One State's Response to the Malpractice Insurance Crisis: North Carolina's Rural Obstetrical Care Incentive Program

DONALD H. TAYLOR, Jr., MPA
THOMAS C. RICKETTS, III, PhD, MPH
JESS L. BERMAN, MPA
JANE T. KOLIMAGA, MA

Three of the authors are with the North Carolina Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, University of North Carolina, Chapel Hill. Mr. Taylor is a Doctoral Student in the school's Department of Health Policy and Administration and a Graduate Assistant in the program. When this research was conducted, he was a student in the Master of Public Administration Program. Dr. Ricketts is Director of the program, Associate Director of the center, and Assistant Professor of Health Policy and Administration in the school. Ms. Kolimaga is a Research Associate in the program. Mr. Berman is Program Manager, Women's Health Section, Division of Maternal and Child Health, North Carolina Department of Environment, Health and Natural Resources, Raleigh.

The North Carolina Rural Health Research Program is totally supported by Grant No. HA-R-000016-03 for $290,477 from the Office of Rural Health Policy, Health Resources and Services Administration, Public Health Service.

Tearsheet requests to Mr. Taylor, Cecil G. Sheps Center for Health Services Research, 725 Airport Rd., Suite 210, CB 7590, University of North Carolina, Chapel Hill, NC 27599-7590, tel. 919-966-4482.

Synopsis

In the period 1985-89, there was a severe drop in obstetrical services in rural areas of North Carolina, partly because of rising malpractice insurance rates. The State government responded with the Rural Obstetrical Care Incentive (ROCI) Program that provides a malpractice insurance subsidy of up to $6,500 per participating physician per year. Enacted into law in 1988, the ROCI Program was expanded in 1991, making certified nurse midwives eligible to receive subsidies of up to $3,000 per year. To participate, practitioners must provide obstetrical care to all women, regardless of their ability to pay for services. Total funding for the program has increased from $240,000 to $840,000, in spite of extreme budgetary constraints faced by the State.

The program and how its implementation has maintained or increased access to obstetrical care in participating counties are described on the basis of site visits to local health departments in participating counties and data from the North Carolina Division of Maternal and Child Health. The program is of significance to policy makers nationwide as both a response to rising malpractice insurance rates and reduced access to obstetrical care in rural areas, and as an innovative, nontraditional State program in which the locus of decision making is at the county level.

In the 1980s, the nation experienced a malpractice crisis that posed a potentially greater threat to the practicing physician than the one in the 1970s (*1*) when many malpractice insurance companies withdrew from the market because of losses from increased malpractice claims, leaving physicians without sources of coverage (*2*). The 1980s crisis was one of affordability—malpractice insurance was more available than in the '70s, but premiums increased at a very rapid pace, especially for obstetrical coverage. This increase left some physicians unable or unwilling to pay the costs necessary to cover obstetrical care (*3*). Many stopped practicing obstetrics or reduced the number of high-risk patients that they treated for fear of lawsuits resulting from bad outcomes, leaving those most in need in danger of not receiving adequate care (*4,5*).

Cullen and colleagues reviewed four national and 14 State studies of obstetrical providers, published between 1988 and 1990, and concluded that all types of providers were reducing their participation in obstetrical practice. The predominant reasons cited for reducing or discontinuing obstetrical practice were malpractice insurance premium costs and the fear of lawsuits (*6*). The loss of access to obstetrical care in many areas was not ameliorated by subsequent reductions in malpractice rates. In many rural areas where a large portion of the patient base is poor and uninsured, the return of obstetrical providers is not likely without some form of subvention or incentive.

The State of North Carolina has responded to

Table 1. Rural Obstetrical Care Incentive (ROCI) funding, North Carolina, 1988–92

Program year	Amount requested	Amount approved	Total funding level
1989	$ 950,000	$240,000	$240,000
1990	1,000,000	0	240,000
1991	2,000,000	300,000	540,000
1992	500,000	300,000	840,000

SOURCE: Division of Maternal and Child Health, N.C. Department of Environmental Health and Natural Resources, Raleigh, 1991.

the malpractice insurance situation through the Rural Obstetrical Care Incentive (ROCI) Program that provides a medical malpractice insurance subsidy to physicians and certified nurse midwives (CNM) who provide obstetrical care to rural women. This paper describes the program and how its implementation has increased access to obstetrical care in participating counties.

Program Goals and Aims

The original legislation that created the ROCI Program states that the program was to "compensate family physicians and obstetricians who agree to provide...obstetrical services in counties that are underserved with regard to these services" (*7,8*). This legislation was developed on the assumption that in rural areas of the State women did not have adequate access to obstetrical care and that the situation was getting worse as malpractice insurance rates were rising. The increasing rates contributed to a drop in the number of family physicians providing obstetrical care in North Carolina from almost 500 in 1985 to 189 in 1988 (*7,8*). This threatened the health of rural women and their babies. The ROCI Program was an attempt to offset some of the malpractice insurance costs of physicians who provided obstetrical care in the hope of slowing down the rate at which physicians were stopping obstetrical care practice in rural areas. The program was a stopgap measure that attempted to block the collapse of the obstetrical care network in rural North Carolina.

Program Description

The ROCI Program makes available up to $6,500 per year to each physician and up to $3,000 per year to each certified nurse midwife (CNM) who agrees to provide obstetrical care to rural women regardless of their ability to pay for services. The physician subsidy is equal to the extra insurance costs incurred for delivering babies or $6,500, whichever is less, and the CNM subsidy equals the extra insurance costs incurred or $3,000, whichever is less. Physicians and CNMs receive the subsidy through their county health department which applies to the Women's Health Section, Division of Maternal and Child Health, North Carolina Department of Environment, Health and Natural Resources (DEHNR) for funds.

Providers must enter into a maternity care coverage plan with the county health department through which they participate in ROCI. The maternity care coverage plan is a prerequisite for county participation in the ROCI Program that details how obstetrical care will be delivered to poor women in the county. The plan's contents are not standardized and vary from county to county, depending on the local needs and physicians' willingness to participate. The county health departments are free to negotiate whatever arrangement they want with the local providers who will participate in return for the malpractice insurance subsidy.

Eligibility criteria. County health departments are awarded funds based on specific criteria that determine the county's relative degree of obstetrical care underservice, although a county is eligible for, but not guaranteed, funds if it meets *any* of the following criteria:

1. There are no public or private prenatal services within the county;
2. There is no public prenatal clinic available within the local health department, hospital, or primary care center that serves low income women;
3. There is a public prenatal clinic but no physician or nurse midwife to staff the clinic or no physician back-up for physician extenders;
4. The county has a waiting list of more than 28 days in the public prenatal clinic;
5. 50 percent or more of the resident live births occur outside the county;
6. The 5-year infant mortality rate or premature birth rate is worse than the State average;
7. 50 percent or fewer of the physicians practicing obstetrics in the county serve Medicaid patients in their private practice;
8. More than 15 percent of the resident live births in a county are to women who receive prenatal care from public clinics;
9. The percentage of resident live births to women who initiated prenatal care in the first trimester is lower than the State average;

10. The percentage of resident live births to women seeking prenatal care in the third trimester is higher than the State average.

In 1991, eight counties that qualified for funds did not receive the ROCI subsidy because the program exhausted the total money available without being able to fund all qualified applicants. The counties that applied and were not funded met fewer of the eligibility requirements than the counties that were funded. As of 1990, 94 of the 100 rural and urban counties in North Carolina met at least one criterion.

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Premium subsidy levels. A county health department may include as many physicians or CNMs as it wants in the ROCI Program, but there is a $19,500 cap on funding for each county, regardless of the number of providers who participate in the program or their individual malpractice insurance costs. Physicians and CNMs are required to document their malpractice insurance premiums and the extra insurance cost incurred as a result of delivering babies. Once approved, providers receive their ROCI supplement in an annual payment, usually in February of each year. Either the participating provider or the health department may cancel the ROCI agreement at any time with written notice of 1 month. In such a circumstance, a pro-rated share of the money that the provider received must be returned to the State Division of Maternal and Child Health.

The degree of variability in both the dollar amount received and the setting in which the services are rendered by the ROCI providers illustrates the flexibility of the program. Providers must agree, however, to some basic requirements for participation that are contained in the North Carolina Administrative Code and serve as the guiding principles that govern the program. Under the ROCI Program, a physician or nurse midwife shall

1. provide prenatal care to low-income women by staffing a public prenatal clinic (physicians may provide medical back-up and supervision of physician extenders providing services in a public prenatal clinic) or providing prenatal care in a private office, or both;
2. take part in an on-call arrangement for coverage of obstetrical care, including deliveries, for low-income women who are residents of the underserved county (if a delivery facility is located within the county in question);
3. not refuse to provide prenatal or delivery care for any patient based on economic status or ability to pay;
4. participate in data collection efforts required by the Maternal Health Branch of the State Division of Maternal and Child Health;
5. agree to serve Medicaid recipients who request prenatal care. These services may be provided through a private practice, the local health department, or other public clinic; and
6. no participating physician or nurse midwife shall be required to assume management of the care of any obstetrical patient if the level of care required for that patient is beyond the professional competence of that physician or nurse midwife.

Program funding. The ROCI Program began operating at the beginning of 1989, but the funds for the program are appropriated on a fiscal year basis, beginning July 1 each year. In 1989, the program received $240,000 and had 52 physicians participating through 21 county health departments. In program year 1990, an additional $1 million was requested for expansion of ROCI but was denied by the North Carolina General Assembly, and the program's 1990 funding level remained unchanged. For the program year 1991, a $300,000 increase was approved by the General Assembly, more than doubling the total funding to $540,000. This increase allowed the ROCI Program to expand to 44 county health departments. As of November, 1991, 119 physicians—44 family physicians, 70 obstetrician-gynecologists, 2 gynecologists, 1 obstetrician, 1 general practitioner, and 1 emergency medicine physician—were participating in the program. 13 CNMs participate through 6 county health departments in addition to the physician participants. Table 1 lists the funding requests and actual funding levels for the ROCI Program from 1989 to 1992. Table 2 shows the number of participating counties and providers for the first 3 years of the program.

Table 2. Expansion of Rural Obstetrical Care Incentive (ROCI) providers, North Carolina, 1989–91

Year	Participating counties	Participating physicians	Participating nurse midwives
1989	21	[1]52	None
1990	25	[2]55	None
1991	44	[3]119	13

[1] 31 family practitioners, 21 obstetrician-gynecologists.
[2] 31 family practitioners, 24 obstetrician-gynecologists.
[3] 44 family physicians, 70 obstetrician-gynecologists, 5 others.
SOURCE: Division of Maternal and Child Health, North Carolina Department of Environmental Health and Natural Resources, Raleigh, 1991.

Program Results

The ROCI Program is a statewide effort to maintain and, if possible, to increase access to obstetrical care for women in rural areas where there are often few channels through which poor women can receive the care they need. The results or effects are important in identifying the relative worth of the program and pointing out future research questions to be answered.

Increase in participating providers. An obvious result of the first 3 years of the ROCI program has been the increase in the number of participating counties and individual physicians in the program. Table 2 shows the increase in the number of participating counties from 21 in 1989 to 44 in 1991. Physicians participating in the program more than doubled during the same period from 52 in 1989 to 119 in 1991. As well, the program expanded to include 13 CNMs in 1991.

Maternity care coverage plan. ROCI has improved relations between some county health departments and local physicians through the negotiation of a maternity care coverage plan that describes how obstetrical care will be delivered to poor women in a particular county. Services enumerated in coverage plans and provided by ROCI physicians to poor women have expanded in some counties according to reports received during site visits. Under the rules of the program, the county health department is given a great deal of latitude in what types of services and arrangements these plans contain, with the specifics of the plans being the responsibility of participating county health departments.

This process has facilitated review of the maternal health care situation in each county by both the health department and local physicians. In some instances this process has produced a greater sense of cooperation among health departments and the physicians who participate in the ROCI Program, while in others it may have brought to the surface disagreements and underlying problems in their relationship.

Table 3 shows the physician services that were formalized as a result of the negotiation process for the maternity care coverage plan in the counties where we conducted site visits. In some instances, services not previously provided by physicians were included in the coverage plans, while in other cases these services were being provided on an informal, ad hoc basis. Having these services formally agreed to in a maternity care coverage plan allows the county health departments to know what services they can depend on being provided, helping them better plan the expenditure of finite resources.

Evidence from site visits. During the summer of 1991, North Carolina Rural Health Research Program staff members conducted site visits in 7 ROCI counties. Following is a synopsis of the impact of the ROCI Program on the obstetrical care network in these 7 counties:

County A

1. A CNM who planned to stop practicing because of increased malpractice premiums has continued her practice, has become the hub of the obstetrical care network in County A, and remains the county's only provider of prenatal care.
2. A group of four family physicians, whose practice is located in another county but who participate in ROCI through the County A health department, had preliminary plans for at least one of them to stop delivering babies because of the increasing cost of malpractice insurance. Because of the ROCI Program, the clinic director reports that they all plan to continue delivering indefinitely.

County B

1. ROCI funds facilitated improved relations between the County B health department and the two obstetrician-gynecologists who are the only physicians performing deliveries in the entire county. While these physicians were treating all women who sought care before participating in the ROCI Program, the health director feels that the ROCI insurance subsidy may prevent the physicians from feeling "burned out" and bitter from the increased costs of treating so many poor women.

Table 3. Physician services formalized in Rural Obstetrical Care Incentive (ROCI) contracts for seven North Carolina counties visited in site visits in 1991

Services formalized through ROCI	County A	B	C	D	E	F	G
Direct prenatal care at normal health department prenatal clinics		X	X	X		X	X
Backup for physician extenders working in health department prenatal clinics (CNMs, NPs, PAs[1], etc.)	X		X		X		
Deliver health department patients and drop ins	X	X	X	X	X	X	X
Direct prenatal care to high-risk patients in health department clinics		X	X	X			X
Direct prenatal care to high-risk or emergency health department patients and Medicaid patients in private office	X	X		X	X	X	X
Consultation for nurses who work in health department prenatal clinics during and outside clinic hours		X		X	X	X	X
Refer low-income pregnant women to WIC[2]	X	X	X	X	X	X	X
Refer Medicaid pregnant women to maternity care coordinator	X	X	X	X	X	X	X
Regularly see health department and Medicaid prenatal patients in private office who aren't high risk	X	X					

[1] Certified nurse midwives, nurse practitioners, physician assistants, and so forth.
[2] Special Supplemental Food Program for Women, Infants, and Children of the U.S. Department of Agriculture.

SOURCE: site visits and the Division of Maternal and Child Health, NC Department of Environment, Health and Natural Resources, Raleigh, 1991.

County C

1. The availability of ROCI funds played a part in an established physician's decision to accept a new partner who is interested in including Medicaid patients in their practice. The subsidy eased the financial burden of increased numbers of Medicaid patients.

2. The County C health department has been able to expand its prenatal clinic since receiving ROCI funds because of a CNM who participates in the program. The addition of a CNM to the health department has resulted in shorter waiting times for women visiting the clinic.

3. Continuity of care has improved according to health department personnel, because ROCI participation led to formalized relationships between the health department and providers that, prior to the ROCI program, were informal and unreliable. With ROCI funds, women can be surer of who will provide their prenatal care throughout pregnancy and deliver their baby.

4. The County C health department staff members believe that ROCI funds have helped them procure higher quality physicians than they were able to get before the program.

County D

1. The County D health department has been able to increase the hours of operation of its prenatal clinic since it began participating in the ROCI Program because the participating obstetrician-gynecologist (who is the only one delivering at the local hospital) has become more willing to staff these clinics.

2. The funds have also been used to encourage the only obstetrician-gynecologist in the county to continue practicing; this physician previously expressed a desire to stop providing obstetrical care to health department patients.

County E

1. Positive results of the program in County E are hard to discern. The terms of the ROCI contract have been the center of dispute between the two obstetrician-gynecologist participants and the County E health department. As a result, these physicians have actually reduced the services that they provide through the health department because of a failure to produce a mutually agreeable maternity care coverage plan. In this instance, increased dealings between physicians and the health department did not result in improved access to obstetrical care.

County F

1. One of the two ROCI obstetrician-gynecologists in County F is a National Health Service Corps physician who cites ROCI as one of the most positive aspects of his remaining in County F after his obligation in the Corps is finished. In this case, ROCI funds are being used as a physician retention tool.

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2. ROCI has also helped keep both of these physicians willing to deliver the children of unlimited numbers of Medicaid women. The malpractice insurance subsidy is important to them since they feel that treating large numbers of poor women increases the likelihood of litigation against them.

County G

1. Since ROCI's inception in the county there has been renewed interest in providing obstetrical care through the County G health department. In the first year of the program, two physicians participated; in 1991, seven participated.
2. Waiting times in the health department prenatal clinics have been shortened because of the increased number of participating physicians and that has led to additional clinic hours.

Health department surveys. The North Carolina Division of Maternal and Child Health surveyed all 100 county health departments in 1988 and 1991 to collect descriptive data concerning perinatal services. From 1989 to 1991, there was an 8.9-percent increase in the number of physicians providing prenatal care in the 25 counties that began participating in the ROCI program in 1989 or 1990. In the 65 counties that did not participate in this program in 1989 or 1990, there was an 18.6-percent decrease in the number of physicians providing prenatal care at the county health department. Ten counties were excluded because they have tertiary care facilities that use resident physicians to provide some prenatal care. These data support the site visit findings that the ROCI Program may have played a part in encouraging physicians to continue providing prenatal care through county health departments.

Nontraditional program management. ROCI also serves as a model of how a government program can work when there is much leeway granted to the local decision makers in the distribution of funds. It appears that the flexibility of the ROCI Program has allowed for location-specific arrangements to be worked out in very different rural counties to increase the obstetrical care available to women in these areas. Local expertise and resources have been used in the formulation of maternity care coverage plans. While all types of programs may not be able to grant so much autonomy to local entities, the option is a useful one for consideration at all levels of government.

Discussion

The ROCI Program facilitates interaction with the North Carolina General Assembly, the State Department of Environment, Health and Natural Resources, county health departments, local obstetrical providers, and the community. Funds flow from the General Assembly to county health departments through the Division of Maternal and Child Health and, eventually, offset individual provider insurance costs. The ROCI Program grants money from the State level to the local level with few rules and regulations, leaving the major decision making responsibility in the hands of those closest to the problem. This approach has allowed funds to be used in a variety of ways for the best response to local needs.

The ROCI Program has continued to expand in spite of severe budgetary constraints that have faced the State of North Carolina in the last few years, particularly in 1991. During the 1991 General Assembly session, as many programs were being cut, ROCI Program funding continued to grow, with $300,000 in expansion funds being approved, bringing the total available to be distributed to physicians and nurse midwives in 1992 to $840,000.

Expansion of the program in the face of statewide fiscal restraints point to a program that seems to be politically popular and fairly secure in the likelihood of continued funding. Legislators feel that ROCI allows them to respond to the malpractice insurance crisis, the shortage of physicians in rural areas, and poor infant mortality statistics at the same time, for a relatively small amount of money. It allows them to demonstrate to their constituents that they are addressing these problems, which could explain some of the political popularity of the program.

The flexibility of the ROCI Program is its greatest strength. The basic guidelines provided in the legislation allow individual counties to use ROCI funds to address their unique set of needs, largely using local resources. The program has been

enthusiastically accepted by most of the health departments that are presently participating. During site visit interviews, the flexibility of the program was mentioned by numerous health department staff as a positive aspect of the program from their standpoint.

The lessons learned from ROCI are of relevance outside of North Carolina as well. The Federal Government and other States may benefit from looking to North Carolina's ROCI Program as an example of a specific means of responding to the malpractice insurance crisis, as well as a model for running a program that emphasizes local discretion rather than standardized rules. House Bill HR 2229, "The Rural Access to Obstetrical Care Act of 1991," that was introduced during the 102nd Congress, appears to be similar to North Carolina's ROCI Program in that it funds "innovative approaches for increasing the participation of obstetric providers" and grants a great deal of discretion to local decision makers in proposing projects to be funded under the act. Listed as possible uses of the money is the subsidization of medical malpractice costs. The ROCI experience should prove useful to those interested in using these funds from this project for malpractice insurance subsidies, should it be funded.

The experience of the first 3 years of the ROCI Program shows that the program has been implemented in such a way that the number of physician participants has increased, relationships between local providers and county health departments have been formalized, and the level of obstetrical care available to women in rural areas has been shored up and in some cases increased. This was the intent of the program.

Also interesting is the question of whether or not there has been an impact on the health status of the rural women served by the ROCI Program. This area needs further research to validate this program's efficacy in doing so. Measures of interest in this undertaking would be changes in the number of women receiving adequate prenatal care, the percentage of babies born with a low birth weight, and the infant mortality rate. Research aimed at identifying physician satisfaction with the program and its effect on individual practices is currently underway at the North Carolina Rural Health Research Program.

References

1. Welch, C.,: Medical malpractice. N Engl J Med 292: 1372, June 26, 1975.
2. Breen, J.,: What was, what is, and what may be. Obstet Gynecol 62: 407, October 1983.
3. Sloan, F. A., and Bovbjerg, R. R.: Medical malpractice: crisis, response and effects. Health Insurance Institute of America Research Bulletin, Washington, DC, 1989.
4. Langholz, R., and Ricketts, T.: Access to obstetrical services in rural communities: a response to the liability crisis in North Carolina. N.C. Rural Health Research Program, Chapel Hill, 1989.
5. Fondren, L., and Ricketts, T.: North Carolina obstetrics access and professional liability study: final report. N.C. Rural Health Research Program, Chapel Hill, 1991.
6. Cullen, T., et al.: Obstetrical providers. *In* Study of health professionals distribution, training and service models to meet rural health care needs, edited by T. Ricketts and J. Kolimaga. N.C. Rural Health Research Program, Chapel Hill, 1991, pp. 1-55.
7. Rural obstetrical care incentive, House Bill 2424, Session 1987. N.C. Institute of Government, Chapel Hill, NC, 1988.
8. Rural obstetrical care incentive, Senate Bill 257, ch. 1086, Session 1987. N.C. Institute of Government, Chapel Hill, NC, 1988.