 8 of the 11 scenarios patients felt they should be seen significantly earlier than physicians. Scenarios involving chronic knee and stomach pain, routine diabetes care, and hyperlipidemia generated the greatest differences. Patients and physicians agreed on the urgency of scenarios concerning wheezing in an asthmatic, an ankle injury, and acute pharyngitis.

CONCLUSIONS: Patients expected to be seen sooner than physicians thought necessary for many common chronic medical conditions, but are in agreement about timeliness for some acute problems. Understanding patient expectations may help physicians respond to requests for urgent evaluation of chronic conditions.

KEY WORDS: access to care; time factors; ambulatory care; primary care.

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Timely access to care is 1 of the 6 dimensions of health care quality identified by the Institute of Medicine's report, *Crossing the Quality Chasm*.¹ The Agency for Healthcare Research and Quality cites improvements in morbidity, mortality, and cost savings as benefits of timeliness.² Components of timely access to outpatient care include time to schedule an appointment, in-office wait time, and the timing of follow-up care.

Previous studies have examined the impact of time to schedule an appointment on patient and provider satisfaction. Time to schedule an appointment has been found in some studies to be the strongest predictor of a patient's overall satisfaction with access to care,^{3,4} and was also found to be the most common area of provider dissatisfaction with access.⁵

Despite documented concern by both patients and providers, delays in scheduling an appointment are pervasive. A recent survey of 15 major metropolitan areas showed that appointment wait times of 2 weeks or more are quite common.⁶ Additionally, the Agency of Healthcare Research and Quality reported that the 2001 Medical Expenditure Panel Survey

found only 44% of adults 18 years or older were always able to get routine care as soon as desired, and 57% of adults were always able to get illness or injury care as soon as desired.⁷

Advanced access scheduling, with appointments provided the same day the patient calls, has been proposed as 1 way to reduce patient wait times for appointments.⁸ Studies examining the impact of advanced access have shown significant reductions in the time to schedule an appointment.^{9–11} Advanced access presumes that patients want to be seen the same day they call. To design scheduling processes that meet the needs of providers and patients, studies examining patient and provider perceptions about appropriate timing of appointments are needed. In this study, we evaluated patient and physician perceptions of the urgency of internal medicine office visits for common complaints.

METHODS

Study Setting

The study was conducted at 2 community-based, ambulatory internal medicine clinics affiliated with the University of Colorado Health Sciences Center in Denver. Aggregate billing data show that 50% of this patient population is from capitated and noncapitated managed care contracts, including military and employer-sponsored insurance plans, 37% are from nonmanaged care Medicare, and 13% are from different sources including discounted fee for service, self-pay, and nonmanaged care Medicaid. One of these clinics was attempting to implement an "advanced access" scheduling during the study period. This clinic had a patient volume to 30,000 visits in the year of the study, while the other had 21,000 visits.

Study Subjects

Individuals 18 years or older who were able to complete the written survey in English were eligible for the study. Patients and adult companions were asked to complete the survey in the waiting room. This study used a convenience sample, and data were collected until the target number of respondents was reached. Companions were included in the study to increase the sample size. We chose to survey patients and their companions to focus the study on persons with recent experience accessing health care. For the remainder of the paper, the term "patients" will be used rather than "patients and companions" when referring to the study group.

Outpatient internal medicine faculty members in the University of Colorado's Division of General Internal Medicine were also surveyed. The division had 69 outpatient Internists at the time of the survey. The 8 physicians involved in the de-

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Table 1. Eleven Clinical Scenarios

Instructions: each of the patients below calls their physician in the morning for an appointment. Based on the concern, how soon should they be able to see a physician?

Responses: that day, tomorrow, 3 to 5 d, 1 to 3 wk, 1 to 3 mo

1. Wheeze	An 18-y-old with asthma is feeling short of breath and wheezing.
2. Pharyngitis	A 25-y-old has a sore throat and feels feverish.
3. Ankle	A 30-y-old with a twisted ankle is having a hard time walking.
4. Lump	A 50-y-old woman is concerned about a lump she discovered in her breast.
5. Rash	A 40-y-old has a new rash on both arms.
6. Back	A 40-y-old with no history of back problems has back pain after moving a box.
7. Stomach	A 25-y-old has had a stomachache, constipation, and diarrhea for several months.
8. Knee	A 65-y-old has had pain in both knees for the last 6 mo that is getting worse.
9. Diabetes	A 60-y-old with diabetes needs to schedule a routine follow-up appointment.
10. Cholesterol	A 60-y-old is found at a health fair to have high cholesterol.
11. Physical	A 50-y-old wants to see a doctor for a physical.

sign of the project were excluded because of potential bias, leaving 61 eligible physician respondents.

Survey Instrument

The self-administered survey instrument consisted of 11 single-sentence clinical scenarios written at the sixth-grade level. The scenarios (Table 1) were designed by a group of faculty General Internists to reflect common problems of varying urgency. This group achieved consensus that some scenarios would require evaluation that day, while others could be evaluated days, weeks, or possibly even months later. Scenarios, listed in decreasing consensus level of urgency, included shortness of breath and wheezing in an asthmatic patient, acute pharyngitis, a twisted ankle, a new breast lump, a new rash, new back pain, chronic stomach pain, chronic knee pain, routine diabetes care, elevated cholesterol found at a health fair, and a routine periodic physical. The patient and physician survey instruments included the same vignettes. In addition to the scenarios, the patient survey included demographic questions relating to gender, age, race/ethnicity (white, black, Hispanic, Native American, Asian), marital status, education, insurance, income, and whether the respondent had training in the health care field. Demographic information in the physician survey included age, gender, number of years practicing, number of half-day sessions the respondent sees patients per week, and their ability to routinely schedule patients for same day appointments in their practice. The Colorado Multiple Institutional Review Board approved the study and the survey forms. Patients in 1 clinic's waiting room pilot tested the survey prior to study implementation. Pilot testing revealed no problems with the survey instrument.

Data Collection

A professional research assistant distributed the survey to all willing adults in the waiting rooms of the 2 participating clinics. Partially completed surveys were collected and included in the data analysis. A response rate was not calculated for the patient surveys as we did not record the number of nonresponders. Faculty received the survey both by e-mail and at a weekly educational conference. Physician nonresponders were contacted either at the weekly conference or by e-mail to improve response rate. To allow response tracking, physician surveys had a detachable cover sheet on which physicians

wrote their name, which was removed prior to recording the survey. For both groups, participation was voluntary and anonymous. Returning the survey was taken as implied consent.

Data Analysis

Power calculations determined that a sample of 250 patients and 45 physicians would be needed to detect a difference of 15 percentage points between groups ($\alpha=0.05$, $\beta=0.20$). A 15 percentage point difference was felt to represent a clinically significant variation between groups. We had access to a limited number of physicians, so sample sizes were not equal. Study outcomes were defined as the perceived urgency for the 11 scenarios. We applied the Mann-Whitney *U* (MWU) test to analyze the frequency of physician versus patient responses using the 5 response categories (that day, tomorrow, 3 to 5 days, 1 to 3 weeks, or 1 to 3 months). Data were also analyzed by the MWU test with results categorized as today or tomorrow versus 3 to 5 days versus 1 week or more. This was done to reflect clinical practice where patients are often booked into an "urgent" appointment that day or the next, a less urgent appointment that week, or offered a more remote appointment. For the MWU test a *P*-value cutoff of .05, 2-sided, was used to determine statistical significance for all comparisons. Scenarios were not included in analyses if the respondent indicated more than 1 response per scenario. Data were entered into Microsoft Access 2000 (Seattle, WA) and then analyzed using Statistical Package for the Social Sciences v. 12.0.2 (Chicago, IL).

RESULTS

Two hundred and sixty-two patients completed the survey. Response rate was not measured. One survey was excluded from analysis because the respondent was under the age of 18, leaving 261 valid responses. Patient demographic data are shown in Table 2. Most of the patients had employer-sponsored health coverage (41.4%), and were female (66.7%). Of the 61 eligible physicians, 46 responded (75.4% response rate). Among the physician responders, 37% were female and the mean age for all responders was 43 years old (SD=9.3). Forty-four percent of the physicians had been in practice for 10 years or less. The majority of physician responders had practiced medicine for over 10 years and 42.2% of the physi-

Table 2. Patient Characteristics

Patient respondents	261
Female (%)	66.7
Race/ethnicity (%) (multiple answers possible)	
White	81.0
Black	8.1
Hispanic	7.0
Asian	5.0
Native American	3.5
Insurance (%) (multiple answers possible)	
Employer sponsored	41.4
Military sponsored	33.6
Medicare	32.0
Medicaid	11.7
Colorado Indigent Care Program	4.7
Privately (nonemployer sponsored)	4.7
No insurance	0.8
Mean age (y) (SD)	57 (15.5)
Education (%)	
High school grade or less	28.5
Attended college	48.8
Postgraduate	22.7
Annual income (%)	
<\$15,000	14.5
\$15,000 to 29,000	14.5
\$30,000 to 59,000	27.8
\$60,000 to 90,000	27.8
>\$90	15.4
Marital status (%)	
Married/unmarried couple	64.3
Healthcare trained (%)	27.3

cian reported being routinely able to schedule same day appointments. There was no significant difference between physician responders and nonresponders for gender, number of clinic sessions per week, or years in practice, but nonresponders were slightly older, with an average age of 46 versus 43 years.

Comparisons of Patient and Physician Responses

Eight of the 11 scenarios showed a statistically significant difference between patient and physician responses when analyzed using the initial 5 response options. These included routine diabetes care, new rash, new back pain, chronic stomach pain, chronic knee pain, elevated cholesterol, routine physical, and a new breast lump (Table 3). In each of these 8 scenarios, patient responders felt the hypothetical patient needed to be seen more urgently than the physician responders. No difference was found for the 3 acute scenarios: wheezing, pharyngitis, and ankle pain.

When analyzed with the data collapsed to today or tomorrow versus 3 to 5 days versus 1 week or more, 4 scenarios showed statistically significant differences. These scenarios included chronic stomach pain, chronic knee pain, routine diabetes care, and elevated cholesterol found at a health fair. Once again, patients perceived greater urgency in each of these 4 scenarios. Patients and physicians agreed on the 6 most urgent scenarios: wheezing in an asthmatic patient, acute pharyngitis, a twisted ankle, a new rash, new back pain, and a new breast lump. For these scenarios, there was no statistically significant difference between patient and physician responses. No patient or physician characteristics were consistently associated with perceived urgency in either analysis.

Table 3. Patient and Physician Perceived Urgency of the 11 Scenarios (Percent Values)

Scenario	Urgent	Soon	Later	P-Values	
				5-Point MWU*	3-Point MWU†
Wheeze					
Pt	99.2	0.8	0.0	0.088	0.543
MD	100.0	0.0	0.0		
Pharyngitis					
Pt	86.3	11.2	2.5	0.377	0.188
MD	93.5	4.3	2.2		
Ankle					
Pt	81.0	18.2	0.8	0.773	0.354
MD	86.7	13.3	0.0		
Lump					
Pt	63.0	33.2	3.8	0.022	0.281
MD	54.3	41.3	4.3		
Rash					
Pt	78.1	19.0	2.8	<0.001	0.151
MD	67.4	32.6	0.0		
Back					
Pt	63.6	31.2	5.3	0.018	0.151
MD	51.1	44.4	4.4		
Stomach					
Pt	61.7	33.1	5.2	<0.001	<0.001
MD	4.3	45.7	50.0		
Knee					
Pt	22.0	50.0	28.0	<0.001	<0.001
MD	0.0	15.2	84.8		
Diabetes					
Pt	13.7	30.6	55.6	<0.001	<0.001
MD	0.0	2.2	97.8		
Cholesterol					
Pt	11.7	35.1	53.2	<0.001	<0.001
MD	0.0	2.2	97.8		
Physical					
Pt	2.0	11.4	86.5	<0.001	0.079
MD	0.0	4.3	95.7		

*Five categories: that day, tomorrow, 3 to 5 days, 1 to 3 weeks, 1 to 3 months.

†Three categories: urgent, today or tomorrow; soon, 3 to 5 days; later, 1 week or more.

Mann-Whitney U test; pt, patient.

DISCUSSION

This study found that patients and physicians often have mismatched perceptions of the appropriate timing of office visits. Patients had a greater perception of urgency than did physicians for many scenarios, and in every scenario with a significant difference patients had a greater sense of urgency. Scenarios involving chronic conditions were areas of consistent disagreement regardless of the analysis method employed. These scenarios included chronic stomach pain, chronic knee pain, routine diabetes care, and elevated cholesterol. Although they often differed in their perceived urgency, these 2 groups did agree on the urgency of wheezing in an asthmatic, an ankle injury, and acute pharyngitis in both analyses.

Studies comparing physician and patient attitudes about the appropriate timing of care are rare and have used differing end points. One survey of both patients and providers at the same clinic found that providers were more likely than patients to be dissatisfied with time to schedule an appointment, but did not examine specific complaints.⁵ Contrary to our findings, 3 Canadian studies provide indirect evidence that patients are willing to accept longer wait times for elective surgeries. Dunn

et al.¹² found that 39% of Canadian patients awaiting cataract surgery rated wait times of more than 3 months as acceptable. A second Canadian study found that 88% of patients awaiting knee replacement rated the median wait time of 9.5 weeks as acceptable.¹³ When Canadian physicians were surveyed in a third study, acceptable wait times for these interventions were 6 and 6.5 weeks by ophthalmologists and orthopedic surgeons, respectively.¹⁴ Relevance of these studies to our health care system is questionable, and our study is the first to our knowledge that directly compares patient and physician perceptions of appropriate timing of primary care appointments.

Several factors limit the generalizability of this study. Individuals in the waiting room were not a random sample of the population and may have differing opinions about appropriate timing of appointments than the general population. Companion responses were incorporated into the survey, but may differ from patient responses. The survey was only conducted at 2 academic clinics. Participants were not selected randomly. Response rate is unknown and nonresponders may differ in their perceptions. Patients with language barriers or patients who were functionally illiterate are underrepresented. Minority communities, the uninsured, and the unemployed may also be underrepresented. Finally, responses to the hypothetical scenarios may not reflect actual behavior.

Previous studies have documented the importance patients place on timely access to appointments and its effects on satisfaction.^{3,4} Advanced access scheduling is 1 attempt to improve access.⁸ In this model patients are scheduled irrespective of the patient or physician perceived urgency. Physician apprehension has limited widespread adoption of this scheduling method. Concerns include the impact of short-term abandonment of patients during provider leave,¹⁵ and concerns that quality of care may suffer if patients fail to schedule follow-up appointments.¹⁶ Outcomes data for advanced access are sparse. A recent study of patients with chronic medical problems using advanced access showed no difference in emergency department utilization or rates of hospital admission, but did show a decrease in urgent care utilization.¹⁷ Our study would suggest mixed physician support for advanced access scheduling as they do not always agree with patient perceived urgency. These results also suggest that patient satisfaction with access to care would improve under advanced access scheduling.

This study highlights the similarities and differences between patient and physician expectations regarding the timing of initial evaluation and routine follow-up care of common medical conditions. Identifying patients who are likely to have a mismatched sense of urgency creates an opportunity to improve patient satisfaction. Providers or their staff could contact such patients and briefly explain why they feel a later appointment is reasonable, and inquire as to why the patient feels it is more urgent. They could then decide to book an appointment sooner in order to possibly improve patient satis-

faction, or attempt to educate them about the course of common illnesses. Further studies could evaluate the reasons why patients and physicians often differ in their perceptions of timely access to care.

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