

Barriers to Prenatal Care for Low-Income Women

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Inadequate prenatal care is associated with poor birth outcomes. Recognizing barriers to care is necessary to improve results. Postpartum in-hospital interviews were conducted with women admitted through emergency departments with no physician of record ($n=69$) in 8 Sacramento hospitals during April and May 1991. A focus group of local obstetrician-gynecologists was used to determine physicians' attitudes about caring for low-income women. We undertook the study in response to an increased number of "no doc" births. The inability to find a physician willing to accept them was reported by the women as the single largest barrier to obtaining care, cited by 64% of women overall and 96% of those who tried but were unable to obtain care. Transportation difficulties were a problem regardless of women's success in obtaining care and were ranked as the top barrier by women who never tried to obtain care. Physicians cited administrative difficulties and reimbursement levels of Medi-Cal plus extra care requirements and resource dependency of low-income patients as barriers to caring for this population. The value ascribed to prenatal care by women and physicians' perceptions of women's attitudes about care contrasted sharply. The link between poor women and physicians providing obstetric services can be fragile. The difficulty finding physicians willing to take them indicates that these women need special support services to ensure adequate care during pregnancy.

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Prenatal care is generally associated with improved birth outcomes, but between a third and a fourth of all pregnant women in the United States do not obtain early, continuous prenatal care.¹ In California in 1989, 7.2% of infants were born to women who had no prenatal care or obtained it only in the third trimester.² Nonwhite women and those on Medi-Cal (Medicaid) or without health insurance coverage are significantly less likely than others to secure care.¹

A major contributor to the difficulties in gaining access to obstetric services is the declining number of physicians practicing obstetrics. About one of eight obstetricians has discontinued providing obstetric care in the past several years.³ The access problem is further exacerbated by the decreasing physician participation in Medi-Cal. In 26 northern California counties, a 13.5% drop in the number of physicians offering obstetric services and a 20% attrition rate among those accepting new Medi-Cal patients have occurred in the past two years. In Sacramento County, the largest suburban county in this area, the number of obstetricians dropped by 16% during this period (Sierra Health Foundation, "Access to Prenatal Care in Northern California: 1990 Update," Sacramento, Calif, June 1990). No new prenatal clinics opened in this geographic area during the period, and the university hospital's department of obstetrics and gynecology reduced its caseload.

Physician shortages notwithstanding, myriad factors

affect the use of prenatal care services. Serious efforts to understand and reduce barriers to the use of prenatal care services are especially important for low-income women because poverty status is inexorably linked to the risk of pregnancy-related complications and poor birth outcomes. Postpartum in-hospital interviews of women with little or no prenatal care in New York City,⁴ Texas,⁵ and Los Angeles⁶ have shown that financial obstacles and women's beliefs and attitudes about prenatal care are the major impediments to early and continuous prenatal care services. Other issues that have been recognized as barriers to health care services in general include problems with transportation and child care, excessive waiting time for new appointments and during clinic visits, language barriers, and cultural differences between patients and physicians.

Hospitals across the United States have reported a growing number of women presenting at emergency departments for delivery who have no physician of record. This means that, although a woman may have received some prenatal care during the pregnancy, she is not currently under care at the time of delivery. "No doc" births have increased as a proportion of total deliveries at each of the four largest obstetric hospitals in Sacramento County and make up more than one of every five births at the local university hospital.

We report a two-part study examining reasons cited by postpartum women for their failure to obtain prenatal

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care and factors cited by obstetricians for their reluctance to accept pregnant Medi-Cal patients. The study was undertaken by a nonprofit human services planning organization on behalf of the county medical society, hospital association, public health department, and community clinics in Sacramento County in response to a growing shortage of obstetric providers in the county and an increasing number of obstetric admissions through hospital emergency departments. The purpose of the study was to identify barriers to prenatal care services from patients' and physicians' perspectives and to plan a countywide strategy to increase access to care.

Patients and Methods

Patient Survey

Postpartum in-hospital interviews were conducted with all women admitted through emergency departments who gave birth in eight Sacramento-area hospitals without having a physician of record during April and May 1991. (The only unique characteristic of births during this period is the higher volume of births in spring months.)

To identify women with no link to an obstetric provider at the time of delivery, investigators contacted hospital obstetric department managers daily between April 1 and May 10, 1991, to determine if any women had been admitted without having a physician of record. All women presenting under such circumstances were asked by hospital staff after the birth if they would consent to be interviewed about their use of obstetric services. Women whose babies had died were not asked to participate in the study. Interviews were conducted by an ethnically and linguistically diverse pool of community health outreach workers and by nurse practitioners and midwives from Planned Parenthood and generally lasted from 45 minutes to an hour.

An interview instrument based on questionnaires used in similar interview projects was developed and adapted to emphasize issues of particular concern in Sacramento County (Community Services Society, "Prenatal Care Study of New York," unpublished data, 1990).⁷ The questionnaire used both open-ended and closed questions to identify barriers to and perceptions about the value of prenatal care. Interviewers first read 36 possible influences on the use of prenatal care in consistent order and asked women whether each had been a major issue, somewhat of an issue, or not an issue in obtaining care and which of the 36 was the single most significant barrier. In the open-ended questions that followed, women were asked without prompting to describe the problems that kept them from receiving care during pregnancy. Answers to open-ended questions, which allowed women to volunteer information such as alcohol and drug use and to speak in their own words, were not analyzed differently from close-ended questions.

Physician Focus Group

Seven obstetric-gynecologic physicians representing the diverse mix of the Sacramento-area obstetric commu-

nity were invited and agreed to participate in a three-hour focus group conducted by the county medical society. The physicians were selected for their breadth of involvement in professional organizations and interactive opportunities with colleagues and were representative of sex and ethnic profiles among Sacramento obstetricians. The objective of the session was to solicit physician perceptions about the problem of inadequate prenatal care for low-income women in Sacramento and possible solutions for addressing it. Because the physicians were extremely active in the medical community and likely to have perspectives beyond their own practices, they were also asked to represent the views of most of their obstetric-gynecologic colleagues. Although "low-income patient" was intended to be defined broadly, physicians' responses indicated that the term became analogous to

TABLE 1.—Distribution of Women by Selected Background Variables, According to Use of Prenatal Care

Variables	Total		Some Care		No Care, Tried		No Care, Did Not Try	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Total	69		26	(38)	23	(33)	20	(29)
Age, yr								
≤ 19	10	(14)	7	(70)	2	(20)	1	(10)
20-29	42	(61)	15	(36)	14	(33)	13	(31)
≥ 30	17	(25)	4	(24)	7	(35)	6	(35)
Race or Ethnicity								
White, non-Hispanic	26	(33)	8	(31)	12	(46)	6	(23)
White, Hispanic	18	(26)	6*	(33)	4	(22)	8	(44)
African American	19	(28)	9	(47)	5	(26)	5	(26)
American Indian	4	(6)	2	(50)	1	(25)	1	(25)
Asian	2	(3)	2	(100)	0	(0)	0	(0)
High School Graduate†								
Yes	36	(53)	18	(50)	8	(22)	10	(28)
No	32	(47)	8	(25)	14	(44)	10	(31)
Parity								
0	8	(12)	5	(62)	3	(38)	0	(0)
1	15	(22)	9	(60)	3	(20)	3	(20)
2	15	(22)	5	(33)	5	(33)	5	(33)
3	14	(20)	4	(29)	8	(57)	2	(14)
4+	17	(25)	3	(18)	4	(24)	10	(59)

*One respondent was reported as both Hispanic and American Indian.

†Schooling data not provided for one respondent.

"Medi-Cal patient." Also evident from physicians' comments was the common perception that all women on Medi-Cal are high-risk patients.

A series of ten open-ended questions solicited information about why physicians were dropping obstetrics, what the greatest barriers were to seeing Medi-Cal patients, how these barriers could be reduced, why the physicians thought more women did not obtain prenatal care, and who needed to be involved to improve access to prenatal care for low-income women. The OptionFinder computerized decision-making system (Option Technologies, Mendota Heights, Minnesota) was used to sort physicians' responses in order of importance.

Results

Characteristics of the Women

A total of 95 women gave birth without a physician of record in eight Sacramento-area hospitals during the six-week study period in April and May 1991, representing 3.4% of the 2,725 births in the county during this period. Of these women, 72 (76%) consented to in-hospital interviews and 69 provided usable responses. Of the total group, 16 (17%) declined to be interviewed, 4 women (4%) were not asked for interviews because their babies had died, and 3 women (3%) were discharged before an interviewer arrived. The demographic characteristics of women who did not consent or were not asked for interviews were not substantively different from those of the women who participated in the study. Differences in the use of alcohol and drugs may have contributed to the reason some women declined to participate in the study.

The distribution of the 69 women by selected background characteristics according to their use of prenatal care is shown in Table 1. About 38% of the women (26) reported that they had had at least one prenatal visit to a physician during their pregnancy. About a third of the

women had received no care but had tried to obtain it. Another 19 (28%) had received no care and did not try to obtain it. Women defined "trying" to obtain care by their own interpretation.

The mean age of all women interviewed was 26 years. Ten (14%) of the women who gave birth without a physician of record were age 19 or younger. As a group, the teen women were much more successful in obtaining some care during pregnancy. Whereas years of schooling did not differ substantially among the women, graduation from high school seemed to be related to success in obtaining prenatal care; a greater proportion of high school graduates who tried to obtain some care were able to do so. The women who made no attempt to find prenatal care were divided equally between those with 12 years of schooling and those with fewer.

Notable differences were recorded among women by racial and ethnic group relative to obtaining prenatal care. Hispanic women were overrepresented among the women who received no care and did not try to obtain it. This was predominantly the case for Hispanic women who were Mexican immigrants. The greatest proportion

TABLE 2.—Major Barriers to Prenatal Care Reported by Women, According to Use of Prenatal Care

Major Barrier	All Women, (n=69)		Some Care, (n=26)		No Care, Tried, (n=23)		No Care, Did Not Try, (n=20)	
	Rank	%	Rank	%	Rank	%	Rank	%
No one taking new patients	1	64	1	59	1	96	8	35
Transportation	2	53	2	33	2	65	1	65
Fare for transportation	3	37	9	19	5	43	2	55
Distance to care	4	34	6	22	7	35	3	50
Difficulty getting appointment	5	33	4	30	4	48	17	20
Didn't know where to go	6	31	12	15	3	52	10	30
Problems with Medi-Cal	7	29	2	33	6	39	--	--
Child care problems	7	29	5	26	12	22	14	25
Family problems	9	26	6	22	--	--	5	40
Felt fine, no need to go	9	26	12	15	9	26	5	40
Pregnant before, knew all	11	23	22	7	9	26	5	40
Couldn't afford care	11	23	16	11	--	--	4	45
No telephone	11	23	9	19	9	26	14	25
Felt depressed	14	20	16	11	12	22	10	30
Denial of pregnancy	14	20	6	22	--	--	10	30
Attitude of physicians, nurses	--	--	9	19	--	--	--	--
Unaware of pregnancy	--	--	16	11	8	30	--	--
Afraid of examinations	--	--	24	4	--	--	8	35
Hassled about smoking	--	--	24	4	--	--	10	30
Afraid of child custody	--	--	16	11	--	--	--	--
Clinic hours inconvenient	--	--	16	11	--	--	--	--
Couldn't see same physician	--	--	16	11	--	--	--	--
Parents knowing	--	--	22	7	--	--	--	--
Afraid to confirm pregnancy	--	--	24	4	--	--	20	15
Hiding pregnancy from others	--	--	24	4	--	--	20	15
Hassled about drinking	--	--	24	4	--	--	20	15
Provider not responsive	--	--	24	4	--	--	--	--
Don't like doctors	--	--	--	--	--	--	17	20
Long wait during visit	--	--	12	15	--	--	--	--
Ambivalence about pregnancy	--	--	12	15	--	--	14	25
Drug use	--	--	24	4	--	--	17	20

of women who reported trying, but not succeeding, to obtain care were white, non-Hispanic; these women represented almost half of that group. African-American women seemed to be the most successful at obtaining care: Nine of the African-American women in the study (47%) reported receiving some care.

Of the women interviewed, 61 (88%) had one or more children in addition to the newborn. Whether a woman had additional children and the number of children she had appeared to have influenced her ability and effort to obtain care; the more children a woman had, the less likely she was to receive prenatal care or attempt to obtain care.

Patient-Reported Barriers to Care

The inability to find a physician was reported by women as the single largest barrier to obtaining care, as shown in Table 2. Failure to find a physician who was accepting new patients was characterized as a major barrier by 44 (64%) women overall and by 22 (96%) of the women who tried but were unable to obtain care. Among women who did not try to obtain care, problems finding a physician did not rank among the most serious barriers. Their difficulties in obtaining obstetric services resulted from not seeking care until the third trimester; arriving in the Sacramento area late in their pregnancy; being dropped by a physician, usually because of missed appointments or drug use; being regarded as high risk; and being unable to find a physician who would accept new Medi-Cal patients.

The second most significant barrier to care was lack of transportation, cited by 36 (54%) women. Transportation appeared to be a more serious problem for those women who had obtained no care, whether or not they tried to obtain it; 28 (65%) of these two groups reported this as a major barrier. Other transportation-related variables that ranked high as major barriers—and highest for the women who did not try to obtain care—were fare for transportation (ranked third and reported by 37% of women) and distance that a woman had to travel to the physician (ranked fourth and reported by 34%).

The inability to afford care and problems related to Medi-Cal were important barriers to care for women. Women with some prenatal care ranked Medi-Cal problems second along with lack of transportation. Not being able to afford care was ranked the next highest problem after transportation variables among women who did not try to obtain prenatal care. Although virtually all (99%) of the women interviewed had applied for Medi-Cal at some time in their lives, Medi-Cal presented a problem for at least a third of the women. In addition to the challenge of locating a Medi-Cal provider, other difficulties described by the women included length of time from application to eligibility, difficulty completing the application form, not knowing at first that they were eligible, inconvenient location of Medi-Cal offices, inability to obtain required information, and fears about applying. Of the 32 (46%) women not on Medi-Cal when they became pregnant, nearly all tried to qualify, and three

quarters were successful in obtaining Medi-Cal coverage by the time of delivery. On average, most women were approaching the third trimester of pregnancy by the time that they initiated the application process; the mean stage of pregnancy at the time of application was 5.6 months. Only 1 of the 69 women in the study was covered by health insurance, and she was enrolled in the Kaiser-Permanente system.

Inadequate child care was cited as a barrier by 21 women (30%) but was a more serious problem for those women with some care. Difficulty making an appointment because of not having a telephone, reported by about a quarter of all women, also ranked higher for women who received some care. Not knowing where to go for care was cited by 22 women (31% of all) but ranked third and was reported by 22 women (52%) who tried unsuccessfully to obtain care. A third of the women who tried to but did not obtain care reported not knowing they were pregnant early in the pregnancy as one of the reasons for failing to get care.

The use of drugs was a serious barrier to care in this population. In the open-ended questions, some women reported being dropped from care because of drug use or being afraid to keep appointments for fear of disclosure. While the methods of the study precluded obtaining an objective assessment of drug use, aggregate toxicity data of the "no doc" women made available by one of the larger hospitals showed that 57% (54/95) of these women tested positive for alcohol and illicit substances. This figure is consistent with data from a universal screening study in which 63% of women having babies with no prenatal care tested positive for alcohol or illicit substances.⁸

Several motivational or behavioral issues were reported by the women as barriers to their seeking care. The two most prevalent overall were feeling fine and thus believing that they did not need care and having had a previous pregnancy and believing that care was unnecessary. These attitudes were expressed by 8 of the women (40%) who did not seek care. Another barrier that ranked high was depression. Although this was not an important issue for the women who had some care, 5 of the women (22%) who had made unsuccessful attempts to obtain care and 6 of those who had not tried (30%) indicated that feeling depressed was an important reason for not obtaining prenatal care. Needing energy to deal with family problems ranked eighth overall as a barrier to care but was fifth for women who did not try to obtain care and for women with some care. Women who did not try to obtain care also reported that trying to ignore their pregnancy (6, or 30%) and feeling ambivalent about it (5, or 25%) kept them from seeking care.

More than 95% of women (66) stated that getting routine prenatal checkups was "very" or "considerably important." Although women who did not try to obtain care rated the value of routine care slightly lower than women who had tried unsuccessfully to obtain care or women who had received some care, 15 of this group (75%) still considered prenatal care very important.

Physician Characteristics

Six of the seven obstetrician-gynecologists in the physician focus group were in solo or small-group private practices. The seventh physician had recently left private practice to direct the obstetric services of a large community clinic. Two of the physicians in private practice had recently dropped obstetrics from their practices; the remaining four physicians in active obstetric practice indicated that they intended to stop providing obstetric services by the time they reached age 55—about 10 years away for most of them. The total number of deliveries in the four obstetric practices ranged from 150 to 500 deliveries per year. The mean number of years since completion of an obstetric residency for the physicians was 18.9 years with a range of 7 to 29 years.

Physician-Reported Barriers

The factors described by physicians as contributing to their reluctance to provide prenatal care for Medi-Cal women are displayed in Table 3. Similar to the results of

TABLE 3.—Physician-Perceived Barriers to Providing Prenatal Care Services to Women on Medi-Cal

Barrier	Rank Order	Frequency*
Administrative paperwork and billing process	1	7
Patients more difficult to care for, require more resources	2	6
Level of reimbursement	2	6
Hard to find appropriate referrals	4	5
Lower compliance than private-pay patients	4	5
Not neat and clean	6	4
Difficulty relating to patients	6	4
Patient attitude of services as a right	8	3
Patient unwillingness to discuss birth control postpartum	8	3
Fear of lawsuits	8	3

*Frequency of mention among the 7 obstetrician-gynecologist participants.

other surveys in California, physicians reported the Medi-Cal reimbursement *process* as the single most important reason for not accepting any or more Medi-Cal patients.^{9,10} (The reimbursement *level* was tied for second in importance.) The frustration of not being paid in a timely manner and being continually challenged about charges and procedures was seen as the primary reason for dropping or not participating in the Medi-Cal program. For physicians who accept Medi-Cal patients, finding specialists to take their patients for consultations or referrals is difficult for the same administrative and financial reimbursement reasons that the obstetricians identified.

Physicians in this group thought that Medi-Cal patients were generally more difficult to care for and required more resources than patients with private insurance, ranking this as second in importance as a barrier to caring for them. They said that a case-management system or financial incentives to physicians willing to spend

more time with Medi-Cal patients would be positive ways for the health care system to address this barrier. The physicians also regarded Medi-Cal patients as less compliant with keeping appointments and following physicians' instructions and believed that Medi-Cal women generally do not place the same value on prenatal care as do private-pay patients. Although some of the physicians were opposed to the idea of patient incentives, others suggested that financial or other incentives (particularly related to transportation and child care assistance) would improve compliance rates.

Despite studies that suggest otherwise, the physicians believed that Medi-Cal patients were more likely than private-pay patients to file lawsuits and to be substance abusers.¹¹⁻¹³ They said that these perceptions continued to be barriers to providing care for the Medi-Cal population. The obstetrician-gynecologists also acknowledged that "physician problems" in relating to Medi-Cal patients because of cultural and socioeconomic differences and patients' personal hygiene habits contributed to their own and their colleagues' reluctance to serve this population. For example, they suggested that the medical society might develop a patient brochure on "standards for a healthier pregnancy" to help women understand the importance of personal cleanliness.

Finally, the physicians were asked their opinions about the use of nurse midwives to expand access to prenatal care for low-income women. Most of the physicians were concerned about the perceived high-risk status of Medi-Cal patients and said that it was inappropriate for midwives to see these patients. They also noted that hiring midwives may not be cost-effective. Midwives spend more time with patients, increasing the unit cost of service and compounding the problems of increasing salaries and decreasing reimbursement from managed-care contracts and Medi-Cal.

Discussion

The results of this study show that the primary barrier to care for poor women who give birth through emergency department admissions with no physician of record is finding a physician who will accept them, particularly in the last weeks of pregnancy, or who will not drop them because of noncompliance or life-style differences. Our findings indicate that the link between pregnant Medi-Cal women and physicians providing obstetric services can be fragile. The impression is that women who initiate care in their first trimester are not high risk, do not use drugs, reside in one county for the duration of their pregnancies, and never or rarely miss appointments will probably be able to obtain care from private-practice physicians. Women who do not meet these criteria, on the other hand, have a more difficult time obtaining care.

The difficulty experienced by low-income women in finding physicians willing to care for them indicates that this population of women needs special support services to ensure adequate care during pregnancy. Among these services are programs that help connect women with willing providers and that employ a monitoring system to

ensure that the connection is made and kept. In view of the transportation problem expressed by most of the women in this and other studies, offering transportation assistance through bus and taxi vouchers or volunteer drivers also seems necessary to ensure compliance with keeping appointments, thereby decreasing physicians' frustration with frequent "no-shows." Programs that are designed to assist private physicians to serve patients with multiple health and social problems are more likely than referral services alone to be successful in increasing the use of prenatal care services.

Although physicians in this study recognized the extra care and resources that women on Medi-Cal often require, the cumbersome payment process and the low level of Medi-Cal reimbursement make physicians less willing to see these patients in their private practices. Simplifying the eligibility procedure for patients and the reimbursement process for physicians would doubtless increase the number of low-income women able to get early and continuous prenatal care. Supplying physicians with information about resources for substance abuse treatment (provided that such resources exist in the community) might also encourage more physicians to maintain resource-dependent patients in their practices.

The value assigned to prenatal care by women contrasted sharply with physicians' perceptions of women's attitudes about care in our study. Physicians judged Medi-Cal patients as having a low regard for prenatal care, but the women in this study ascribed considerable importance to obtaining care during pregnancy. Although studies have shown that women who believe prenatal care is important are more likely to obtain care beginning in the first trimester, attitudes toward the value of prenatal care are not always predictive of behavior.¹⁴ Despite the belief expressed by 95% of our patients that prenatal care was very or considerably important and should be started early, nearly a third did not even try to obtain care. Some women—especially those with previous uncomplicated pregnancies and healthy newborns—do not seek care because they think pregnancy is a normal event not requiring medical attention unless problems arise; however, the high value placed by most women on getting prenatal care indicates that barriers of money, inability to find or keep a physician, cultural differences, drug use, and fear may thwart a woman's intention to obtain care. Two thirds of the women in our study reported that they made efforts to overcome these problems; only half were successful, although not throughout the pregnancy because they still gave birth without having a physician of record.

Our study is limited by the absence of a group obtaining continuous prenatal care to serve as a control. The women in this study were different from other women who gave birth in Sacramento during this period in that they were poorer and depended more on Medi-Cal as their source of payment. Medi-Cal births, which are not evenly distributed among area hospitals, constituted 39.8% of all births in the county and increased by 22% as a proportion of all births over the three-year period preceding this study. The study women were also unevenly

distributed among the youngest and oldest age groups, again similar to other studies of prenatal care utilization.^{6,15} Although our selected sample of women may not be representative of all pregnant women who are poor and have trouble finding physicians to care for them, the sample comprised all of the women in Sacramento who delivered without physicians of record within a given period.

Conclusions drawn from physicians' perceptions are constrained by the inherent limitations in the use of focus groups. Using expert panels and focus groups, which tend to be small, is a common method for gathering information in the fields of medicine and health care when empiric data are not available. The profile of our physicians was appropriate for Sacramento County. Although physicians were not prompted in identical ways to patients, their analogous responses to the questions of barriers, fears, perceptions, and values suggest correspondences on these issues.

The results of our study affirm the importance of understanding patient and physician concerns that impede access to prenatal care, as well as shedding additional light on the reasons some physicians are reluctant to provide obstetric care to poor women. The problem will most likely persist until fundamental changes in the health care delivery and financing systems take place. The critical importance of early and continuous care requires us to consider why women cannot or do not get prenatal care and to devise appropriate means to ensure that they do.

REFERENCES

1. Institute of Medicine: *Prenatal Care: Reaching Mothers, Reaching Infants*. Washington, DC, National Academy Press, 1988
2. Health Data and Statistics Branch: *Advance Tables for 1989 from the Health Data Summaries for California Counties*. Sacramento, Calif, Department of Health Services, 1991
3. Heland KV: Who will deliver our babies? *Med Malpract Prev* 1987 Spring, pp 48-50
4. Chao S, Imaizumi S, Gorman S, Lowenstein R: *Reasons for Absence of Prenatal Care and Its Consequences*. New York, NY, Department of Obstetrics and Gynecology, Harlem Hospital Center, 1984
5. Johnson CD, Mayer JP: *Texas OB Survey: Determining the Need for Maternity Services in Texas*. College Station, Tex, Public Policy Resources Laboratory, 1987
6. Richwald GA, Rhodes K, Kersey L, Silberman IA: *No Prenatal Care Study at Los Angeles County/USC Medical Center Women's Hospital*. Los Angeles, Calif, University of California at Los Angeles, School of Public Health, 1987
7. *Prenatal Care: Medicaid Recipients and Uninsured Women Obtain Insufficient Care*. US General Accounting Office publication No. GAO/HRD 87-137, Appendix II, September 1987
8. *Sacramento County Prenatal Substance Abuse Survey*. Sacramento, Calif, Sacramento County Public Health Department, May 1990
9. *A Prescription for Medi-Cal—Report of the Little Hoover Commission*. Sacramento, Calif, Commission on California State Government Organization and Economy, November 1990
10. *Strategies to Increase Access to Perinatal Care Services for Low-Income Women in California—Recommendations From the Prenatal Policy Conference*. Sacramento, Calif, The Sierra Foundation, November 1990
11. Newhart C, Teran S, Aved BM, Gemmil A, Harer WB, Fink A: *Obstetrical Malpractice Suits Among Medi-Cal Patients in Relation to the General OB Patient Population in California*. Sacramento, Calif, Sierra Health Foundation, 1990
12. Mussman MG, Zawistowich L, Weisman CS, Malitz FE, Morlock LL: Medical malpractice claims filed by Medicaid and non-Medicaid recipients in Maryland. *JAMA* 1991; 265:2992-2994
13. Chasnoff IJ, Landress HJ, Barrett ME: The prevalence of illicit-drug or alcohol use during pregnancy and discrepancies in mandatory reporting in Pinellas County, Florida. *N Engl J Med* 1990; 322:1201-1206
14. Toomey BG: *Factors Related to Early Entry Into Prenatal Care: A Replication*. Columbus, Ohio, Bureau of Maternal and Child Health, Ohio Department of Health, 1985
15. Cooney JP: What determines the start of prenatal care? Prenatal care, insurance and education. *Med Care* 1985; 23:986-997