North Carolina Obstetrics Access and Professional Liability Study Research Summary

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RESEARCH SUMMARY

NORTH CAROLINA OBSTETRICS ACCESS AND PROFESSIONAL LIABILITY STUDY

Overview

In the 1980s a rapid rise in the costs of malpractice coverage for obstetrical services caused many practitioners to stop delivering babies, especially in rural areas. Other factors were also influencing the decision by physicians to exclude obstetrics from their practices. North Carolina was not unlike other states in recognizing a very severe drop in access to obstetrical services in many communities, but there was no clear picture of the degree to which access to obstetrical service was reduced since there is no comprehensive registry of practitioners of services in the State. The North Carolina Rural Health Research Program at the Cecil G. Sheps Center for Health Services Research of the University of North Carolina at Chapel Hill proposed to conduct a study of the specific reasons why obstetricians chose to either drop obstetrics or maintain an obstetric practice, the conditions of their obstetric practice that might cause them to drop obstetrics, their attitudes toward certain proposed policies related to obstetrics and malpractice, and the degree to which their practices were regionalized. The study was funded by the U.S. Office of Rural Health Policy in the Health Resources and Services Administration and subsequently endorsed by the North Carolina Obstetrics and Gynecology Society. The project was staffed by the N.C. Rural Health Research Program with assistance from the North Carolina Office of Rural Health and Resource Development.

A seven-page questionnaire was mailed to all active, licensed obstetricians and obstetrician/gynecologists practicing in North Carolina to determine the availability of their services on a county-by-county basis and the effects of malpractice claims and policies on obstetrical practice in North Carolina. The survey was initially mailed on June 13, 1989 to the 650 obstetricians and obstetrician/gynecologists, including residents in training, identified in the N.C. Board of Medical Examiner's license files as active in North Carolina. An additional 26 physicians were identified through other methods and were mailed questionnaires on June 23, 1989. A follow-up questionnaire was sent to all non-respondents on July 11, 1989. Follow-up telephone calls were made from August through October, 1989 to non-respondents in rural counties to ascertain their practice status. Of the 676 physicians who were sent the survey, 52 were excluded due to death, retirement, moving out of state, or duplication, leaving a total number of 624 physicians. As of March 1, 1990, the response rate was 407 of 624, or 65.2%.

Since the focus of the study was access to obstetrical services in rural North Carolina, data were analyzed using the Office of Management and Budget's definition of Metropolitan Statistical Area (MSA), whereby an area qualifies as an MSA if there is a city of at least 50,000 population, or an urbanized area of at least 50,000 with a total population of at least 100,000. Since the 1983 revision, North Carolina has nine MSAs composed of 25 counties and these counties are referred to

interchangeably in this report as either "metropolitan" or "urban" counties. Those counties not included in MSAs are referred to interchangeably in this report as either "nonmetropolitan" or "rural".

Results

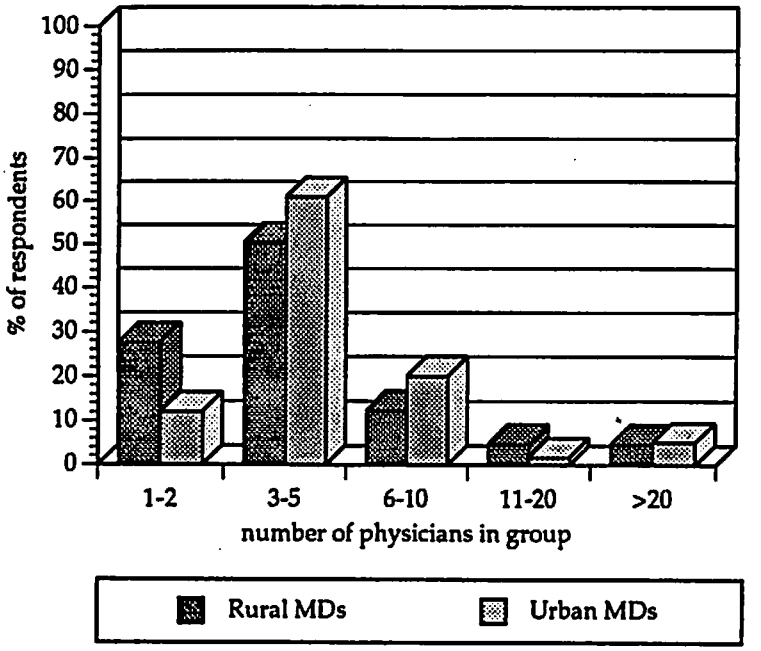
Demographics and Practice Characteristics

Of the 407 physicians responding to the survey, 355 or 87.2% indicated they were practicing obstetrics at the time of the survey. Of the 52 who were not practicing obstetrics, 5 had never practiced obstetrics (all from metropolitan counties) and about half of the remaining 47 physicians had quit in the previous three years (1987-1989). In addition, of the 52 who were not practicing obstetrics, 38 or 73% were from metropolitan counties. Males comprised 91% and females comprised 9% of the respondents, with the mean age being 46.7 years. The rural-urban split among respondents was 40% and 60% respectively. Approximately 75% of the respondents indicated they were in a small group practice of 5 or fewer physicians (Table 1 and Figure 1). Rural physicians tended to have groups with fewer physicians than urban physicians, with more than twice the percentage of rural physicians in solo practice or in two-physician groups.

Table 1
Physician Group Size by Rural-Urban Location

# MDs in practice	State Total (N=279)		Rural Respondents (N=105)		Urban Respondents (N=174)	
	#MDs	% MDs	#MDs	% MDs	#MDs	% MDs
1-2	50	17.9	29	27.6	21	12.1
3-5	159	57	53	50.5	106	60.9
6-10	48	17.2	13	12.4	35	20.1
11-20	8	2.9	5	4.8	3	1.7
>20	14	5	5	4.7	9	5.2

Figure 1
Physician Practice Size by Rural-Urban Location

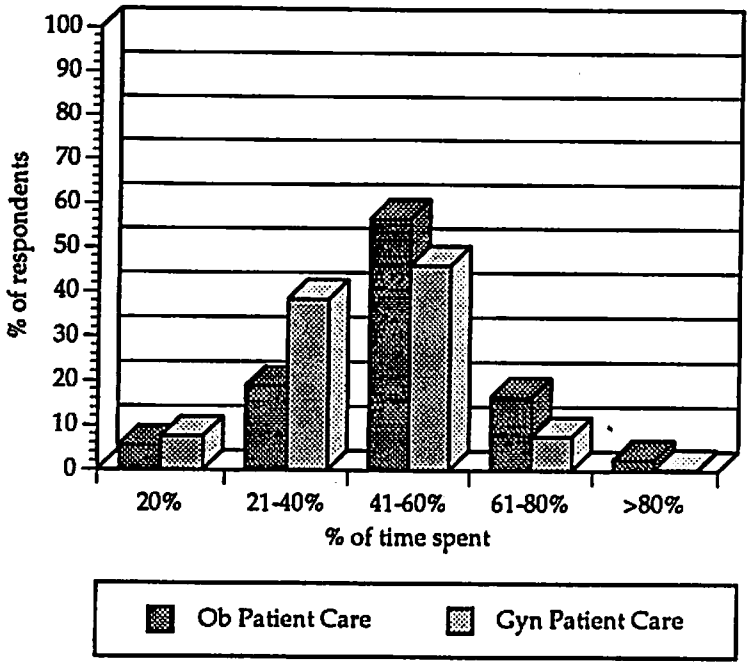


The majority of respondents (56.5%) indicated that they spent 41-60% of their time in obstetrical patient care, with a mean of 51% (Table 2). Gynecology occupied a mean of 44% of physicians' time, and other activities accounted for approximately 5% of their time. There was no appreciable difference between rural and urban physicians in how they reported spending their professional time.

Table 2
Percent Physician Time Spent in Obstetrical vs. Gynecological Patient Care

	Obstetrical Patient Care		Gynecological Patient Care		Other Activities	
% Time	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
≤20%	18	5.6	24	7.6	295	94.9
21-40%	61	18.9	121	38.4	10	3.2
41-60%	182	56.5	145	46	3	1
61-80%	53	16.5	24	7.6	3	1
>80%	8	2.5	1	0.4	0	0

Figure 2
Percent Physician Time Spent in Obstetrical vs. Gynecological Patient Care

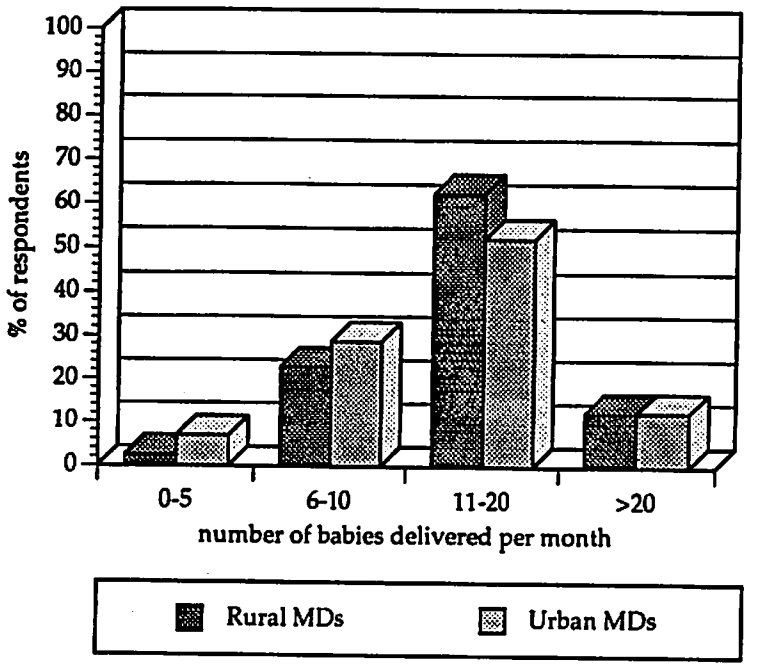


The number of deliveries per month averaged 14.7 per respondent (15.3 for rural MDs; 14.4 for urban MDs), with 7 physicians indicating they delivered over 40 babies per month. Nonmetropolitan physicians seemed to do slightly more deliveries than their metropolitan counterparts; 62% of the nonmetropolitan physicians delivered 11-20 babies per month, while 52% of the metropolitan physicians delivered that many babies per month. Table 3 and Figure 3 show the distribution of physicians delivering babies by location and number of deliveries per month.

Table 3
Number of Deliveries Per Month by Rural-Urban Practice Location

#deliveries per month	State Total (N=324)		Rural Respondents (N=122)		Urban Respondents (N=174)	
	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
0-5	17	5.2	3	2.5	14	6.9
6-10	86	26.5	28	22.9	58	28.7
11-20	181	55.9	76	62.3	105	52.0
>20	40	12.4	15	12.3	25	12.4

Figure 3
Number of Deliveries Per Month by Rural-Urban Practice Location



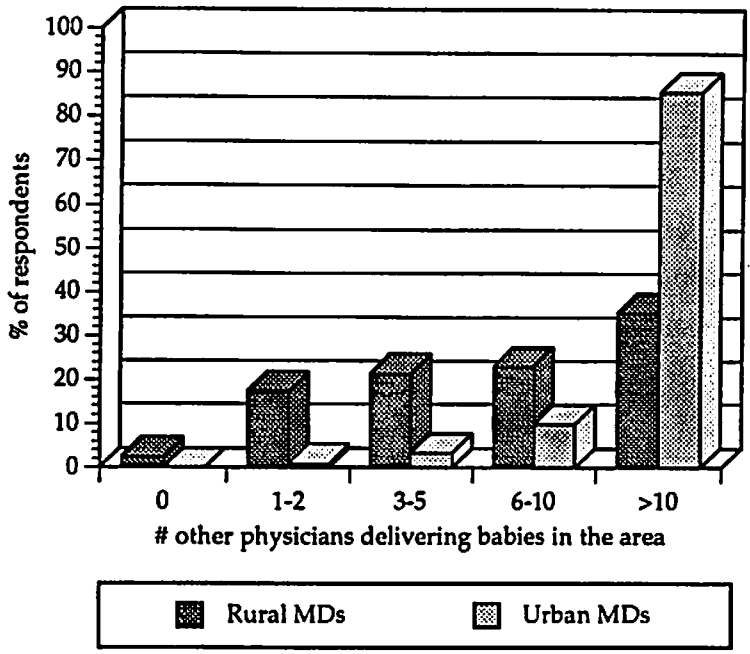
Assistance, Consultation and Coverage in the Community

It is interesting that two-thirds (67%) of the respondents indicated that there are more than 10 other physicians delivering in their self-designated geographic service area; practically all of whom were OB/GYNs. However, a different picture emerges from a metropolitan- nonmetropolitan analysis. Among metropolitan physicians, 86% indicated there were more than 10 other physicians delivering babies in their area, while among nonmetropolitan physicians, only 35% indicated there were more than 10 other physicians delivering babies in the area. Looking at this data from a different perspective, 41.4% of the nonmetropolitan respondents indicated there were 5 or less physicians delivering babies in the area while only 4.5% of their metropolitan counterparts indicated 5 or less physicians delivering in the area. This item may lack reliability due to differences in respondents' interpretation of "area." The data are given in Table 4 and are shown graphically in Figure 4. Regarding providing regular back-up for FPs/GPs doing deliveries, 75% of the respondents indicated that they did not and there was no appreciable difference between metropolitan and nonmetropolitan respondents.

Table 4
Number of Other Physicians Delivering in the Area

# other MDs delivering in the area	State Total (N=323)		Rural Respondents (N=121)		Urban Respondents (N=202)	
	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
0	3	0.9	3	2.5	0	0.0
1-2	23	7.1	21	17.4	2	1.0
3-5	33	10.2	26	21.5	7	3.5
6-10	48	14.9	28	23.1	20	9.9
>10	216	66.9	43	35.5	173	85.6

Figure 4
Number of Other Physicians Delivering in the Area

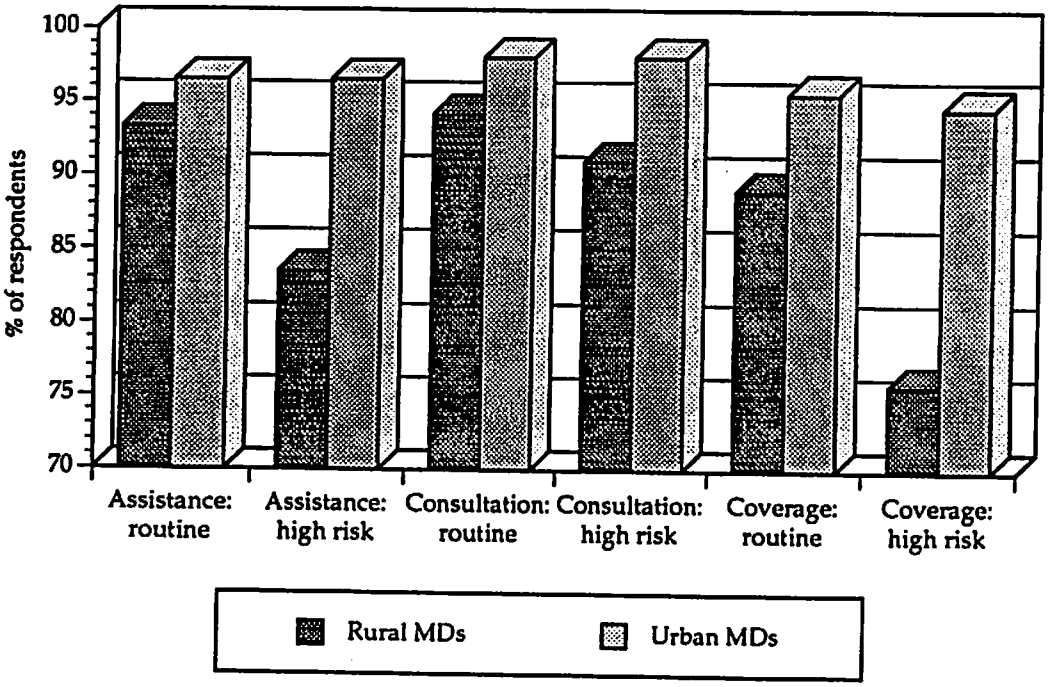


In terms of the adequacy of assistance, consultation and coverage opportunities for both routine and high-risk deliveries in the community, most physicians felt they were "adequate" to very "adequate" (Table 5). Coverage, however, rated lowest for both types of deliveries. Rural-urban differences were greater in responses to the high-risk category of delivery, with 13% of nonmetropolitan and only 1.5% of metropolitan physicians indicating assistance was "inadequate" to "very inadequate." Regarding coverage for high-risk deliveries, 16.7% of rural physicians and only 2.5% of urban physicians indicated coverage was "inadequate" or "very inadequate."

Table 5
Opportunities for Assistance, Consultation and Coverage:
Percent of Physicians Indicating "Adequate/Very Adequate" and "Inadequate/Very Inadequate"

% Physicians indicating: "adequate/ very adequate"	State Total (N=321)		Rural Respondents (N=120)		Urban Respondents (N=201)	
	Routine Deliveries	High-Risk Deliveries	Routine Deliveries	High-Risk Deliveries	Routine Deliveries	High-Risk Deliveries
Assistance	95.3	91.6	93.3	83.5	96.5	96.5
Consultation	96.6	95.3	94.1	90.9	98.0	98.0
Coverage	93.1	87.6	88.9	75.8	95.5	94.5
% physicians indicating "inadequate/very inadequate"						
Assistance	3.1	5.9	6.7	13.2	1.0	1.5
Consultation	2.2	3.4	5.0	7.4	0.5	1.0
Coverage	4.7	7.8	8.6	16.7	2.5	2.5

Figure 5
Opportunities for Assistance, Consultation and Coverage:
Percent of Physicians Indicating "Adequate/Very Adequate"



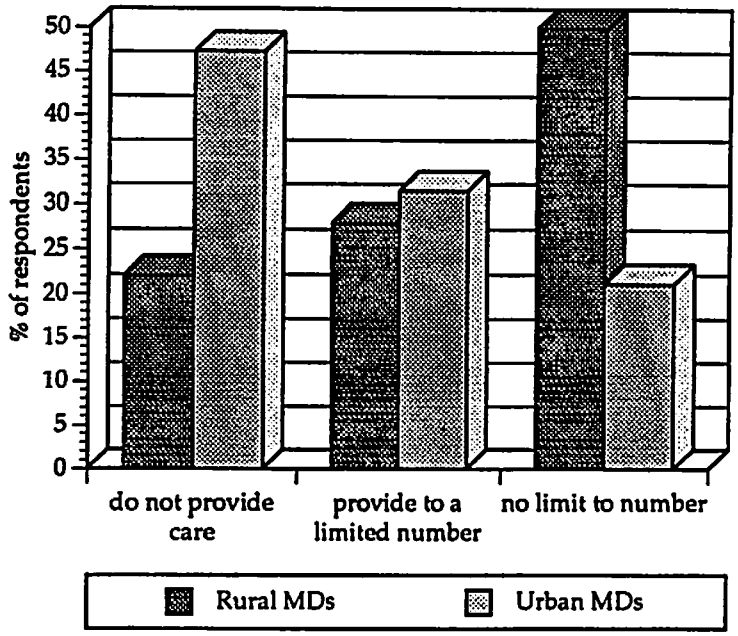
Medicaid Caseload

Approximately 62% of the respondents provided some prenatal and delivery care to Medicaid patients; 38% or 123 physicians indicated that they did not serve this population at all. Results of the metropolitan-nonmetropolitan analysis of physicians providing care to Medicaid patients are shown in Table 6. The biggest difference is seen in the percentage of physicians who provided care to an unlimited number of Medicaid patients: 50% of nonmetropolitan physicians and only 21.2% of metropolitan physicians.

Table 6
Policies on the Provision of Obstetrical Care to Medicaid Patients by Practice Location

policies on the provision of obstetrical care to Medicaid patients	State Total (N=325)		Rural Respondents (N=122)		Urban Respondents (N=203)	
	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
do not provide care	123	37.8	27	22.1	96	47.3
provide to limited number	98	30.2	34	27.9	64	31.5
no limit to number	104	32	61	50	43	21.2

Figure 6
Policies on the Provision of Obstetrical Care to Medicaid Patients by Practice Location

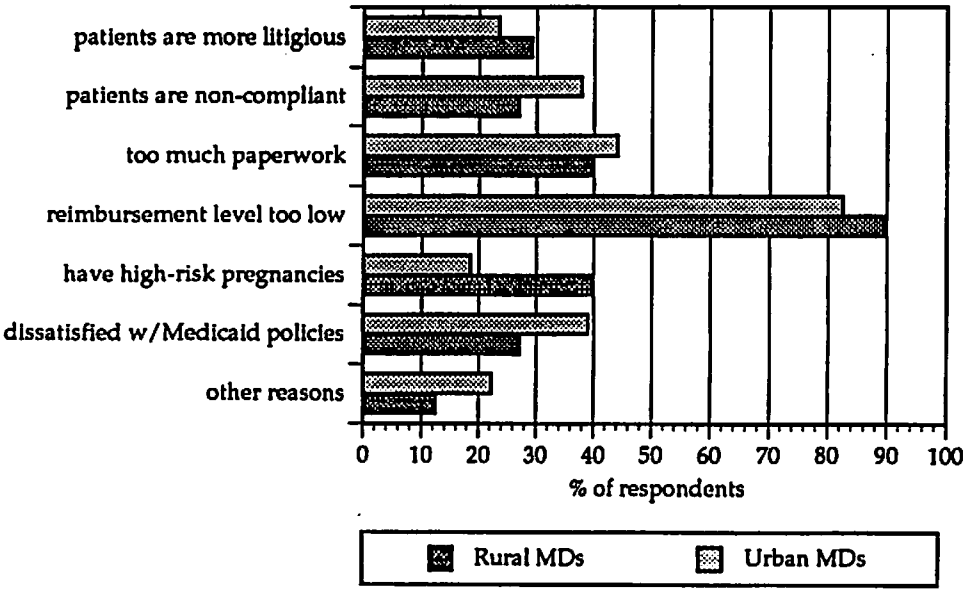


Of the 221 physicians not providing care or providing care to a limited number of Medicaid patients (Table 6), the most important factors influencing their decision were low reimbursement level, excessive paperwork, patient non-compliance and dissatisfaction with Medicaid policies (Table 7). Table 7 shows responses of the 185 physicians who gave reasons for providing limited or no care to Medicaid patients; 27 physicians did not answer this question. Notably, only 21% of respondents' felt that Medicaid patients being more likely to sue influenced their decisions to limit care to these patients.

Table 7
Factors Influencing Decision to Limit Care to Medicaid Obstetrical Patients

factors influencing decision to limit care to Medicaid patients	State Total (N=185)		Rural Respondents (N=48)		Urban Respondents (N=137)	
	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
patients are more litigious	46	20.8	14	29.2	32	23.4
patients are non-compliant	74	33.5	13	27	51	37.8
too much paperwork	79	35.7	19	39.6	60	44.1
reimbursement level too low	155	70.1	43	89.6	112	82.4
have high-risk pregnancies	44	19.9	19	39.6	25	18.5
dissatisfied w/ Medicaid policies	66	29.9	13	27.1	53	39
other reasons	36	16.3	6	12.5	30	22.2

Figure 7
Factors Influencing Decision to Limit Care to Medicaid Obstetrical Patients

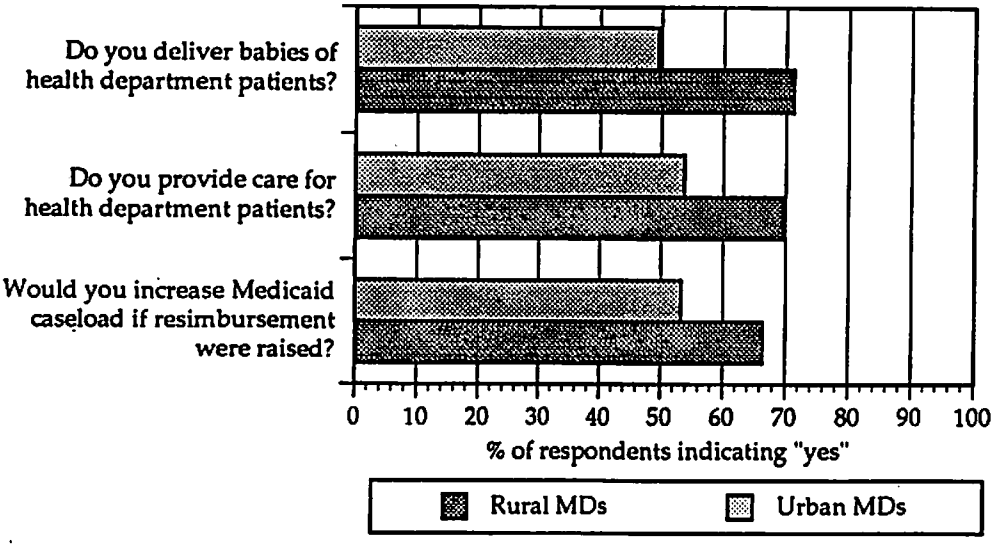


Even though low reimbursement level was the primary reason physicians decided to limit their care of Medicaid patients, only 53% of the urban respondents said they would increase their Medicaid caseload if the reimbursement level for prenatal care and delivery were raised to $1200 from the then current $925. Two-thirds of the rural physicians would increase their Medicaid caseload if the reimbursement level were raised to $1200. On a related issue, about 54% of urban respondents and 70% of rural respondents indicated they provide care or back-up for Health Department patients. About 50% of the urban physicians and 71% of their rural counterparts deliver babies of Health Department patients. Table 8 summarizes this information.

Table 8
Rural-Urban Breakdown: Issues Regarding Medicaid Patients

physicians responding "yes" to these issues:	State Total		Rural Respondents		Urban Respondents	
	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
Increase Medicaid caseload if reimbursement raised?	177	58.4	79	66.4	98	53.3
Provide care for Health Department patients?	193	59.8	85	69.7	108	53.7
Deliver babies of Health Department patients?	187	57.7	87	71.3	100	49.5

Figure 8
Rural-Urban Breakdown: Issues Regarding Medicaid Patients



Approximately the same percentage of respondents did not provide care to Medicaid patients in 1988 as in 1986 (30.9% compared to 31.7%) and this is substantially less than the 1989 figure of 37.8% of respondents not providing care (see Tables 9 and 6). The Medicaid caseload has changed somewhat over the years, however, with physicians indicating larger caseloads than in 1986 (Table 9). For example, in 1986 24.4% of respondents indicated a Medicaid caseload of greater than 20%, while in 1988 this had risen to 28.4%.

Table 9
Respondents' Medicaid Caseload, 1986-1988

Medicaid Caseload	1986 (N=262) % MDs	1987 (N=267) % MDs	1988 (N=285) %MDs
0%	31.7	31.5	30.9
1-5%	22.9	21.3	21.1
6-10%	9.2	10.1	8.8
11-20%	11.8	10.9	10.9
21-40%	14.5	15.4	15.1
41-60%	5.3	5.2	5.6
>60%	4.6	5.6	7.7

There is a large disparity between rural and urban physicians in the percent of their patients who are covered by Medicaid (Table 10 and Figures 9 and 10). The most striking difference is seen in the physicians who indicated that they did not serve Medicaid patients at all, or whose Medicaid caseload was 5% or less. Almost twice the percentage of urban physicians as their rural counterparts had a Medicaid caseload of 5% or less in 1988 (63.6% vs. 33%). Over the past three years, changes among both rural and urban counties have not been large, however, the percentage of rural physicians indicating a Medicaid caseload of greater than 60% has more than doubled (from 3.9% to 8.3%) and has almost doubled for urban physicians (from 5% to 7.4%).

Table 10
Comparison of Medicaid Caseload by Practice Location, 1986-1988

Medicaid Caseload	1986		1987		1988	
	% Rural MDs	% Urban MDs	% Rural MDs	% Urban MDs	% Rural MDs	% Urban MDs
0%	15.7	41.9%	15.5	41.5	15.6	40.3
1-5%	17.6	26.2	17.5	23.8	17.4	23.3
6-10%	6.9	10.6	6.8	12.2	6.4	10.2
11-20%	17.6	8.1	15.5	7.9	17.4	6.8
21-40%	26.5	6.9	28.2	7.3	22.9	10.2
41-60%	11.8	1.3	11.6	1.2	11.9	1.7
>60%	3.9	5.0	4.9	6.1	8.3	7.4

Figure 9
Medicaid Caseload of Rural Respondents, 1986-1988

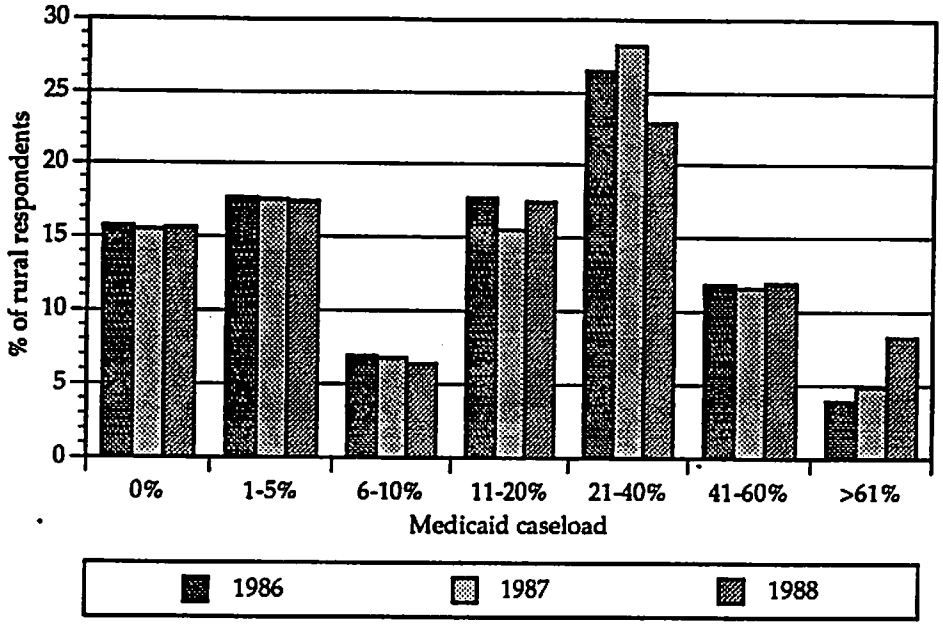
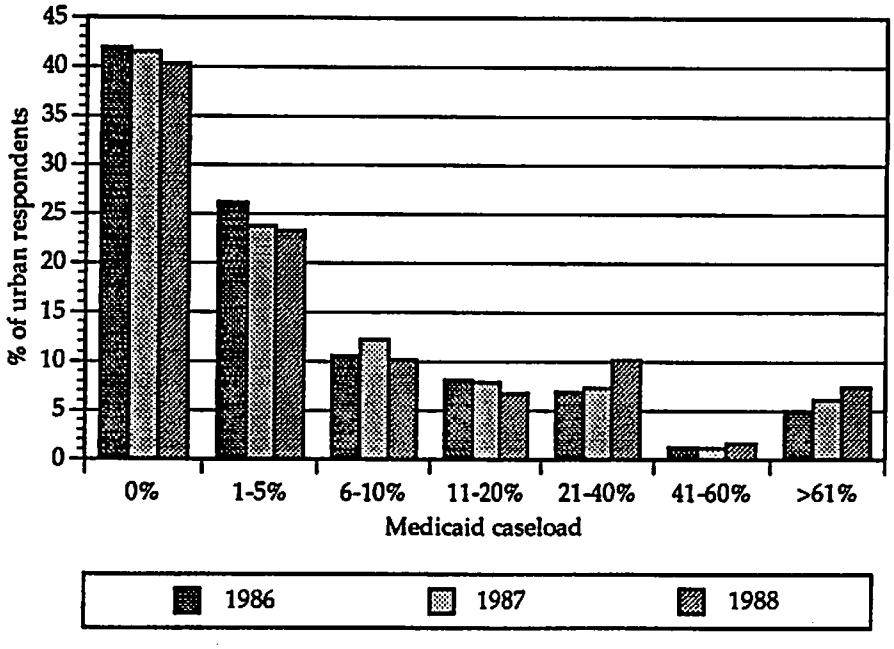


Figure 10
Medicaid Caseload of Urban Respondents, 1986-1988



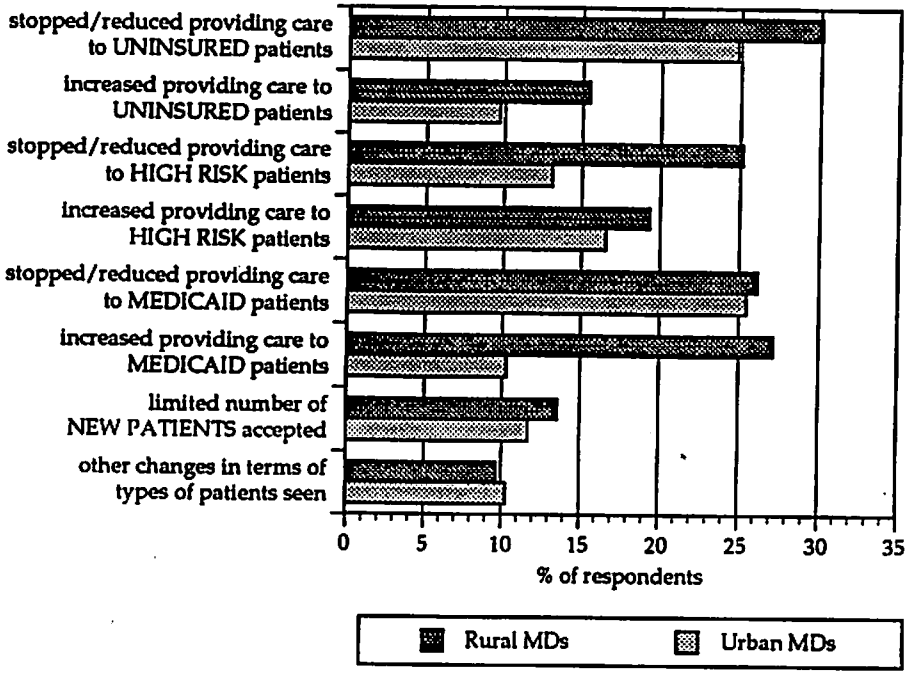
Changes in Obstetrical Practice

The question was asked, "How has your obstetrics practice changed in terms of the types of patients that you see?" Of all the categories of responses, the most frequently cited was "stopped or reduced providing care to uninsured patients," with 27% of physicians indicating this aspect of change. Several interesting differences surfaced when these data were analyzed for metropolitan-nonmetropolitan differences (Table 11 and Figure 11). The most interesting finding was that almost twice the percentage of nonmetropolitan physicians as metropolitan physicians indicated that they had stopped or reduced providing care to medically high-risk patients (25% of nonmetropolitan MDs vs. 13% of metropolitan MDs). However, two and a half times the percentage of nonmetropolitan physicians indicated that they had increased providing care to Medicaid patients (27% vs. 10%).

Table 11
Changes in Obstetrics Practice Regarding Types of Patients Seen

changes in obstetrics practice TYPES OF PATIENTS	State Totals (N=248)		Rural Respondents (N=103)		Urban Respondents (N=145)	
	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
stopped/reduced providing care to UNINSURED patients	67	27.0	31	30.1	36	24.8
increased providing care to UNINSURED patients	30	12.1	16	15.5	14	9.7
stopped/reduced providing care to medically HIGH-RISK patients	45	18.1	26	25.0	19	13.1
increased providing care to medically HIGH-RISK patients	44	17.7	20	19.4	24	16.6
stopped/reduced providing care to MEDICAID patients	64	25.8	27	26.2	37	25.5
increased providing care to MEDICAID patients	43	17.3	28	27.2	15	10.3
limited number of NEW PATIENTS accepted	31	12.5	14	13.6	17	11.7
other changes in terms of types of patients seen	25	10.1	10	9.7	15	10.3

Figure 11
Changes in Obstetrical Practice Regarding Types of Patients Seen



Regarding changes in the medical aspects of practice, about 75% of respondents indicated that they increased their use of tests and monitoring procedures, and raised patient fees due to higher malpractice insurance premiums. Approximately 70% of the physicians indicated they now provide more information to patients about risks and benefits of procedures. Only 27% provide more preventive services, and only 4% have eliminated certain services from their medical practice. Rural-urban differences in terms of changes in medical aspects of obstetrics practice of the previous 12 months were not substantial (Table 12).

Table 12
Changes Regarding Medical Aspects of Obstetrics Practice

Changes in Obstetrics Practice MEDICAL ASPECTS	State Totals (N=301)		Rural Respondents (N=118)		Urban Respondents (N=183)	
	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
increased use of tests or monitoring procedures	224	74.4	93	78.8	131	71.6
increased use of consultations with other physicians	134	44.5	56	47.5	78	42.6
provided more information about risks and benefits of procedures	208	69.1	85	72.0	123	67.2
raised patient fees due to higher malpractice insurance premiums	225	74.8	89	75.4	136	74.3
provided more preventive services such as pap smears	80	26.6	35	29.7	45	24.6
increased use of written consent procedures	121	40.2	53	44.9	68	37.2
eliminated specific services	13	4.3	8	6.8	5	2.7
reduced specific services	8	2.7	3	2.5	5	2.7
other changes	17	5.6	9	7.6	8	4.4

It is notable that only 8% of the respondents indicated that their obstetrical patient volume decreased; 40% said it stayed the same and 52% of physicians' practices saw an increase in obstetrical patient volume over the previous 12 months. Rural-urban differences in terms of obstetrical patient volume are shown in Table 13.

Table 13
Changes Over the Last Year in Obstetrical Patient Volume

changes in obstetrical patient volume	State Total (N=321)		Rural Respondents (N=121)		Urban Respondents (N=200)	
	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
decreased over the year before	26	8.1	13	10.7	13	6.5
stayed the same as the year before	129	40.2	51	42.2	78	39.0
increased over the year before	166	51.7	57	47.1	109	54.5

Of those whose obstetric patient volume decreased, (26 physicians; 13 metropolitan and 13 nonmetropolitan) 30% indicated the important factors were fear of an obstetrics malpractice lawsuit, and the inconvenience of obstetrics practice. Almost three times as many nonmetropolitan as metropolitan physicians listed fear of an obstetrics malpractice lawsuit as an important factor. The majority (almost 60%) listed other reasons influencing their decision to decrease their obstetrical

patient volume. An explanation for this large number of "other reasons" may be that the decision to reduce their obstetrical patient volume was not really a decision, but rather a "natural" decrease that occurred without putting any policies into effect. A rural-urban analysis of the differences in reasons for decreasing obstetric patient volume is shown in Table 14 (1 of the rural physicians did not respond to this question). Due to the small number of cases, caution should be taken in the interpretation of the data in Table 14 and the data should not be generalized to larger populations.

Table 14
Important Factors Influencing Decision to Decrease Obstetrical Patient Volume

factors influencing decision to decrease OB patient volume	State Total (N=26)		Rural Respondents N=13 (1 missing)		Urban Respondents (N=12)	
	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
fear of an obstetrics malpractice lawsuit	8	32.0	6	46.1	2	16.7
ongoing obstetrics lawsuit	4	16.0	2	15.4	2	16.7
increasing costs of obstetrics malpractice insurance	3	12.	2	15.4	1	8.3
uncertainty of future costs of obstetrics malpractice insurance	2	8.0	1	7.7	1	8.3
occurrence type of insurance contract not available	0	0	0	0	0	0
inconvenience of obstetrics practice	8	32.0	5	38.5	3	25.0
lack of adequate back-up	3	12.0	2	15.4	1	8.3
lack of adequate facilities	1	4.0	0	0	1	8.3
decreased interest in practicing obstetrics	5	20.0	5	38.5	0	0
other reasons	16	64.0	7	53.8	9	75.0

Removal of Cerebral Palsy Births From the Tort System

Regarding the proposal then before the North Carolina General Assembly to remove most cases of cerebral palsy from the Tort system, 70% of physicians indicated they did not think passage of this proposal would change their obstetrics practice. Of those who thought it would (95 MDs), 60% thought it would increase their high-risk deliveries. The following table shows the distribution of responses of those physicians who thought passage of this statute would affect their practice. A separate rural-urban analysis showed that differences among respondents did not appear to be significant, except regarding Medicaid patient load; 56% (22) of the rural physicians thought passage would affect Medicaid patient load, while 28% (14) of the urban physicians felt this way. Preliminary results from this survey were instrumental in modifying the proposal, which is still pending before the N.C. General Assembly.

Table 15
Changes in Obstetrical Practice Expected if Cerebral Palsy Proposal is Passed

aspects of obstetrics practice that passage of proposal would affect:	% of physicians (N=95)		
	increase	stay the same	decrease
number of deliveries	44.3%	52.3%	3.4%
number of high-risk deliveries	59.3%	36.3%	4.4%
uninsured patient load	36.8%	62.1%	1.1%
Medicaid patient load	40.9%	56.8%	2.3%

Almost half of the respondents (45.6%) indicated having delivered a baby with cerebral palsy. Only 13 physicians (10%) had a malpractice claim or lawsuit brought against them as a result of the delivery.

Knowledge of the Rural Obstetrical Care Incentive Program (ROCI)

In 1988, the North Carolina General Assembly passed the Rural Obstetrical Care Incentive Program (ROCI) which compensates physicians in underserved areas for the difference between the cost of malpractice insurance with and without obstetrical practice, or $6500, whichever is less (see Chapter 6 of Final Report). Approximately half of the respondents (54.3%; 47% of rural respondents and 59% of urban respondents) had not heard of the ROCI program and only 12 physicians indicated participation in the program (all from rural counties).

Professional Liability Insurance

All of the respondents who were currently practicing indicated that they were covered by professional liability insurance. Malpractice premium rates varied widely among all respondents, but not between metropolitan and nonmetropolitan respondents; 41% of all respondents indicated paying an annual premium in the range of $20-30,000. The largest rural-urban difference occurred in the $40,000-$50,000 range which included the premiums of only 13% of rural but 20% of urban physicians. Medical Mutual Insurance Company of North Carolina covered 56% of respondents, St. Paul Fire and Marine Insurance Company covered 33%, and 10% indicated they were self-insured or covered by another source. Regarding type of coverage, 68% of the respondents had a "claims made" policy, only 9% had an "occurrence" type of policy and 22% did not know the type of policy they had. Rural-urban differences were not significant for type of coverage or company. Malpractice premiums were paid by practice corporations or employers for 76.7% of the respondents while 19% indicated they paid the premiums personally. There were no significant differences by rural-urban practice location in terms of who paid malpractice premiums.

Table 16 shows the cumulative percentage of respondents indicating the level of annual malpractice premium that would force them to stop practicing obstetrics. Rural-urban differences were slight, however, it can be seen that when premiums reach the $50,000 range, 65% of rural physicians indicated that this would be high enough to force them to stop obstetrics while 54% of urban physicians indicated premiums up to this figure would be too high for them to continue delivering babies. Physicians were also asked if they would continue to practice obstetrics without obstetrics malpractice coverage and only 20 physicians (6.3%) indicated they would do so.

Table 16
Malpractice Premium That Would Force Physicians to Stop Practicing Obstetrics

Premium	cumulative % Rural MDs	cumulative % Urban MDs
$30,000 or less	11.3	13.3
up to $40,000	29.6	24.1
up to $50,000	64.8	54.2
up to $60,000	73.2	66.7
up to $90,999	80.3	78.3
up to $200,000	91.6	95.2
no limit	100.0	100.0

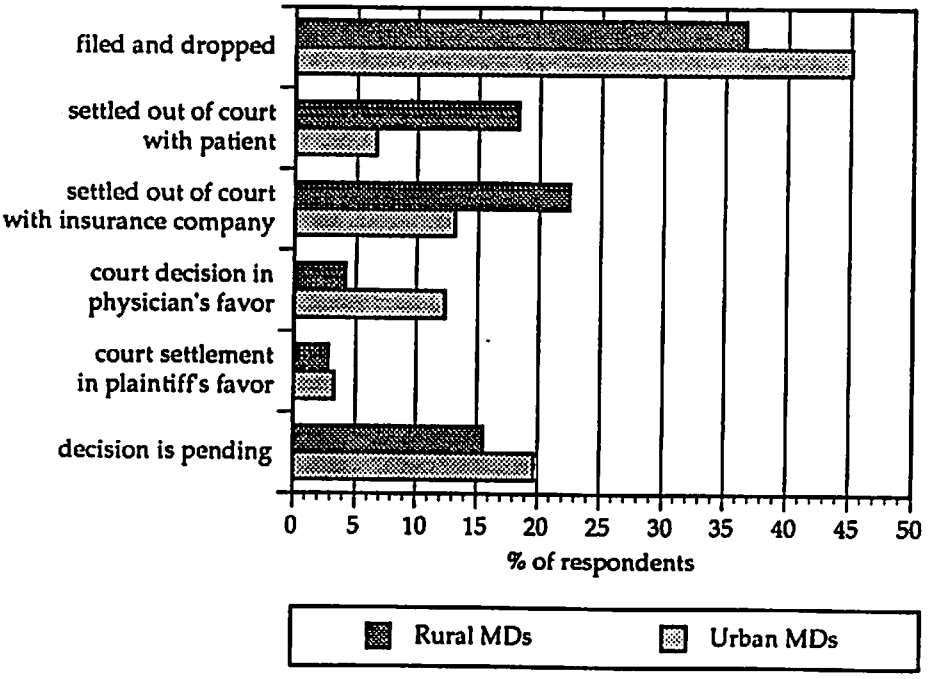
Obstetrics Personal Injury Suits

Regarding obstetrics personal injury suits or malpractice claims, 125 physicians (55 rural and 70 urban) or 39% of the respondents indicated having been named in a lawsuit, for a total of 193 claims. Most physicians (65%) mentioned only one claim filed against them; 24% said 2 claims had been filed against them. Regarding outcomes of these claims, 81 or 42% had been filed and dropped, and 35 or 18% are pending (Table 17).

Table 17
Outcomes of Personal Injury Claims Filed

Outcome	State Totals		Rural Physicians' Claims		Urban Physicians' Claims	
	# Claims	Percent	# Claims	Percent	# Claims	Percent
Filed and dropped	81	42.0	26	36.6	55	45.1
Settled out of court with patient	21	10.9	13	18.3	8	6.6
Settled out of court w/ insurance company	32	16.6	16	22.5	16	13.1
Court decision in physician's favor	18	9.3	3	4.2	15	12.3
Court settlement in plaintiff's favor	6	3.1	2	2.8	4	3.3
Decision is pending	35	18.1	11	15.5	24	19.7
Total number of claims	193		71		122	

Figure 12
Outcomes of Personal Injury Claims Filed



Satisfaction with Relationship between Practice and Back-up

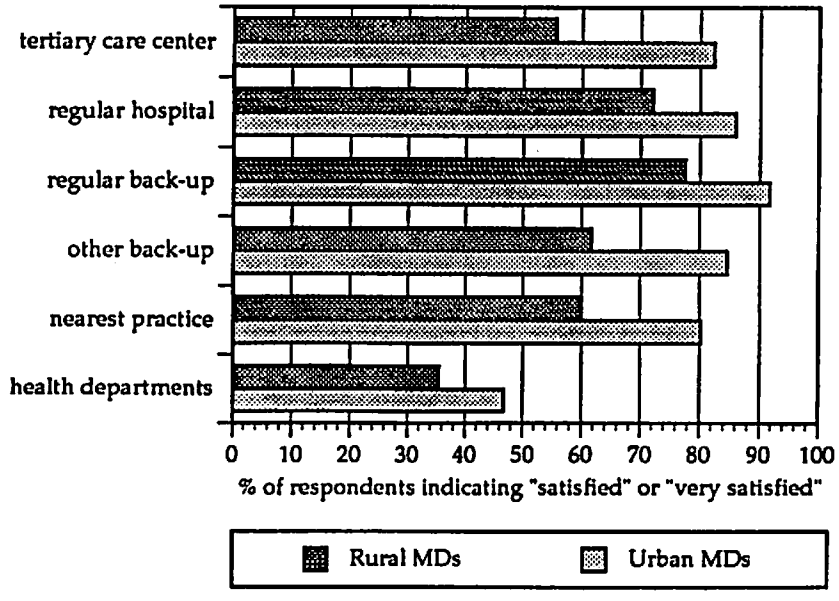
Physicians were asked to rank their satisfaction with the relationship between their practice and several different sources of medical care: tertiary care center, regular hospital, regular back-up or covering practice, nearest practice for which they provide back-up and the health department serving

their area (Table 18). On the whole, respondents were satisfied, with at least 70% of respondents indicating they were either "satisfied" or "very satisfied" and less than 10% of the respondents indicating they were not satisfied. An exception is relationships with health departments, with only 42% of the respondents indicating they were satisfied or very satisfied and 24% indicating they were not satisfied. A metropolitan-nonmetropolitan analysis revealed appreciable differences in physicians' satisfaction with back-up and other sources of care. The largest difference was seen in satisfaction with tertiary care centers, with only 55.6% of nonmetropolitan physicians indicating the relationship between their practice and the tertiary care center was "satisfactory" or "very satisfactory" and 82.3% of metropolitan physicians indicating these levels of satisfaction.

Table 18
Satisfaction with Relationship Between Practice and Other Sources of Medical Care

physicians indicating satisfied/very satisfied with:	State Totals		Rural Physicians		Urban Physicians	
	# MDs	% MDs	# MDs	% MDs	# MDs	% MDs
tertiary care center	223	72.2	65	55.6	158	82.3
regular hospital	248	80.8	83	72.1	165	86.0
regular back-up	223	86.1	79	77.5	144	91.7
other back-up	131	76.6	37	61.7	94	84.7
nearest practice	113	72.4	36	60.0	77	80.2
health departments	115	42.1	39	35.4	76	46.7

Figure 13
Satisfaction Between Practice and Back-Up



Non-Respondent Analysis

Non-respondents were compared to respondents using data from the N.C. Board of Medical Examiner's license files. The data collected on initial and renewal physician license forms are maintained by the Sheps Center and permission was given by the Board to use the licensing data for use in this survey. Physicians are required to register every two years and this might cause a lag in the completeness of data. Since residents in training were surveyed but may not be in the license files, the totals for the non-respondent analysis are not the same as the total number of physicians surveyed. In addition, certain items are optional on the license form and these variables will have a higher frequency of missing data. Of the 624 obstetrician/gynecologists to whom a questionnaire was mailed, 217 or 34.8% did not respond.

Demographics. Age seemed to be a minor factor in physicians' tendency to respond to the survey; within the non-respondent group, 44.2% fell in the range of 31-40 years. Comparing ages of respondents to non-respondents, the greatest discrepancy was seen in the 61 or older age group with 81% of these physicians responding and 19% not responding. The age group with the greatest percentage of non-respondents was that of physicians less than 30 years old, with 45% responding and 55% not responding.

Regarding race, 73% of the white physicians responded while only 39% of the Black physicians responded. A little over half (54%) of the Asian physicians responded. Of the non-respondent group, 81% were white, 15% were Black and 4% were Asian. Within the respondent group, 93% were white, 4% were Black and 2% were Asian.

Table 19
Race and Gender by Respondent Status

frequency percent row percent column percent	White	Black	American Indian	Asian	Male	Female
respondent	359	16	1	7	353	30
	65.5	2.9	0.2	1.3	64.4	5.5
	93.7	4.2	0.3	1.8	92.2	7.8
	72.8	39.0	100.0	53.9	72.3	50.0
non-respondent	134	25	0	6	135	30
	24.5	4.6	0.0	1.1	24.6	5.5
	81.2	15.2	0.0	3.6	81.8	18.2
	27.2	61.0	0.0	46.1	27.6	50.0
total	493	41	1	13	488	60
	90.0	7.5	0.2	2.4	89.0	11.0

Female physicians were less likely to respond to the survey than their male counterparts; only 50% of the females responded (30 of 60) while 72% of the males responded. Within the non-respondent

group, 82% were male and 18% were female. The non-response differences among Black and female OB/GYNs may indicate some threat to the representativeness of data for these groups, but overall response should allow for extrapolation of total response to the population of OB/GYNs in North Carolina.

Metropolitan and Nonmetropolitan Status. The location of a physician's practice did seem to be related to responding to the questionnaire; 78% of the rural physicians surveyed and only 60% of the urban physicians surveyed responded. This was due, in part, to the more intensive follow-up for rural physicians; the focus of the study prompted the effort to maximize rural practitioner response. There were almost two and half times as many urban as rural physicians (443 urban and 181 rural) in the survey population, and the urban physicians comprised 65% of the respondents and 82% of the non-respondents.

Table 20
Metropolitan-Nonmetropolitan Practice Location by Respondent Status

frequency percent row percent column percent	nonmetro-politan	metro-politan	total
respondent	141 22.6 34.6 77.9	266 42.6 65.4 60.0	407 65.22
non-respondent	40 6.41 18.4 22.1	177 28.4 81.6 40.0	217 34.8
total	181 29.0	443 71.0	624 100.0

Form of Employment and Principal Practice Setting. The majority (63%) of the physicians surveyed (67% of respondents and 54% of non-respondents) were working in partnership/self-employed settings. However, the form of employment showing the greatest percentage of non-respondents was "post-graduate self-employed", with 63% (19 of 30 physicians) of this group not responding to the survey. Regarding principal setting, 47% of those surveyed practiced in practitioner's offices, with professional associations being the second most frequent setting (26% of physicians). The category with the most non-respondents was "educational institution" with 24 of 55 (44%) of these physicians not responding to the survey.

Workload. Comparisons can be made between respondents and non-respondents regarding their workload, i.e., the percent of time they spent in patient care and the number of hours worked per week.

Within the non-respondent group, those spending more than 80% of their time in patient care comprised the largest group (61 of 94 or 65% of non-respondents for whom we have this information). Comparing the two groups, it was seen that the highest response rate occurred within the group spending 21-40% of their time in patient care, with 82% responding (9 of 11 physicians). Perhaps more representative, however, is the group spending over 80% of their time in patient care, with 77% of those surveyed responding to the questionnaire.

Regarding hours worked per week, almost 50% of all physicians surveyed (for which we have this information) worked more than 60 hours per week. This category included both the largest number of non-respondents, (58 of 190 or 31%) and the largest number of respondents (132 of 284 or 46%). The greatest discrepancy between respondents and non-respondents regarding hours worked per week fell within the 31-40 hours per week category, with 11 or 92% of this group responding and 1 or 8% not responding to the survey. For physicians working more than 60 hours per week, almost 70% were respondents and about 30% did not respond to the survey.

Conclusions

This research summary presents the results of a survey conducted in the fall of 1989 of all North Carolina obstetrician/gynecologists and obstetricians. Separate surveys were sent to family physicians and certified nurse midwives in the State and these results are presented in the full report of the North Carolina Obstetrics Access and Professional Liability Study. The study was undertaken to determine the availability of obstetrical services on a county-by-county basis, and the effect malpractice claims and policies have had on obstetrical practice in North Carolina. The results are also analyzed by respondent location in terms of rural or urban practice setting to determine if differences exist along this dimension.

Several differences were apparent between physicians practicing in metropolitan versus nonmetropolitan areas. Nonmetropolitan physicians tended to have practices with fewer physicians, attended slightly more deliveries per month, indicated fewer physicians delivering babies in their service area, had higher Medicaid caseloads and a greater percentage had stopped or reduced providing care to medically high risk patients.

Regarding changes in obstetrical practice, three-quarters of the physicians had raised fees due to higher malpractice insurance premiums, and only 8% of respondents indicated that their patient volume had decreased over the year before. For those whose patient volume had decreased, the most important factors influencing their decision to decrease obstetrical patient volume were inconvenience of obstetrics practice, fear of an obstetrics malpractice lawsuit and "other reasons" which may be explained by the wording of the question. Almost three times as many rural as urban physicians (46% compared to 16.7%) indicated fear of an obstetrics malpractice lawsuit as an important factor in their decreased obstetrical patient volume.

Regarding malpractice policies and the Tort system, 70% of the respondents did not feel that the proposal before the NC General Assembly removing cerebral palsy births from the Tort system would affect their obstetrics practice. Of those who thought it would change their obstetrics practice, 60% felt it would increase their high-risk deliveries. The Rural Obstetrical Care Incentive Program, then in its first year, was familiar to approximately half of the respondents. This program's goal is to increase access to obstetrical care by compensating physicians in underserved areas for the difference in the cost of malpractice insurance with and without obstetrical practice. Currently, the Sheps Center is conducting an evaluation of the ROCI program, whose funding and participation has greatly increased since its implementation.

Professional liability insurance rates varied widely among all respondents, but not between rural and urban physicians. Differences did occur, however, regarding the level of annual malpractice premium that would force a physician to discontinue doing deliveries. Premiums of up to $50,000 would force 65% of the rural physicians compared to 54% of the urban physicians to stop doing obstetrics. Obstetrics personal injury suits were filed against 125 of the respondents for a total of 193 claims, of which 42% had been filed and dropped.

The full report includes recommendations regarding increasing obstetrical access and improving maternal and infant health for all North Carolinians.