

# Insurance or a Regular Physician: Which is the Most Powerful Predictor of Health Care?

## ABSTRACT

**Objectives.** This study compared the relative effects on access to health care of relationship with a regular physician and insurance status.

**Methods.** The subjects were 1952 nonretired, non-Medicare patients aged 18 to 64 years who presented with 1 of 6 chief complaints to 5 academic hospital emergency departments in Boston and Cambridge, Mass, during a 1-month study period in 1995. Access to care was evaluated by 3 measures: delay in seeking care for the current complaint, no physician visit in the previous year, and no emergency department visit in the previous year.

**Results.** After clinical and socioeconomic characteristics were controlled, lacking a regular physician was a stronger, more consistent predictor than insurance status of delay in seeking care (odds ratio [OR] = 1.6, 95% confidence interval [CI] = 1.2, 2.1), no physician visit (OR = 4.5, 95% CI = 3.3, 6.1), and no emergency department visit (OR = 1.8, 95% CI = 1.4, 2.4). For patients with a regular physician, access was no different between the uninsured and the privately insured. For privately insured patients, those with no regular physician had worse access than those with a regular physician.

**Conclusions.** Among patients presenting to emergency departments, relationship with a regular physician is a stronger predictor than insurance status of access to care. (*Am J Public Health.* 1998;88:364-370)

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### Introduction

It is a peculiarity of the American health care system that some insured individuals do not have a regular, ongoing relationship with a physician, while some uninsured individuals do have such relationships with a "regular physician." Data from the late 1980s presented in a recent study suggest that 27% of privately insured Americans had neither a regular physician nor a regular site of care.<sup>1</sup> Most commonly, people lack a regular source of ambulatory care because they do not want one, although poor patients are more likely to cite financial barriers.<sup>2</sup> Certainly insurance status affects access to a regular physician<sup>1,2</sup>; 6 months after loss of Medicaid status, the proportion of indigent adults in California with a regular physician dropped by 56%.<sup>3</sup> In the late 1980s, however, data suggest that 40% of uninsured Americans did have relationships with regular physicians,<sup>1</sup> largely through hospital outpatient departments or free clinics.<sup>4,5</sup>

It follows that insurance status and a relationship with a regular physician are likely to affect access to care independently. It has been demonstrated repeatedly that being without insurance is a consistent and strong predictor of poor access.<sup>6-9</sup> However, insurance coverage and ability to pay may not be sufficient to obtain adequate health care.<sup>10,11</sup> On the other hand, lack of a regular site of care has been shown to be predictive of poor access.<sup>4,12,13</sup> Indeed, recent evidence has demonstrated that lack of a regular physician is a strong independent predictor of poor access to care<sup>1,14</sup> as well as of poor outcome.<sup>15</sup>

Unfortunately, most studies of access to health care do not contain information on both insurance status and relationship with a regular physician, making it difficult to discern which factor is the more important pre-

dictor of access.<sup>1,14</sup> In one study of hospitalized patients, in which hospital billing data were used to categorize patient insurance status, lacking a regular physician was the strongest predictor of hospitalized patients' having delayed seeking care.<sup>14</sup> A second study, which controlled for patients' health status, showed that lack of a regular physician was predictive of no physician visits during a year and of no receipt of preventive services.<sup>1</sup> Unfortunately, this study did not report the impact of insurance status on its access measures. No study has yet reported on the relative effects of relationship with a regular physician and patient perception of insurance status on access to care.

We hypothesize that lacking a regular physician is a more powerful barrier to accessing health services than insurance status, after multiple clinical and socioeconomic characteristics are controlled. To evaluate this hypothesis, we examined data collected in interviews with working-age, nonretired patients who presented with 1 of 6 chief complaints to the emergency departments of 5 academic hospitals in Boston and Cambridge, Mass. We used 3 measures to evaluate access to care: delay in seeking care for the current complaint, no physician visit in the previous year, and no emergency department visit in the previous year.

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## Methods

The study sites were the adult emergency departments of 5 urban teaching hospitals associated with Harvard Medical School: Beth Israel Hospital, Brigham and Women's Hospital, Massachusetts General Hospital, Mount Auburn Hospital, and New England Deaconess Hospital. All physicians and hospitals shared a common self-funded malpractice insurance program. The emergency department director of each hospital, or the director's designate, served on the study team with investigators from the Harvard School of Public Health and Harvard Medical School. The human subjects committees at each institution approved the study.

We conducted this study from February through May 1995, after conducting a similar study in 1993. During a 1-month study period in each emergency department, we enrolled all patients who presented during study hours with 1 of 6 chief complaints. All of these patients were eligible for medical record review, which occurred after their emergency department visit. Patients were approached by research assistants in the emergency department and were asked to enroll and to provide informed consent for the interview portion of the study. On-site interviews were conducted by research assistants with the eligible patients who agreed to participate.

The chief complaints selected for the study were abdominal pain, asthma or chronic obstructive pulmonary disease, chest pain, hand laceration, head trauma, and vaginal bleeding. We chose these complaints because of their prevalence in emergency department care and their risk of liability in emergency departments.

### Record Review

One of the investigators (H.R.B.) identified medical records with the selected chief complaints through a daily review of emergency department logs. Physicians reviewed the medical records, using an explicit clinical data form developed by the study team in concert with relevant local faculty and national experts. Physician-reviewers underwent a training session, were provided with a detailed coding manual, and reviewed all of the identified medical records.

Medical record review provided data on each patient's acuity on presentation. We derived a complaint-specific measure of patient urgency based on triage criteria developed by Baker et al.<sup>16</sup> This 4-level urgency scale ranged from evaluation of a stable medical condition to the need for

immediate evaluation of a life-threatening situation.

### Patient Questionnaire

For logistical reasons, research assistants generally enrolled patients in the interview portion of the study between 10 AM and midnight. We selected this time period after a pilot study determined that it would allow us to capture the highest proportion of eligible patients. However, every third day of the study, research assistants enrolled patients during all 24 hours of the day. We deemed patients ineligible for the questionnaire portion of the study if they were incapacitated by medical illness, confused or intoxicated, or nonpregnant minors, or if they left the emergency department without being seen. Patients who agreed to participate in the survey portion of the study completed an on-site questionnaire, which was self-administered or interviewer-administered, if requested, in English or Spanish.

We used the questionnaire to collect socioeconomic and demographic information. Patients reported their insurance coverage, membership in any of 10 local managed care organizations, and whether they had experienced a change in insurance in the last year. In addition, they reported their site of regular medical care as an emergency or walk-in clinic, hospital-based clinic, community health center, or private doctor's office or health maintenance organization (HMO).

Patients also reported individual comorbid conditions: anemia, asthma, arthritis, back problems, cancer (diagnosed in the past 3 years), depression, diabetes, digestive problems, heart trouble, high blood pressure, human immunodeficiency virus (HIV) infection or acquired immunodeficiency syndrome (AIDS), kidney disease, liver problems, stroke, and other major health problems. Patients rated their overall health status, both before and since the current illness began, using a 5-level Likert scale ranging from "excellent" to "poor."

To investigate access to care among working-age adults, we restricted our study population to nonretired patients aged 18 to 64 years. We excluded patients from the study if their insurance status was Medicare or "other insurance" or if their employment status was unclear.

### Variables

We solicited the predictor variable of interest, lacking a regular physician, by asking the patients, "Do you currently have a

regular medical doctor who you usually go to if you are sick or need advice about a medical problem?" We categorized health insurance as private insurance, Medicaid, or no insurance. We classified patients as privately insured if they had private insurance or if they had "other" insurance and were part of either an HMO or a managed care organization.

Using the 1994 US Census poverty income thresholds appropriate for family size, the patient's reported 1994 income, and number of dependents, we created 3 income categories: poor (100% of poverty level or less), near-poor (101% to 175% of poverty level), and not poor (more than 175% of poverty level). We grouped patients into 3 categories on the basis of their employment status: not in workforce, part-time employment (less than 35 hours per week), and full-time employment (35 or more hours per week).

We grouped patients into 4 age groups: 18 through 39 years, 40 through 49 years, 50 through 59 years, and 60 through 64 years. We classified education level as some high school education, high school graduate, and any college education. We categorized race as Black, White, Latino, and Asian or other race. We dichotomized patient reports of overall health as excellent/very good/good or fair/poor. Marital status, sex, regular site of care at an emergency department or walk-in clinic, and whether the patient changed insurance in the last year were 2-level (dummy) variables.

The 3 dependent variables were measures of poor access to care: (1) delay in seeking care ("Have you delayed seeing a medical doctor for your current complaint longer than you should have?"); (2) no physician visits in the last year ("How long has it been since your last visit with a medical doctor, at any location?"); and (3) no emergency department visits in the last year ("Have you been to an emergency room at any hospital in the last year?").

### Data Analysis

We used chi-square tests to assess univariate associations between the explanatory variables and the outcome measures. We present a summary of the univariate results. We used multivariate logistic regression models to assess the relative weight and statistical significance of associations between the explanatory variables and the measures of access. We analyzed interactions between insurance status and lack of a regular physician.

We included the following explanatory variables in each regression model: rela-

tionship with a regular physician, insurance status, change in insurance in the last year, race, income level, employment status, sex, marital status, education, age, health status, chief complaint, and the 15 comorbid conditions. In addition, we included urgency of chief complaint in the model of delay in seeking care, and included regular site of care at an emergency department or walk-in clinic in the model of emergency department utilization. We used the patient's report of overall health since the current illness began in the model that assessed correlates of delay in care, and used the patient's report of overall health before the current illness in the models that assessed correlates of no physician visits and no emergency department visits in the past year.

Finally, healthy patients and privately insured patients are 2 populations whose health care access and utilization patterns differ from those of their counterparts. To confirm that lack of a regular physician continues to be an independent predictor of access for these 2 populations, we performed 2 stratified analyses, the first restricted to those patients who rated their health status as good or better and the second restricted to privately insured patients alone. These logistic regressions controlled for the same patient characteristics as the other regressions.

## Results

During a 1-month period, a total of 4325 patients presented during study hours with 1 of the 6 chief complaints selected for the study. Of these, 3354 patients were eligible for the baseline questionnaire; 971 patients were deemed ineligible (606 for medical reasons, 37 left without being seen, 96 because an interpreter was not available, and 232 for other reasons). Of those eligible, 2899 patients completed the survey while in the emergency department, and 2087 of these were 18 to 64 years of age and not retired. We excluded 135 patients who had Medicare or "other" insurance or whose employment status was unclear. Therefore, the study population includes 1952 working-age patients.

There were no significant differences in age, sex, or hospital among patients who completed baseline questionnaires and eligible patients who did not. Patients with abdominal pain, asthma or chronic obstructive pulmonary disease, or hand laceration, as well as patients in the highest severity group, were more likely to complete the baseline questionnaire. Characteristics of the study population are presented in Table 1.

**TABLE 1—Characteristics of the Patient Population in Harvard-Affiliated Emergency Departments: Boston, 1995**

	n	No. (%) with No Regular Physician	P <sup>a</sup>
Study population	1952	575 (29.5)	
Insurance status			
Uninsured	393	254 (65.0)	.0001
Medicaid	271	51 (18.8)	
Private insurance	1276	266 (20.8)	
Changed insurance in last year			
Yes	385	146 (37.9)	.0001
No	1531	414 (27.0)	
Income level			
Poor	573	190 (33.2)	.0001
Near-poor	353	142 (40.3)	
Not poor	864	189 (21.9)	
Employment status			
Full-time employment	1088	315 (29.0)	.42
Part-time employment	349	112 (32.3)	
Not in workforce	478	135 (28.4)	
Sex			
Female	1081	245 (22.8)	.0001
Male	869	329 (37.9)	
Age, y			
18–39	1222	447 (36.7)	.0001
40–49	334	76 (22.8)	
50–59	247	34 (13.8)	
60–64	99	11 (11.2)	
Race			
White	1231	319 (26.0)	.0001
Black	352	115 (32.7)	
Latino	254	89 (35.0)	
Asian or other	114	51 (45.1)	
Education			
Some high school	240	69 (29.0)	.03
High school graduate	687	227 (33.1)	
Any college	1018	276 (27.1)	
Marital status			
Not married	1186	423 (35.8)	.0001
Married	766	152 (19.9)	
Regular site of care			
Emergency department or walk-in clinic	348	243 (69.8)	.001
Other	1593	328 (20.6)	
Health status before current illness			
Excellent, very good, good	1699	515 (30.3)	.008
Fair, poor	218	47 (21.6)	
Comorbid conditions			
None	752	282 (37.5)	.001
One or more	1177	288 (24.5)	

<sup>a</sup>The *P* value represents the significance of the relationship between lack of a regular physician and each characteristic.

## Univariate Results

Many sociodemographic characteristics were associated with lacking a regular physician (Table 1). Of the 1952 study patients, 575 (29.5%) did not have a regular physician. Lacking a regular physician was related to insurance status: 65.0% of uninsured patients had no regular physician, compared with 20.8% of privately insured

patients and 18.8% of Medicaid patients ( $P < .0001$ ). Patients significantly more likely to have no regular physician were those who had changed insurance in the last year; those who were near-poor, unmarried, of Asian or other race, high school graduates, male, or aged 18 to 39 years; those who reported that their regular site of care was an emergency department or walk-in clinic; those who had no comorbid condi-

**TABLE 2—Predictors of Access to Care among Patients in Harvard-Affiliated Emergency Departments: Boston, 1995**

Predictor variables	Delayed Seeking Care OR (95% CI)	No Physician Visit in Previous Year OR (95% CI)	No Emergency Department Visit in Previous Year OR (95% CI)
No regular physician	1.6 (1.2, 2.1)*	4.5 (3.3, 6.1)*	1.8 (1.4, 2.4)*
Insurance status			
Uninsured	1.5 (1.1, 2.1)*	1.8 (1.2, 2.6)*	0.8 (0.6, 1.1)
Medicaid	1.5 (1.0, 2.2)*	1.4 (0.8, 2.5)	0.8 (0.6, 1.3)
Changed insurance in last year	1.3 (1.0, 1.7)	0.8 (0.6, 1.1)	0.9 (0.7, 1.2)
Sex (female)	1.1 (0.9, 1.5)	0.6 (0.4, 0.8)*	0.9 (0.7, 1.2)
Race			
Black	1.7 (1.2, 2.3)*	1.4 (0.9, 2.0)	0.9 (0.7, 1.2)
Latino	1.2 (0.8, 1.7)	1.8 (1.1, 2.8)*	1.2 (0.8, 1.7)
Asian or other	1.1 (0.7, 1.9)	1.3 (0.7, 2.4)	1.7 (1.0, 2.8)*
Employment status			
Full-time	1.5 (1.0, 2.1)*	1.1 (0.7, 1.6)	0.9 (0.6, 1.2)
Part-time	1.6 (1.1, 2.4)*	1.0 (0.6, 1.6)	1.0 (0.7, 1.4)
Income level			
Poor	1.2 (0.8, 1.7)	1.0 (0.7, 1.6)	0.7 (0.5, 1.0)
Near-poor	1.1 (0.8, 1.5)	0.8 (0.6, 1.3)	0.9 (0.6, 1.2)
Education			
Some high school	1.1 (0.7, 1.6)	1.0 (0.6, 1.8)	0.5 (0.3, 0.7)*
High school graduate	1.2 (1.0, 1.6)	1.0 (0.7, 1.4)	0.7 (0.6, 0.9)*

Note. Each logistic regression model also controls for age, marital status, health status, chief complaint, and 15 comorbid conditions. The delay-in-seeking-care model also controls for urgency and the emergency department utilization model also controls for emergency department or walk-in clinic as the regular site of care. OR = odds ratio; CI = confidence interval.

\*The comparison groups, in order, are as follows: have a regular physician, privately insured, no change of insurance, male sex, White, not in workforce, not poor, any college education.

\* $P < .05$ .

tions; and those who were in good or better health before the current illness began.

Not presented in Table 1 are the characteristics of 2 subpopulations of interest: privately insured patients with no regular physician and uninsured patients with a regular physician. Among privately insured patients, those with no regular physician were more likely to be male, aged 39 years or younger, of Asian or other race, not married, and near-poor, and to have changed insurance in the last year. While 40.3% reported at least 1 comorbid condition, these patients were no more likely to have good or better health status than were privately insured patients with a regular physician. Of privately insured patients with no regular physician, 37.1% reported that their regular site of care was a private physician's office or HMO; 33.1%, an emergency department or walk-in clinic; and 30.7%, a hospital-based primary care clinic or community health center.

Among uninsured patients, those with a regular physician were more likely to be poor, female, and married, not to have finished high school, and to be in fair to poor health; 71% of these patients reported at least one comorbid condition. Of the uninsured patients with a regular physician, 41.5% reported that their regular site of

care was a hospital-based primary care clinic or community health center; 37.4%, a private physician's office or HMO; and 21.1%, an emergency department or walk-in clinic.

Many of the 1952 study patients experienced poor access to care: 29.6% reported a delay in seeking care for the current complaint, and in the previous year 18.2% had had no physician visits and 54.2% had had no emergency department visits. Individual patient characteristics predicted poor access to care. Patients with no regular physician were significantly more likely than those with a regular physician to delay seeking care (36.2% vs 27.0%,  $P < .0001$ ) and to report no physician visits in the last year (39.5% vs 9.3%,  $P < .0001$ ) and no emergency department visits in the last year (62.0% vs 51.0%,  $P = .001$ ). The 348 patients whose regular site of care was an emergency department were significantly more likely to have visited an emergency department in the last year (53.1% vs 44.2%,  $P = .002$ ) than were those with other regular sites of care.

#### Multivariate Results

Our multivariate findings demonstrate that lack of a regular physician is a more

consistent and stronger predictor of poor access to care than is insurance status. Lack of a regular physician was the only explanatory variable that was a statistically significant predictor of all 3 measures of poor access, and its odds ratios are higher than or comparable to those of the other explanatory variables, including insurance status (Table 2). Patients without a regular physician were at greater risk for delay in seeking care (odds ratio [OR] = 1.6, 95% confidence interval [CI] = 1.2, 2.1), for no physician visits in the last year (OR = 4.5, 95% CI = 3.3, 6.1), and for no emergency department visits in the last year (OR = 1.7, 95% CI = 1.4, 2.4). The predictors of emergency department use did not change when we excluded the patients whose regular site of care was an emergency department or walk-in clinic.

While other explanatory variables were statistically significant predictors of one or more measures of poor access, none were statistically significant predictors of all three measures of access. Uninsured patients were significantly more likely to delay seeking care and to report no physician visits in the previous year. Patients who had changed insurance or who were either full-time or part-time employees were more likely to delay seeking care. Black patients were

**TABLE 3—Predictors of Access to Care among Patients in Harvard-Affiliated Emergency Departments, Boston, 1995: Interactions Between Lacking a Regular Physician and Insurance Status**

Predictor variables	Delayed Seeking Care OR (95%CI)	No Physician Visit in Previous Year OR (95%CI)	No Emergency Department Visit in Previous Year OR (95%CI)
No regular physician and uninsured	2.4 (1.6, 3.5)*	7.8 (5.2, 12.2)*	1.5 (1.0, 2.3)*
No regular physician and privately insured	1.7 (1.2, 2.3)*	4.3 (3.0, 6.1)*	1.7 (1.2, 2.3)*
Have a regular physician and uninsured	1.6 (1.0, 2.5)	1.5 (0.8, 3.0)	0.7 (0.4, 1.1)
Have a regular physician and privately insured	Reference group	Reference group	Reference group
No regular physician and a Medicaid recipient	2.5 (1.3, 5.0)*	7.4 (3.3, 16.5)*	2.3 (1.1, 4.6)*
No regular physician and privately insured	1.6 (1.2, 2.2)*	4.3 (3.1, 6.0)*	1.7 (1.3, 2.3)*
Have a regular physician and a Medicaid recipient	1.5 (1.0, 2.3)	1.2 (0.6, 2.4)	0.7 (0.5, 1.1)
Have a regular physician and privately insured	Reference group	Reference group	Reference group

Note. After interaction terms are created between lack of a regular physician and insurance status, each regression model is structured identically to the models presented in Table 2.

\*Interaction term  $P < .05$ .

\*\*Interaction term  $P = .10$  for uninsured analysis and  $P = .02$  for Medicaid analysis.

more likely to delay seeking care, Latino patients were more likely to report no physician visits, and Asian and other groups were more likely to report no emergency department visits in the last year. While other patient characteristics were predictive of individual measures of access, lack of a regular physician was the only predictor of all three measures.

The effects of relationship with a regular physician and insurance status appear to be intertwined, as there were significant interactions between these 2 variables for each of the 3 outcome measures (Table 3). Among patients with a regular physician, uninsured and privately insured patients had equally good access. However, among patients with no regular physician, both uninsured and privately insured patients had significantly worse access by all 3 measures than patients with a regular physician and private insurance. The magnitude of risk for poor access among patients with no regular physician was higher for uninsured than for privately insured patients for 2 of the 3 measures: for uninsured and privately insured patients, respectively, the odds for delayed care were 2.4 and 1.7, the odds for no physician visits were 7.8 and 4.3, and the odds for no emergency department visit were 1.5 and 1.7.

To confirm these interaction results, we performed a subanalysis on privately insured patients, which revealed that privately insured patients with no regular physician were significantly more likely than those with a physician to delay seeking care (OR = 1.7, 95% CI = 1.2, 2.5) and to report no physician visits (OR = 3.8, 95% CI = 2.6, 5.6) and no emergency department visits (OR = 1.5, 95% CI = 1.0, 2.1) in the last year. Even for privately insured patients, lack of a regular physician was a predictor of poor access to care.

For all 3 measures of access to care, there were significant interactions between Medicaid coverage and lacking a regular physician (Table 3). Among patients with no regular physician, the magnitude of risk for each of the 3 measures was higher for Medicaid recipients than for privately insured patients. The magnitude of risk for poor access for uninsured patients with no regular physician was very similar to that for Medicaid patients with no regular physician.

Patients with no regular physician are more likely to be healthy; it may be that lack of a regular physician is not predictive of poor access to care for healthy patients. However, in a subanalysis of patients with good or better health status, not having a regular physician remained an independent predictor of delay in seeking care (OR = 1.8; 95% CI = 1.3, 2.3) and of no physician visits (OR = 4.6, 95% CI = 3.4, 6.4) and no emergency department visits (OR = 2.0; 95% CI = 1.5, 2.7) in the last year. Consistent with our findings for the entire population, there were significant interactions between not having a regular physician and insurance status for all 3 measures. Lack of a regular physician remained a strong predictor of poor access for healthy patients.

## Discussion

Lack of a regular physician is a stronger, more consistent independent predictor than insurance status of each of our 3 measures of poor access to care: delay in seeking emergency care, no physician visits in the previous year, and no emergency department visits in the previous year. Among privately insured patients, those with no regular physician had worse access than those with a regular physician. However, among patients with a regular

physician, we detected no difference in access between privately insured patients and either uninsured patients or Medicaid recipients. Insurance status did affect access to care in our study; although lack of a regular physician was most strongly correlated with poor access, being uninsured or having Medicaid insurance conferred additional risk to patients without a regular physician. Ultimately, however, patients' relationship with a regular physician has more impact than their insurance status on their access to health care.

Our study is the first to compare the effect of relationship with a regular physician and patient-reported insurance status on several measures of access to care—each of which depends on a patient's initiating care—while controlling for patient case mix and socioeconomic characteristics. A recent study by Lambrew et al. had a similar scope; they found that having a regular doctor improved access to primary care services such as screening and immunization.<sup>1</sup> However, their analyses controlled for case mix using only health status, while our analyses included health status, chief complaint, comorbid conditions, and patient urgency, when appropriate. Although their analyses controlled for insurance status, Lambrew et al. did not describe these results and did not compare the relative importance, with regard to access, of insurance status and lack of a regular physician.

Not having seen any physician in the last year is accepted as a gross indicator of poor access<sup>6</sup> and has been shown to be affected by insurance status.<sup>5,17</sup> Our study shares this measure with the study of Lambrew et al., and our results agree.<sup>1</sup> Also consistent with our findings, a study of emergency department patients demonstrated that lack of a regular source of care was a stronger predictor of not having seen

a physician in the last 3 months than was lack of insurance.<sup>13</sup>

Weissman et al. reported on the association of lack of a regular physician with a single access measure, delay in seeking care.<sup>14</sup> Our results complement this study, which found that lack of a regular physician was a strong predictor of delay in seeking care and showed that such delays resulted in longer hospital stays. However, this study included only hospitalized patients and used insurance status derived from the medical record, as opposed to patient-reported insurance status. A study of delay in care among emergency department patients showed that insurance status was an independent predictor of delay, but the analyses in that study did not adjust for lack of a regular physician.<sup>18</sup>

Access to emergency services should be universal, as emphasized by legislation that prohibits private institutions from transferring uninsured patients to public emergency departments.<sup>19</sup> Our finding that patients who lack a regular physician were actually less likely to have visited the emergency department in the last year, even after adjustment for urgency and other clinical characteristics, is surprising and worrisome. It is unclear where patients who lack a regular physician, and who are thus likely to report emergency departments or walk-in clinics as their regular sites of care, are receiving acute and primary care. However, our emergency department utilization measure did not address the appropriateness of the prior year's visit, so perhaps our finding reflects an overutilization of emergency departments by patients with a regular physician. This interpretation is consistent with the results of a recent randomized controlled trial that found an increased rehospitalization rate in the intensive primary care intervention group, suggesting that patients who receive primary care may be more likely to seek care.<sup>20</sup>

While our study confirms previous work in demonstrating that lack of a regular physician is an important predictor of access, we also found that other patient characteristics were significantly associated with poor access to care. The racial differences in access reinforce the need for interventions focused on the unique characteristics of Black and Latino populations that put them at risk for poor access to health care. The finding that full-time and part-time employees were more likely to delay seeking care is presumably due to employees' difficulty in leaving work to obtain care. Because delays in care can result in increased morbidity and resource utilization,<sup>14</sup> primary care physicians should pro-

vide evening or weekend clinics to serve those with daytime commitments, as others have suggested.<sup>21</sup>

One may argue that patients with no regular physician are relatively healthy and therefore use the health care system less, while patients who have a regular physician are less healthy but have adequate access. However, we found that even among healthy patients, lack of a regular physician remained a strong predictor of poor access.

There are several limitations to this study. First, because this study was conducted at 5 university-affiliated urban hospitals in the Northeast, our findings may not be generalizable to other populations. Second, we relied upon patients' reports of their relationship or lack of a relationship with a regular physician, which may not be entirely reliable, as patients may frequently misclassify their regular source of care.<sup>22</sup> Similarly, 2 of our study's patient-reported measures of access may not be reliable, as they depend on patient recall of utilization over a 12-month period. However, the measure of delay in seeking care for the current complaint recalls very recent information, and our results are consistent for all 3 measures. Finally, our findings may represent an artifact of a particular sampling period. To investigate this possibility, we analyzed data collected during an initial study at the same 5 emergency departments in 1993 and found remarkably similar results.

Care delivery programs that direct each patient to choose a regular physician may reduce barriers to access, potentially even in patient populations with traditionally poor access to care. A regular physician may reduce access barriers by helping patients negotiate the health care system and helping them make decisions about when they should pursue care. To accurately measure barriers to access to care, future investigators must collect information both on patients' relationship with a regular physician and on their insurance status. Future researchers should investigate differentials in access among privately insured patients. In addition to improving insurance coverage, health care reform must include strategies to maximize the number of people with a regular physician. □

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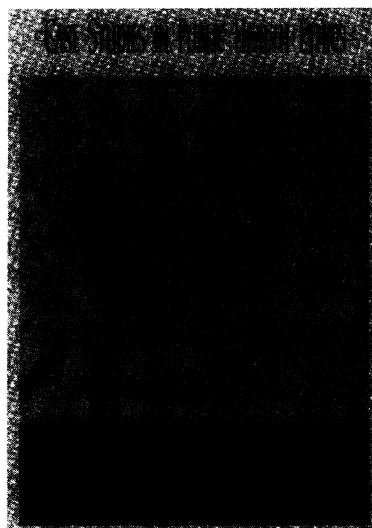
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