Research on Physician Behavior

Obstetricians' Receptiveness to Teen Prenatal Patients Who Are Medicaid Recipients

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Objective. To test the accuracy of various physicians' participation in Medicaid models.

Data Sources/Study Setting. Primary data on 221 obstetricians and gynecologists in the Chicago area by telephone interviews over a four-month period. These data were combined with secondary data from the American Medical Association Master File (1993) and U.S. Census data (1990).

Study Design. Telephone interviewers posing as the older sisters of a pregnant teenager who is a Medicaid recipient sought information regarding the care provided in a first prenatal care appointment (e.g., appointment duration, tests administered, delivery privileges, appointment availability).

Data Collection/Extraction Methods. A "receptionist helpfulness" variable was developed through pretesting on obstetricians in another city. Inter-interviewer reliability was enhanced through common interview technique education.

Principal Findings. Only 81 obstetricians (36.7 percent) accepted new Medicaid patients. This finding is lower than previous research on physician participation in Medicaid. There was strong empirical support for both dimensions—cost containment and limited access—of the physicians' receptiveness model, the model introduced with this research. There was limited support for the dual market and residential segregation models of physician participation in Medicaid.

Conclusions. It is argued that this study's research design is more accurate in reflecting the barriers that a pregnant Medicaid-eligible patient encounters when seeking office-based prenatal care. As such, combining the physicians' receptiveness model with other physician participation in Medicaid models provides a more complete picture of access barriers to prenatal care for our most needy populations.

Key Words. Medicaid participation, physicians' receptiveness model, teen pregnancy

Medicaid was enacted in 1965 with the intent of improving the access of low-income Americans to "mainstream" healthcare. Not only was it hoped that the poor would receive more healthcare services than before, but proponents

of the legislation also hoped that there would be less reliance on institutional sources of healthcare services and increased utilization of private physicians, thereby enhancing the continuity of patient care. From the outset, however, Medicaid has been characterized by unintended program features. For one, federal law has permitted considerable latitude at the state level in the types of services a state Medicaid program can provide and the rates at which services are reimbursed. Further, access to private practice physicians has been limited because physicians are not required to accept Medicaid patients, and a substantial percentage of physicians subsequently have either been unwilling to participate or have accepted Medicaid patients only on a limited basis. In light of this, numerous attempts have been made to document the extent to which physicians participate in Medicaid and whether these rates are changing (e.g., Mitchell and Schurman 1984; American College of Obstetricians and Gynecologists 1988; Yudkowsky, Cartland, and Flint 1990; Lewis-Idema 1992; Perloff, Kletke, and Fossett 1995).

Existing models of physician participation in Medicaid have been developed exclusively through the use of physician surveys or Medicaid claims records (Lewis-Idema 1992) and generally focus on the availability of prenatal care. However, the value of physician surveys is limited because physicians may be reluctant to report an unwillingness to accept Medicaid patients. Likewise, utilization studies that use claims data often do not differentiate between those physicians who have an occasional Medicaid claim and those for whom Medicaid patients comprise a sizable percentage of their practice. Thus, these studies often overstate physicians' participation in Medicaid (Physician Payment Review Commission 1993).

In an attempt to get a more realistic view of physician participation in Medicaid, this research takes an alternative tactic: considering participation through the perspective of first-time teen prenatal care patients attempting to gain appointment information from obstetricians' (OBGYNs') offices. It is argued that the approach of this research provides a more complete and realistic picture of the barriers to care that prenatal patients confront.

An alternative model, the physicians' receptiveness model, is presented and empirically tested in this research. This model considers the extent to which physicians look for ways to reduce the costs associated with treating

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Medicaid patients in an attempt to lessen the gap between Medicaid reimbursement and private-pay levels. Further, this model considers whether there are practice characteristics, such as appointment availability, waiting time, and receptionists' helpfulness, that may lessen the incentives for Medicaid patients to seek care at a particular physician's office. In effect, these cost containment and limited accessibility management practices may profoundly affect the accessibility of healthcare for Medicaid patients. Additionally, identifying such practice characteristics will enhance our understanding of reasons why some physicians accept Medicaid patients while others do not.

BACKGROUND, MODELS, AND RESEARCH HYPOTHESES

TEEN PRENATAL CARE

Research has shown that pregnant teens have unique health requirements. Teenage women have higher rates of infant death and diseases and physical complications during pregnancy (Makinson 1985). Also, miscarriages, stillbirths, and low birthweight infants are twice as common among teens as among adult women (Morris, Warren, and Aral 1993). As such, most teen-oriented programs, like those for high-risk women, generally adopt a more intensive approach than is typically offered as part of conventional maternity care. These comprehensive systems entail nutritional, educational, and psychosocial support and counseling, and have been shown to result in improved pregnancy outcomes (Buescher et al. 1987; Stevens-Simon, Fullar, and McAnarney 1992). The usefulness of these programs, of course, is limited if teens do not have access to a prenatal care provider.

DUAL MARKET MODEL

Physicians' participation in Medicaid has been theorized to depend on their competition for paying patients (Sloan, Cromwell, and Mitchell 1978). Physicians are presumed to confront demand in two types of markets–one in which they themselves set the price patients must pay for their services, and one in which they accept the price defined by a third party payor, such as Medicaid, as payment in full for care. Physicians allocate their services between these two types of markets based on the strength of demand in each market, fees available from private-pay patients and third-party payors, and the supply of providers in each market. Because the charges physicians can command in the private market are generally higher than Medicaid fees,

many physicians prefer to treat private-pay patients. Accordingly, factors that increase or decrease private demand should have the opposite effect on the supply of physicians participating in the Medicaid market. Physicians expand the Medicaid portions of their practices in response to declines in private patient income or insurance, or to increases in Medicaid fees or coverage. Their acceptance of Medicaid patients is reduced as private market conditions become more favorable.

The dual market model predicts that physicians with relatively low demand for their services in the private patient market will be most likely to participate in Medicaid. Consequently, Medicaid participation is predicted to be higher for physicians who are graduates of foreign medical schools and for less well established physicians. Further, the dual market model predicts that Medicaid participation will be highest in communities that have the highest relative supply of physicians. These variables, which are included in the regression analysis, are tested as Hypotheses 1–3.

Hypothesis 1. Participation in Medicaid will be higher for OBGYNs who are graduates of foreign medical schools.

Hypothesis 2. Participation in Medicaid will be higher for OBGYNs with fewer years of practice.

Hypothesis 3. Participation in Medicaid will be higher for OBGYNs whose offices are located in regions with higher numbers of OB-GYNs per capita.

RESIDENTIAL SEGREGATION MODEL

According to the dual market model, competition for private patients should increase physician acceptance of Medicaid patients and lead to the "mainstreaming" of Medicaid patients into private physician practices. However, empirical results indicate that the dynamics of this two-market theory do not hold for larger metropolitan areas. Several studies, in a variety of contexts using a number of methods, have found that the percentage of physicians accepting Medicaid patients is lowest in comparatively wealthy city neighborhood areas even though these areas often have higher physician-to-population ratios: "Since physicians tend to locate in upper-income neighborhoods, far from the residences of most Medicaid patients, participation in Medicaid may be low despite an apparently generous supply of physicians" (Perloff, Kletke, and Fossett 1995: 12). As such, Medicaid patients are often forced to use institutional settings.

These counterintuitive findings suggest that the Medicaid participation

of OBGYNs will be lowest in zip codes that have the highest relative supply of physicians (Hypothesis 4), higher per capita income (Hypothesis 5), and smaller percentages of minority populations (Hypothesis 6). Note that Hypothesis 4 contradicts the prediction of Hypothesis 3 and is a direct comparison of the validity of the dual market versus residential segregation models.

Hypothesis 4. Participation in Medicaid will be lower for OBGYNs whose offices are located in zip codes with higher numbers of OBGYNs per capita.

Hypothesis 5. Participation in Medicaid will be lower for OBGYNs whose offices are located in zip codes with higher per capita income.

Hypothesis 6. Participation in Medicaid will be lower for OBGYNs whose offices are located in zip codes with lower proportions of African Americans and Hispanics.

PHYSICIANS' RECEPTIVENESS MODEL

Neither the dual market nor the residential segregation model appears to explain fully the highly unequal distribution of Medicaid patients across physicians. For example, a study found that 62 percent of 958 primary care physicians had 1 percent or fewer Medicaid recipients in their patient populations. Alternatively, another study found that a very small proportion of physicians in Illinois provide a majority of Medicaid care (Brodt, Possley, and Jones 1993). Out of 24,000 physicians in the state, only 240 physicians (1 percent of the total) accounted for 41 percent of all Medicaid bills in Illinois in 1993. These research results indicate that Medicaid patient care is more than a substitution process for physicians or a reflection of physician and patient location patterns.

Cost Containment Dimension

Alternatively, it is argued that physicians manage their practices to attract certain patient types and that these patient recruitment practices are reflected in differing patterns of physicians' participation in Medicaid. One practice strategy is to accept all new Medicaid prenatal care patients or, in the extreme case, to seek Medicaid patients.[1] It is argued that physicians who accept Medicaid patients will have higher incentive to manage their practice costs in a more efficient and economical manner to compensate for the gap between private pay and Medicaid reimbursement rates. Since this gap is especially large in urban areas, one might expect cost containment practices for Medicaid patients to be especially pronounced in an urban area.

A number of cost containment practices are possible. First, less costly health professionals, such as nurses or physician assistants, could handle an increasing percentage of patient care time. Second, physicians could decrease the amount of time spent with each patient, thus increasing the volume of patients seen. Third, physicians may attempt to increase revenues by administering a higher number of prenatal care tests, for which physicians are separately reimbursed, in an attempt to make up for lower Medicaid patient revenues. Research Hypotheses 7–9 test whether OBGYNs who accept Medicaid patients exhibit more extensive cost containment efforts.

Hypothesis 7. Participation in Medicaid will be higher for OBGYNs who limit the duration of a patient's first prenatal care appointment.

Hypothesis 8. Participation in Medicaid will be higher for OBGYNs who substitute their presence at the first prenatal care appointment with less expensive healthcare professionals.

Hypothesis 9. Participation in Medicaid will be higher for OBGYNs who administer a higher number of tests in a patient's first prenatal care appointment.

Limited Access Dimension

A second provider strategy is simply to continue serving paying patients and to limit or deny services to Medicaid patients. In such a practice setting, a physician may attempt to limit the attractiveness of his or her practice to new Medicaid patients. For example, the physician may try to limit access by not having appointment times available to Medicaid recipients for a week or two, or the physician may have a limited number of hospitals at which he or she will deliver.

Research has consistently shown that inaccessibility of office-based care severely limits Medicaid recipients' ability or willingness to obtain prenatal care (Institute of Medicine 1988). Likewise, the research team, through preliminary field work, found that Medicaid recipients often prefer to deliver their children at private hospitals to lessen the stigma of having a "welfare baby." As such, Hypothesis 11 suggests that Medicaid patients will be attracted to physicians who offer a wider variety of delivery settings.

Prenatal care use is also influenced by the attitudes and styles of providers. For example, poor communication about procedures, failure to answer questions, and hurried and otherwise depersonalized care results in reduced utilization of healthcare services (Institute of Medicine 1988). Limited and difficult communication toward a prospective teen patient seeking a prenatal appointment may lead to an unfortunate mix of hostility, passivity, and

evasiveness on the part of the client, often forcing her to look for care elsewhere (Ross and Duff 1982; Stevens-Simon, Fullar, and McAnarney 1992). This can be seen in a physician receptionist's willingness to help first-time prenatal patients make appointments. Since first-time pregnant patients often seek information, receptionists play a key role in projecting an image of receptiveness. Research Hypotheses 10–12 reflect OBGYNs' limiting of access to care for Medicaid participants.

Hypothesis 10. Participation in Medicaid will be lower for OBGYNs who have longer wait times for prenatal care appointments.

Hypothesis 11. Participation in Medicaid will be lower for OBGYNs with delivery privileges at fewer hospitals.

Hypothesis 12. Participation in Medicaid will be lower for OBGYNs whose office receptionists are less helpful to information-seeking prenatal care patients.

METHODS

DATA AND DATA SOURCES

Two hundred twenty-one of the Chicago area physicians who self-report as obstetricians and gynecologists ($n = 671$) on the American Medical Association's Physician Master File were surveyed for this study. The Master File, updated in 1993, lists the entire U.S. physician population, including members and nonmembers of the AMA. Of these physicians, 431 had offices in Chicago; the remainder (240) had offices in Chicago suburbs. The Master File had office telephone numbers for 215 Chicago physicians (49.9 percent) and 139 suburban physicians (57.9 percent). Of these, many phone numbers were incorrect. The final sample (221, 32.9 percent of the total) contained 136 physicians from Chicago and 85 physicians from Chicago suburbs.

Other Master File variables included in this research were physicians' medical school location (i.e., foreign or United States), office addresses and phone numbers, gender, and medical school graduation date. Medical school graduation date was used to determine a "years in practice" variable. These variables were used to compare respondent and nonrespondent populations (i.e., those physicians for whom we were unable to obtain a correct phone number). Interview respondents were more likely to be male (71.4 percent to 58.9 percent), to be foreign medical graduates (38.9 percent to 23.2 percent), and to have been in practice longer (23.6 years to 16 years) than nonrespondents.

Phone interviewers asked a number of questions concerning appointment availability, the tests conducted, and the time length of the first prenatal care appointment. Interviewers also scored each interviewee in terms of "helpfulness" in supplying asked-for information. A "helpfulness" indicator is particularly pertinent for considering whether teens seek prenatal care (Stevens-Simon, Fullar, and McAnarney 1992). A "helpfulness" protocol was determined through pretesting on obstetricians in another city. Inter-interviewer reliability was enhanced through common interviewing technique education.

Data collected from the Master File and the telephone surveys of physicians were combined with 1990 U.S. Census data to approximate the community characteristics of physicians' office locations. The office location of OBGYNs is given by zip code in the Master File. The ratio of the number of OBGYNs per 10,000 population in a zip code is used as an approximate measure of OBGYN practice concentration.

INTERVIEW PROCEDURES

Two women graduate students in their mid-20s each posed as the sister of a pregnant teenager in order to gain information for this study. These interviewers called obstetricians' offices during normal working hours and generally encountered the office receptionist. The interviewers explained that they were attempting to gain information about the care provided in a first prenatal care appointment to help their "sister" determine where to seek care. There was no attempt to make an appointment. It was necessary to have interviewers pose as an older sister because it was felt that the kinds of information being sought might have been perceived as being too sophisticated for a teen. After gathering the required information, interviewers asked whether the physician would see a new, Medicaid-eligible patient. Responses to this question were used to divide physicians who accepted teen Medicaid patients at their offices from those who did not. Some interviewees qualified negative responses by stating that the physicians would see a Medicaid patient at a clinic. These responses were coded as having the physicians unavailable to see a Medicaid patient (at the physician's office).

ANALYSES

Bivariate analysis was conducted via chi-square tests, and model building was conducted using logistic regression. Logistic regression was conducted for individual variables and groups of variables. That is, the variables for each theoretical group are combined and analyzed for significance in an

attempt to limit intercorrelation between individual variables and because this research is primarily concerned with the relative strength of physician participation models. The significance of alternative groups of variables in logistic regressions, which is referred to as joint significance in this article as well as in previous research (Perloff, Kletke, and Fossett 1995), was tested using a likelihood ratio test. The null distribution of the test statistics are approximately chi-square (Hosmer and Lemeshow 1989).

RESULTS

OBGYNS' PARTICIPATION IN MEDICAID

Overall, 81 of 221 physicians (36.7 percent) accepted new Medicaid patients for prenatal care. Participation rates varied widely between OBGYNs with offices in Chicago (44.1 percent) and those practicing in the suburbs (24.7 percent). The overall physician participation rate of this research is lower than previous studies and appears to be in line with downward trends in the rate of physician participation in Medicaid and participation by obstetricians and gynecologists (e.g., American College of Obstetricians and Gynecologists 1988; Mitchell and Schurman 1984).

DUAL MARKET MODEL

Bivariate analyses indicate some support for the dual market model. Table 1 shows that Medicaid participation by foreign medical graduates was significantly greater than that of U.S. medical graduates, which supports Hypothesis 1. However, Table 1 also shows that physicians who have been in practice longer are more likely to accept new Medicaid patients. This result negates Hypothesis 2. A possible explanation may be that these physicians have developed more efficient practice styles that increase patient volume and offset lower Medicaid reimbursement levels.

Table 1 also shows that OBGYNs are more likely to participate in Medicaid if they practice in areas with either very low or very high concentrations of OBGYNs. This nonlinear relationship neither supports nor negates either the dual market or residential segregation models (Hypotheses 3 and 4). The dual market model predicts a positive linear relationship between physician participation and practice location concentration, while the residential segregation model predicts an inverse relationship. The finding of a nonlinear relationship indicates a need to further develop physician participation in Medicaid models.

Table 1: Results of Dual Market and Residential Segregation Models: Characteristics of Obstetricians and Gynecologists Who Accept New Medicaid Patients

Dual Market Model		
Country of medical education	N	*Percentage Accepting New Medicaid Patients*
U.S. medical graduate	134	25.4
Foreign medical graduate	87	47.0
		($p < .001$)
Years in practice		
0–9	25	20.0
10–19	73	28.8
20–29	64	54.7
30+	59	33.9
		($p < .01$)
Residential Segregation Model (by Zip Code)		
OBGYNs per 10,000 population		
1–2	76	52.6
3–5	65	26.2
6–16	41	22.0
>16	39	38.5
		($p < .01$)
Percent nonwhite		
<10	63	19.1
10–24	60	35.0
25–49	48	45.8
≥ 50	50	52.0
		($p < .01$)
*Percent below poverty level**		
<10	123	27.6
10–25	53	49.0
>25	41	52.5
		($p < .01$)

* The poverty level for a family of four in the United States was approximately $15,000 in 1990. Fifteen percent of all Americans live below the federal poverty level (Department of Income Statistics, U.S. Census Bureau).

RESIDENTIAL SEGREGATION MODEL

Other hypotheses regarding the residential segregation model were also tested. Table 1 shows that there are significant differences in OBGYNs' participation in Medicaid via neighborhood demographic characteristics and that the direction of the participation rates is consistent with the residential

segregation hypotheses model (i.e., Hypotheses 5 and 6).[2] First, the data indicate that OBGYN participation rates increase in zip code areas with higher nonwhite populations. This finding is complemented by analysis that shows that those OBGYNs who work in the poorest neighborhoods have relatively high Medicaid participation rates (i.e., 52.5 percent).

Table 2 shows that a fewer-than-average number of obstetricians (27.9 percent) work in the poorest neighborhoods (i.e., more than 25 percent of the population below the poverty line). This finding adds support to the general contention that physicians "tend to locate in upper-income areas" of cities (Perloff, Kletke, and Fossett 1995: 12). Table 2 also shows that a high percentage of OBGYNs in the wealthiest neighborhoods of Chicago do not accept new Medicaid patients and that many of the wealthier neighborhoods (50 percent) in Chicago do not have any OBGYN practice locations in them. This finding is also in support of the residential segregation model. Overall, these findings suggest that many Chicago OBGYNs split into two practice orientations: (1) those who work in poorer neighborhoods and are generally willing to see new Medicaid patients, and (2) those who are clustered together in a few wealthier neighborhoods and are generally unwilling to see Medicaid patients. Further, the findings of this research are consistent with previous research on Chicago OBGYNs, which found that participation ranged from 31 percent of those OBGYNs located in areas of Chicago with few Medicaid recipients to 100 percent of physicians located in areas with large numbers of recipients (Fossett et al. 1990).

PHYSICIANS' RECEPTIVENESS MODEL

Bivariate analyses show strong support for the physicians' receptiveness model. Table 3 illustrates the extent to which physicians' receptiveness

Table 2: Obstetricians' and Gynecologists' Office Location by Chicago Neighborhood Poverty Level

Percent of Population Below Poverty Level by Zip Code Area	*Total Zip Codes*	*Total OBGYNs in Zip Area*	*Percent Zip Areas with OBGYNs*	*Percent OBGYNs Who Accept Medicaid Patients*
Less than 10%	18	52	50%	32.7%
10% to 25%	17	46	70.6	56.5
More than 25%	20	38	55	47.2
Total	55	136	58.2%	44.1%

Note: The downtown Chicago zip codes 60601 to 60606 were aggregated as one zip code to attain a larger than 10,000/zip code population ratio.

differs between OBGYNs who participate and those who do not participate in Medicaid. Hypotheses 7–9 consider whether participating OBGYNs are more actively pursuing cost containment in patient care. As shown in Table 3, there is no support for Hypothesis 8 (use of lower-cost healthcare professionals) and limited support for Hypothesis 9 (use of more tests). However, the data clearly indicate that physicians who participate in Medicaid have shorter appointments for their patients than physicians who do not participate (Hypothesis 7).

Hypotheses 10–12 consider whether OBGYNs might limit access to their care. It is suggested that rather than directly denying care to a Medicaid recipient, some physicians might attempt to avoid Medicaid patients by being less accessible. Table 3 indicates that prenatal care patients are more likely to get an appointment within the week with participating physicians (Hypothesis 10). Such a situation would give further credence to the dual market theory, which predicts that physicians busiest with non-Medicaid patients will have less financial incentive to accept new patients who are Medicaid recipients.

There is little difference between Medicaid participants and nonparticipants in terms of the number of hospitals at which they perform deliveries, so Hypothesis 11 is rejected. Finally, the analysis presented in Table 3 indicates that Medicaid-participating physicians' offices are more likely to be helpful in assisting prenatal care patients who are seeking appointment information (Hypothesis 12). As shown, over 95 percent of the receptionists who were "difficult" toward inquiring patients worked for physicians who would not accept new Medicaid patients.

RESULTS OF MULTIVARIATE ANALYSIS

Table 4 presents the results of logistic regression analysis for Medicaid participating and nonparticipating OBGYNs. This analysis indicates limited support for the dual market model and residential segregation models. That is, one dual market variable, the country of medical education, is significant ($p = .01$), and a residential segregation model variable, percent nonwhite, is significant ($p = .05$). Results further indicate that as groups, neither the dual market variables nor the residential segregation variables significantly alter log-likelihood ratios when they are omitted from the regression model.

The results of the logistic regression indicate stronger support for both dimensions of the physicians' receptiveness model: cost containment at first appointment and limited access. The "appointment duration" ($p = .05$) and

Table 3: Analysis of Physicians' Receptiveness Model: Practice Characteristics of the Obstetricians and Gynecologists Who Accept New Medicaid Patients

Cost Containment (at first appointment)		
Physician involvement	N	*Percentage Accepting New Medicaid Patients*
no physician	8	25.0
physician present	213	37.1
		(p = n.s.)
Appointment Duration		
<20 minutes	21	61.9
20–45 minutes	123	41.5
>45 minutes	77	22.1
		(p > .001)
Tests Administered		
no answer	2	50.0
1	16	31.3
2	43	30.2
3	61	39.3
4	68	38.2
5	31	38.7
		(p = n.s.)
Limited Access		
Appointment Availability		
<6 days	102	50.0
6–12 days	63	27.0
>12 days	56	23.2
		(p > .001)
Number of Hospitals with Delivery Privileges		
1	123	34.1
2	72	40.3
3	24	41.7
4+	2	0.0
		(p = n.s.)
Receptionist Helpfullness		
Difficult	24	4.2
Adequate	83	27.7
Very helpful	114	50.0
		(p > .001)

the "tests administered" ($p = .05$) variables are significantly related to participation in Medicaid, indicating prediction strength for the cost containment dimension. Also, the group of cost containment variables are jointly significant

Table 4: Comparison of Physician Participation in Medicaid Models: Logistic Regression of Obstetricians' and Gynecologists' Participation and Nonparticipation in Medicaid

Variables	*Coefficient and (Std. Error)*
Intercept	−4.909*
	(1.962)
Dual Market Model	
• Country of medical education	1.434**
	(0.473)
• Years in practice (squared)	0.001
	(0.004)
• OBGYNs per 10,000 population	−0.011
	(0.014)
Residential Segregation Model	
• Percent nonwhite	2.668*
	(1.446)
• Percent below poverty	−0.229
	(0.501)
Physicians' Receptiveness Model:	
Cost containment at first appointment†	
• Physician involvement	0.573
	(1.293)
• Appointment duration	−0.745*
	(0.338)
• Tests administered	0.299*
	(0.166)
Limited access‡	
• Appointment availability	−0.111
	(0.245)
• Delivery privileges	0.026
	(0.264)
• Receptionist helpfulness	1.405**
	(0.408)
Log Likelihood	−88.27
Number of Cases	221
Degrees of Freedom	11

* Significant at $p = .05$; ** Significant at $p = .01$.

† Cost containment at first appointment variables jointly significant at $p < .005$.

‡ Limited access variables jointly significant at $p < .005$.

($p < .005$) indicating support for this dimension of the physicians' receptiveness model. Likewise, there is support for the limited access dimension of the

physicians' receptiveness model. In particular, the "receptionist helpfulness" variable is significant ($p = .01$) in relation to OBGYN Medicaid participation. Also, the group of limited access variables is jointly significant ($p < .005$) indicating support for the limited access dimension of the physicians' receptiveness model.

CONCLUSIONS AND FUTURE RESEARCH DIRECTIONS

Overall, 36.7 percent of OBGYNs accepted new teen Medicaid patients for prenatal care. This finding is of particular interest because this is the first study that measures participation via Medicaid patients' interest in making their first prenatal care appointment. It is argued that the design of this survey more accurately reflects the barriers that a pregnant Medicaid-eligible patient encounters when seeking office-based prenatal care.

Research results also indicate the strength of adding a physicians' receptiveness model to existing physician participation models. One dimension of the physicians' receptiveness model is the notion of the degree to which physicians' cost containment practices account for whether they participate in Medicaid or not. Analysis shows that physicians who participate in Medicaid have shorter appointments and administer more tests for their patients than physicians who do not participate. This result indicates that OBGYNs who participate in Medicaid may attempt to compensate for lower revenues per patient by seeing more patients and administering more tests. Further research needs to consider the extent to which other cost containment measures are more prevalent in Medicaid participating physicians' practices and whether a given physician is more likely to implement cost containment measures with Medicaid patients than with privately insured patients. Also, research should consider whether similar cost containment strategies become more prevalent with the growth of Medicaid HMOs.

A second dimension of the physicians' receptiveness model considers how physicians may limit their accessibility to Medicaid patients. Analysis shows that participating OBGYNs are more likely to have appointment availability within the week. This may be because participating OBGYNs have shorter appointment times and, presumably, have the ability to see a higher volume of patients. Alternatively, it may indicate that physicians with busier practices may be less inclined to accept Medicaid patients. Another salient finding is that non-Medicaid-participating OBGYNs are much more

likely to have receptionists who are not helpful to patients with questions. This finding begins to capture the extent to which patients' feelings toward the physician offices' receptivity are indicative of whether a physician is willing to accept new Medicaid patients or not. This finding points to the need to consider the extent to which attitudinal and organizational barriers may be compounding the problems of the accessibility of office-based physician care to Medicaid prenatal patients. For example, previous research indicates that OBGYNs perceive Medicaid patients to be more litigious and higher risk (American College of Obstetricians and Gynecologists 1988).

Overall, this research indicates that physician participation in Medicaid is guided by both economic and social concerns. That is, physicians appear to manage their practices to attract certain patient types, and these patient recruitment practices are reflected in differing patterns of physicians' participation in Medicaid. For example, further research might consider whether physicians may be willing to accept some, but not all, Medicaid prenatal patients; that is, whether there may be a "tipping point" at which a physician's practice loses its identity as a private practice and becomes a Medicaid practice. Future research might also consider the conditions under which physicians gain economies of scale in either accepting no first-time Medicaid patients, or many, for prenatal care.

Readers should be aware of potential shortcomings with this research. First, analysis indicates that respondents are more likely to be male foreign medical graduates and to have practiced longer than nonrespondents. These differences could lead to biases in the findings that are presented. Second, appointment information is given before the interviewees know that the potential patient is a Medicaid recipient. Subsequent research could consider whether receptionists may respond differently to patients who identify themselves as Medicaid recipients at the beginning of appointment inquiries. Third, this study focuses on Medicaid-eligible teenage women and the type of prenatal care they can obtain from obstetricians. It is not clear whether these results may be generalizable to other Medicaid patient populations or physician specialties. Fourth, it is unclear from this research the extent to which some OBGYNs may accept new Medicaid prenatal patients in an institutional setting such as a hospital outpatient department, public health clinic, and community health center. Despite these limitations, however, this research provides a first step toward helping researchers build a stronger and more holistic model of physician participation in Medicaid. Ultimately, this should lead to a better understanding of how to combat the problems of access for our most needy populations.

NOTES

1. Seeking Medicaid patients is the condition that is often depicted in the high-patient-volume "Medicaid mills" that are found in urban areas. In such practice settings, a physician may serve up to 60 or 70 Medicaid patients in a day, limiting patient visits to an average of four or five minutes (Brodt, Possley, and Jones 1993). This suggests that the care given at these physicians' offices will be oriented toward cost containment practices.
2. It should be noted that Fosset et al. (1990) use the number of AFDC recipients per capita in determining inner-city zip code areas with the greatest need. This research as an alternative uses the poverty level for a family of four in 1990, as established by the U.S. Department of the Census, to determine areas with greatest need in Chicago.

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