Even patients with changing moles face long dermatology appointment wait-times: A study of simulated patient calls to dermatologists

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Background: Previous studies have shown long wait-times for general dermatology patients seeking routine appointments. No evidence has been gathered on wait-times for patients with urgent problems or on the impact of physician extenders on access to dermatologic care.

Objective and Methods: To evaluate access for patients with an urgent problem, we performed scripted patient telephone calls to 851 dermatologists to assess wait-times for both patients with Medicare and those paying out-of-pocket complaining of a changing mole.

Results: Mean wait-times were similarly long for patients paying out-of-pocket (38.2 days) and those on Medicare (38.9 days; $P = .85$). Acceptance rates and wait-times varied greatly by geographic area (range of mean wait-times, 19.7-73.4 days). Many dermatologists (23.3%) employed a physician extender, and the wait-times for these extenders (27.9 days) were significantly shorter than those for the physicians supervising them (45.8 days; $P < .001$).

Limitations: The metropolitan areas sampled represented about one tenth of practicing dermatologists in the United States, and no remote or highly rural communities were included.

Conclusions: Patients with a changing pigmented lesion, a possible indicator of malignancy, face wait-times just as long as those previously published for patients with routine complaints. Medicare patients did not experience any greater barriers to access. Although the use of physician extenders remains controversial, these practitioners were able to schedule patients more quickly than their supervising physicians. (J Am Acad Dermatol 2006;55:54-8.)

The field of dermatology is reportedly experiencing a physician workforce shortage.[1-3] One measure cited as evidence of a shortage has been wait-times for routine new patient appointments. Two large surveys of US dermatologists have shown mean wait-times for new patient appointments of 36 to 37 days.[1,4] In addition to an overall workforce shortage, evidence also suggests that dermatologists in the United States are maldistributed, with wait-times varying substantially from one geographic area to another.[1,4]

Some have argued that wait-times for patients with urgent problems would be a more important and meaningful measure of patient access to dermatologists, stating that patients who think they might have melanoma can get appointments much more quickly.[5] Previous studies have only asked about

Abbreviations used:

CI:	confidence interval
MSA:	metropolitan statistical area
NP:	nurse practitioner
PA:	physician assistant

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"routine" new patient visits, and patients with chief complaints requiring more immediate attention might not face the same impediments to access. In addition, some of the previous studies have relied on physician self-reporting, which may introduce biases into results.

In the setting of a workforce shortage, certain subsets of patients may be the first to experience limited access to care. Evidence suggests that many dermatologists do not accept new patients whose insurance reimbursement is far below typical rates (such as Medicaid). Furthermore, Medicaid patients face longer wait-times to be seen at even the subset of offices that accept their insurance, and these access limitations are more pronounced in geographic areas with fewer dermatologists per capita. With Medicare physician payment rates scheduled under current law to decline by more than 25% in the next few years,[6] some wonder whether dermatologists might begin to limit access for Medicare patients as well.

One response to the demand for dermatologic services has been the use of nurse practitioners and physician assistants in the offices of dermatologists. In 2002, 33% of dermatologists reported using some sort of physician extender in their practices. Although controversies continue regarding which patients should be seen by extenders and how physicians should supervise in their care, the use of extenders is undoubtedly increasing the net capacity of the dermatology workforce. No evidence has been gathered regarding the wait-times to see these extenders (or to compare them to the wait-times of their supervising physicians).[7-11]

To answer remaining questions about wait-times in dermatology, we undertook a study utilizing scripted fictitious patient calls to a large sample of US dermatologists. In an effort to determine access for patients with an urgent problem, the simulated patients reported having a changing mole. Because a rapidly changing pigmented lesion may indicate a possible melanoma, such a chief complaint is widely regarded as relatively urgent in the dermatology community. We also sought to determine whether access and wait-times varied for Medicare versus cash-paying patients and how the presence of a physician extender affected wait-times.

METHODS

The study population included all Board-certified and Board-eligible nonfederal dermatologists actively involved in patient care in all 12 primary mid-sized to large communities followed by the Robert Wood Johnson-funded Community Tracking Survey at the time of study. These communities were selected because they represent diverse geographic areas and health marketplaces. This population also represents the same 12 communities previously used in a similar study of dermatology wait-times. Standard Metropolitan Statistical Areas (MSAs)[12] define the areas corresponding to these 12 communities. Each MSA includes multiple counties and extends beyond the limits of the central city, thus more accurately reflecting the dermatology referral base. Almost 10% of the nation's dermatologists practice in one of these 12 MSAs.

A list of physicians meeting these criteria was generated from the American Academy of Dermatology member list, which includes data on 96% of dermatologists practicing in the United States. Respondents were excluded if they were not actively caring for medical dermatology patients at the time of the survey.

Two scripted telephone calls were placed by one of the study authors (M. T.) to the office phone number listed for each dermatologist. All calls were placed during a 3-week period from August 22 through September 12, 2005. The receptionist answering was told that the caller was worried about a changing mole and needed a new-patient appointment. In one of the calls, the simulated patient reported having traditional (nonmanaged) Medicare, and in the other, he reported that he would pay cash for the visit. The caller asked if the physician would see him, and if so, when he could be seen. Then, the caller asked whether a nurse practitioner or physician assistant practiced in the office, and if so, whether and when he could be seen by the physician extender.

The order of the two calls (Medicare and cash pay) was randomly assigned for each dermatologist, and the two calls were spaced out by no more than 1 week. Calls were also placed during randomly varied times of day and days of the week to assure a comparable number of calls were made in the morning and afternoon of each day of the week for each MSA.

The institutional review board of the University of California, San Francisco approved the study protocol. A waiver of informed consent was granted to minimize the use of any forms that would contain respondent names and might limit confidentiality.

Wait-times were calculated as the number of calendar days from the date of the call until the date of the appointment offered. For the purposes of this study, physician extenders were defined to include nurse practitioners and physician assistants. Calculated physicians per 100,000 population were based on the number of physicians meeting inclusion criteria and 2004 census data.[13]

DataDesk v6.1 statistical software (Data Description, Inc; Ithaca, NY) was utilized to perform the

Table I. Appointment acceptance rates and wait-times for patients with a changing mole, paying out of pocket, by metropolitan area and gender

	No.	Percentage accepting	Mean wait-time (days)	Median wait-time (days)
All respondents	851	93.5	38.2	26.0
By metropolitan area (dermatologists per 100K)*				
Boston, Mass (4.3)	177	88.1	73.4	68.0
Cleveland, Ohio (3.5)	72	94.4	44.6	39.0
Greenville, SC (3.1)	17	100.0	30.4	33.0
Indianapolis, Ind (2.5)	40	95.0	29.7	22.0
Lansing, Mich (1.5)	7	85.7	29.7	22.0
Little Rock Ark (3.5)	22	100.0	19.7	15.5
Miami, Fla (3.9)	188	97.3	20.8	11.0
Newark, NJ (3.6)	71	93.0	26.5	21.0
Orange County, Calif (3.6)	107	96.3	22.6	18.0
Phoenix, Ariz (2.0)	69	98.6	48.4	31.0
Seattle, Wash (2.4)	72	83.3	34.1	35.0
Syracuse, NY (1.4)	9	100.0	47.9	44.0
By physician gender				
Male	525	93.3	32.3	20.0
Female	326	93.9	47.5	36.0

*Practicing dermatologists per 100,000 population.

analyses. Values for P less than .05 were considered statistically significant. Two-sample t tests (as well as confidence intervals of differences between means) were used when comparing mean wait-times among individual subgroups and analysis of variance was used when evaluating the relationship between mean wait-times among multiple subgroups. Chi-square tests were used when comparing the numbers of patients accepted by subgroups.

RESULTS

Initial screening yielded names and telephone numbers for 984 Board-certified or Board-eligible dermatologists. From this group of dermatologists, 851 (86.5%) were actively involved in the care of medical dermatology patients at the time of the study. The others were excluded because they were subspecialists involved only in dermatologic surgery (31), dermatopathology (15), pediatric dermatology (12), or cosmetic dermatology (8). Eleven were not involved in any patient care, and the remaining 56 were no longer practicing in the area or could not be found. Of those included, 326 (38.3%) were women.

Acceptance rates

The acceptance rates for a new patient with a changing mole paying out-of-pocket were high (93.5% overall). Physician gender (Table I) did not have an impact on acceptance rates (difference between acceptance rates 0.6%, 95% confidence interval [CI]: −2.8%-3.9%). Acceptance rates did, however, vary by MSA ($P < .001$), ranging from a low of 83.3% in Seattle, Washington to a high of 100% in Greenville, South Carolina, Little Rock, Arkansas, and Syracuse, New York. The acceptance rates for patients with Medicare (92.9%) were not significantly lower than for patients paying out of pocket ($P = .063$). Separate geographic analyses failed to show any MSA in which the acceptance rates varied significantly depending on whether the patient had Medicare or was paying out of pocket.

Wait-times

Patients with a changing mole willing to pay out of pocket faced a mean wait-time of 38.2 days (95% CI: 35.4-41.0) (Table I). Wait-times ranged from same-day availability to 310 days (median, 26 days). Female dermatologists had significantly longer wait-times than their male colleagues (15.2 days longer, 95% CI: 9.3-21.1 days longer). There was dramatic regional variation ($P < .001$) with mean wait-times as low as 20 days in Little Rock and as high as 73 days in Boston. Mean wait-times exceeded 1 month in half of the MSAs examined (Boston, Cleveland, Greenville, Phoenix, Seattle, and Syracuse).

Medicare patients had wait-times (38.9 days) similar to those paying out of pocket ($P = .85$). Separate analyses of each MSA failed to reveal any geographic area in which the wait-times for Medicare patients differed significantly from those for patients paying out of pocket.

Physician extenders

Many respondents (23.3%) reported the presence of either a physician assistant (PA) or a nurse practitioner (NP) in their office (Table II). The prevalence of these physician extenders varied substantially by MSA ($P < .001$). Few dermatologists in Little Rock (4.6%) and Cleveland (8.7%) reported the presence of a PA or NP. Extenders were more commonly utilized in Indianapolis (39.5%), Phoenix (33.3%), and Seattle (39.3%). The difference in prevalence of extenders among female dermatologists (25.1%) and male dermatologists (22.2%) was not statistically significant ($P = 0.35$).

Among respondents with a PA or NP, 73.3% reported that their physician extender was able to see a new patient with a changing mole paying out of pocket. The mean wait-time to see these

physician extenders was 27.9 days. This was significantly shorter than the wait-time for the physicians in these same practices (45.8 days, $P < .001$). The wait-time for physicians in these practices (with a PA or NP who could see the patient) was significantly longer than for the other dermatologists (33.9 days; $P = .003$).

A slightly smaller percentage of respondents with PAs or NPs (66.3%) reported that their extender could see a new Medicare patient with a changing mole. This difference of 7% in acceptance rates, however, was not statistically significant (95% CI: −2.4%-16.3%). Medicare patients faced similar wait-times for physician extenders when compared with patients paying out of pocket.

Table II. Physician respondents employing a physician assistant or nurse practitioner, by metropolitan area and gender

	Percentage with PA or NP
Total	23.3
By metropolitan area	
Boston, Mass	19.6
Cleveland, Ohio	8.7
Greenville, SC	17.6
Indianapolis, Ind	39.5
Lansing, Mich	16.7
Little Rock Ark	4.6
Miami, Fla	24.6
Newark, NJ	23.9
Orange County, Calif	19.4
Phoenix, Ariz	33.0
Seattle, Wash	39.3
Syracuse, NY	22.2
By physician gender	
Males	22.2
Females	25.1

NP, Nurse practitioner; *PA,* physician assistant.

DISCUSSION

Patients with changing pigmented lesions, a possible indicator of malignancy, face dermatology appointment wait-times no shorter than those previously reported for patients with routine complaints. Even for patients willing to pay out of pocket and reporting this urgent complaint, the mean wait-time was 38 days (median, 26 days) in the metropolitan areas examined. It does not appear that most dermatology offices with relatively long wait-times are finding ways to identify new patients with urgent complaints and to see them more quickly.

As has been reported for dermatology patients with routine problems, there is dramatic geographic variation in acceptance rates and wait-times for those with an urgent problem. Even in those areas with the shortest wait-times, however, mean waits exceeded 19 days. There was no direct correlation between the density of dermatologists in a community and wait-times. This may relate to variations in the demand for dermatologic services from one community to another; urban areas such as Boston and Miami may have more demand for elective services. In addition, those same urban areas with multiple referral centers may have more specialized dermatologists and may be serving a much larger population extending beyond the MSA boundaries.

The significantly longer wait-times seen for female dermatologists is also consistent with gender differences in previous studies of appointment availability.[4] Female dermatologists choose to work fewer hours and see fewer patients per week,[3] and this may explain their longer wait-times.

Although Medicaid patients have been previously shown to experience severe dermatology access problems, our study is consistent with findings across all physician specialties that Medicare patients face access levels similar to those of other patients.[14] If a scheduled series of decreases in physician payment under Medicare are implemented in future years, Medicare patients may begin to face additional hurdles, but none were evident at this time.

The prevalence of PAs and NPs working with dermatologists varied greatly by geographic area. A number of factors, including variation in state laws governing the use of physician extenders, availability of such practitioners, local norms of practice, and local wait-times, may influence the use of these practitioners. The impact of physician extenders on appointment wait-times was not surprising. Physician extenders had shorter wait-times than the doctors for whom they worked. Dermatologists employing PAs and NPs had longer mean wait-times than the other dermatologists, suggesting that longer wait-times may be one of the factors which leads a practice to seek help from extenders. On the basis of our data, we are unable to determine how the addition of the extenders affected wait-times longitudinally.

This study is primarily limited by the selection of the geographic areas sampled. The 12 metropolitan areas may not be representative of access nationwide, but were selected to represent a variety of regions and healthcare markets, and contain almost 10% of practicing US dermatologists. Very rural areas, however, are not included in any of these regions.

Because every dermatologist meeting inclusion criteria in each MSA was called, this study eliminates many of the sampling issues that might have affected previous studies of dermatology wait-times. The use

of sham patient phone calls (not identified as study calls) also likely eliminated potential problems with reporting or recall biases in previous studies. The wait-times reported should reflect those experienced by actual patients seeking care. The fact that each office was called twice (once by a sham Medicare patient and once by a sham patient paying out of pocket) means that the two arms of the study were conducted on the same population, avoiding possible problems from unequal randomization.

We can only speculate as to why patients with changing moles faced long wait-times. This study does not provide any data about whether dermatologists were actually instructing their receptionists to screen for urgent problems or why such triage mechanisms were not being carried out. It is possible that a patient who demanded to speak to the physician's nurse and again explained that they had a changing mole might be seen sooner, but many patients might not know that such an approach was necessary or would help.

It is possible that a consensus will not be reached as to whether the delays in access found in this study are clinically significant or whether they are "too long." The wait-times reported, however, contradict claims made that patients with an urgent problem such as a changing mole do not face wait-times as long as those with routine skin problems.

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