A Response to the Professional Liability Crisis: The First Three Years of North Carolina's Rural Obstetrical Care Incentive Program

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EXECUTIVE SUMMARY

This paper reviews the first three years of North Carolina's Rural Obstetrical Care Incentive (ROCI) program which was passed into law in 1988 and began operating in 1989. The program was designed to ease the burden of medical malpractice insurance costs for physicians and nurse midwives providing obstetrical care in rural areas of North Carolina. The program was initiated in response to the lack of an adequate number of obstetrical care providers in rural areas of the state. The program reimburses physicians up to $6,500 per year if they enter into an obstetrical care coverage plan for their county which is mutually agreeable with the local Health Department, through which they participate in ROCI. The basic requirement for participation in the program is that providers may not refuse care to any patient regardless of the patient's ability to pay. The program has received approval for expansion funds from the North Carolina General Assembly in two of its three years, bringing the total money available for distribution in the 1992 program year to $840,000. Certified Nurse Midwives have been added as of the 1991 program year and are eligible to receive up to $3,000 per year to offset the cost of medical malpractice insurance. This expansion has occurred during a period of considerable budgetary constraint in the State of North Carolina, suggesting that the program is seen as a priority by the North Carolina General Assembly. The key question to be answered is whether ROCI is a good program in which to invest given that there are finite resources to be spent on health care.

The program has encouraged closer cooperation between county Health Departments and local physicians through the institution of obstetrical care coverage plans for the individual counties. Physicians and Certified Nurse Midwives have entered into contracts which stipulate the type of services which they will provide in return for the ROCI subsidy. This has allowed local Health Departments to better plan the expenditure of resources by knowing what obstetrical services they can depend on being provided by ROCI participants. The flexibility of the program has allowed for solutions to local health needs to be tailor-made by utilizing local resources to a great extent. This is a result of the locus of decision making resting with the local Health Departments. A reconstruction of the first three years of the ROCI program and site visits to seven of the participating counties have provided valuable information which illustrate lessons learned from North Carolina's experience with the ROCI program. The ROCI experience in North Carolina is not only useful for providing feedback for the improvement of this program, but is also of great use to other states which are facing similar obstetrical access problems. The program should also prove interesting to policy makers nationwide who are interested in methods of non-traditional program administration which provide resources to local entities with few rules and regulations.

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INTRODUCTION

North Carolina's Rural Obstetrical Care Incentive (ROCI) Program is a state–funded program consisting of annual payments to physicians and certified nurse midwives (CNMs), which encourage physicians and CNMs to provide obstetrical care in rural areas by offsetting some of the obstetrical malpractice insurance costs these providers must bear.[1] The program addresses the complex problem of insufficient obstetrical care in rural North Carolina, a challenge faced by many states because the lack of obstetrical care in rural areas is prevalent throughout the nation.[2] This paper is a review of the implementation of the ROCI program and illustrates the mechanics of a malpractice insurance subsidy program targeted at rural areas. Through a reconstruction of program funding levels and site visits, conclusions and recommendations are drawn based on this program's early years. Lessons learned from the first three years of ROCI will not only benefit North Carolina's program, but could influence rural health policy throughout the United Sates. This paper, which details the first years of ROCI, can be used to project the effects of recently submitted federal legislation, U.S. House Bill 2229, which was proposed during the Summer of 1991 in the 102nd United States Congress by Congressman J. Roy Rowland, D-GA. The bill asks for $30,000,000 to be set aside and given to States for "medical demonstration projects to allow States to test innovative approaches for increasing medical participation of Obstetrical/Gynecological providers in rural areas." (See Appendix 2.) Further, it establishes demonstration grants to test innovative approaches to the obstetrical liability problem.[3] North Carolina enacted and has been running such a program since 1989. The lessons learned from the prototypic ROCI program should prove invaluable to the administrators and participants in this proposed Federal program which was referred to the House Energy and Commerce Committee in September, 1991.[4] The experiences of ROCI's first three years should also prove interesting to proponents of programs which grant money to local entities with few strings attached, leaving the locus of decision making largely with those closest to the problem. Ideally, this type of approach ensures more effective use of public money. The ROCI experience should prove informative to many health care policy makers nationwide who are interested in obstetrical issues as well as those interested in non–traditional forms of program operation.

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[1]In this paper, obstetrical care refers to both prenatal care and delivery unless otherwise noted.

[2]Cullen T, Hart LG, Lishner D, Rosenblatt R, Chapter VI "Obstetrical Providers" in Ricketts T, Kolimaga J. eds. Study of Health Professionals Distribution, Training and Service Models to Meet Rural Health Care Needs. N.C. Rural Health Research Program, University of North Carolina at Chapel Hill, 1991. (A Report prepared under contract to the National Rural Health Association and the U.S. Bureau of Health Professions.)

[3]United States Congress. House Bill 2229. 1991.

[4]Hennemuth K. Legislative Assistant, J. Roy Rowland, D–Georgia. Phone Interview. September 18, 1991.

Past Malpractice Crises and National Access to Obstetrical Care

The medical malpractice crisis of the 1970s caused widespread public concern, prompting numerous states and the federal government to consider proposals to rectify the situation. Awareness of the issue waned as the crisis subsided. In the 1980s, the nation experienced another malpractice crisis, which posed a potentially greater threat to the practicing physician than the one of the 1970s.[5] In the 1970s, the problem was availability of malpractice insurance, which became scarce as many insurance companies withdrew from the market because of losses due to increased malpractice claims.[6] The threat posed by the malpractice situation in the 1980s was one of affordability. Malpractice insurance policies remained readily available but premiums increased at a very rapid pace after 1980, especially for obstetrical coverage, leaving some physicians unable or unwilling to pay the costs necessary to continue delivering babies.[7] Over the past few years, many physicians have stopped practicing obstetrics or have changed their practices and reduced the number of high risk patients that they treat out of fear of lawsuits resulting from bad outcomes, leaving those most in need in danger of not receiving adequate care.[8,9] In a survey comprised of 1,915 responses from Family Practice Physicians (FPs) and residents, *Family Practice News* found that the proportion of FPs including obstetrical care in their practice has dropped during the period from 1986 through 1991. In 1986, 33% of the FPs surveyed provided obstetrical care, while in 1991 only 21% report doing so.[10] This trend is even more pronounced in rural areas where the percentage of respondents delivering obstetrical care has fallen from 50% in 1986 to 34% in 1991.[11] Thirty seven percent of the respondents described their practice as rural, while a companion survey reported by the *Family Practice News* reveals that only 18% of Obstetricians/Gynecologists (OB/GYNs) have rural practices. While OB/GYNs provide the majority of obstetrical care in urban areas, FPs deliver about two–thirds of the care in rural areas.[12] This illustrates the importance of FPs to rural health delivery, and underscores the urgency with which the decreasing number of FPs providing obstetrical care in rural areas should be viewed.

The crisis facing North Carolina regarding the supply of obstetrical providers in rural areas is dealt with at length in a report by Fondren and Ricketts, *The North Carolina Obstetrical Access And*

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[5]Welch C. "Medical Malpractice." *New England Journal of Medicine* 292(June 1975):1372.

[6]Breen J. "What Was, What Is, and What May Be." *Obstetrics and Gynecology* 62(October 1983):407.

[7]Sloan FA, Bovbjerg RR. Medical Malpractice: Crisis, Response and Effects. Washington, DC: Health Insurance Institute of America, 1989. (Research Bulletin).

[8]Langholz R, Ricketts T. Access to Obstetrical Services in Rural Communities: A Response to the Liability Crisis in North Carolina. N.C. Rural Health Research Program, University of North Carolina at Chapel Hill. 1989.

[9]Fondren L, Ricketts T. North Carolina Obstetrics Access and Professional Liability Study: Final Report. N.C. Rural Health Research Program, University of North Carolina at Chapel Hill. 1991.

[10]Wood A. "Survey Reveals Growing Disenchantment Among FPs." *Family Practice News*. Vol. 21, (18). 1991.

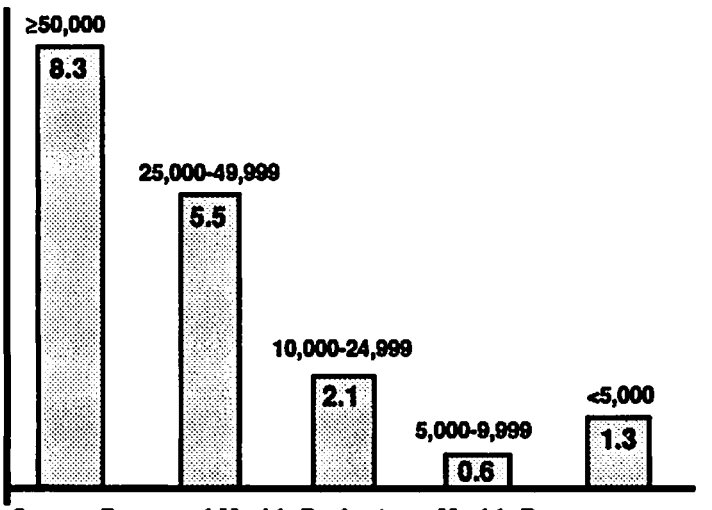
[11]Wood A, 1991.

[12]Schmittling GT, Tsou C. "Obstetric Privileges for Family Physicians: A National Study." *Journal of Family Practice*. 29 (2): 179-184.

Professional Liability Study,[13] and a report by Langholz and Ricketts, *Access to Obstetrical Services in Rural Communities: A Response to the Liability Crisis in North Carolina.*[14] These reports have detailed some of the effects of the most recent malpractice crisis and its implications for the future availability of obstetrical care. Cullen et al. compiled extensive data regarding obstetrical care nationwide in rural areas in their Obstetrical Providers chapter in the *Study of Health Professionals Distribution, Training and Service Models to Meet Rural Health Care Needs.*[15] They conclude that rural counties have fewer health care resources than urban ones and concur with results from the *Family Practice News* survey, indicating that many physicians practicing in rural areas are abandoning the obstetrical portion of their practices. Figure 1 below illustrates the difference in the ratio of (OB/GYNs) per 100,000 population by county size throughout the United States. In order for the ratio of OB/GYNs to population in rural areas to be equivalent to the ratio in urban areas, 5,018 OB/GYNs nationwide would have had to locate in rural areas as of 1988.[16]

FIGURE 1

Number of Obstetricians/Gynecologists per 100,000 Population by County Size, 1988



Source: Bureau of Health Professions, Health Resources and Services Administration, U.S. Department of Health and Human Services, 1991. Rural Health Professions Facts: Obstetrical Providers: 1991. Prepared by the Rural Health Research Program, University of North Carolina at Chapel Hill.

[13]Fondren and Ricketts, 1991.

[14]Langholz and Ricketts, 1989.

[15]T Cullen in Ricketts and Kolimaga, 1991.

[16]Bureau of Health Professions, Health Resources and Services Administration, U.S. Department of Health and Human Services. Rural Health Professions Facts: Obstetrical Providers: 1991. Prepared by the Rural Health Research Program, University of North Carolina at Chapel Hill.

This leaves residents of rural areas more likely to receive inadequate prenatal care as compared to urban dwellers. In a review of literature concerning obstetrical care, the report by Cullen et al. found one consistent conclusion: all types of providers nationwide are reducing their participation in obstetrical care and the predominant reasons for this are the costs of malpractice insurance and, the fear of lawsuits. They conclude that Family Physicians are most affected by this trend, leaving rural residents at greater risk since they rely on (FPs) for a great deal of their obstetrical care. Mothers in nonmetropolitan areas are more likely to be poorer than those in urban areas and are less likely to have comprehensive health insurance with which to pay for needed care, so they have few options when seeking obstetrical care. In conclusion, rural areas nationwide have a poorer population of pregnant women and a supply of physicians, both FPs and OB/GYNs, which is inadequate to provide the needed care. There is no reason to expect this trend to get better and the situation may continue to worsen. Concern about malpractice issues appears to be a major reason that physicians are discontinuing obstetrical practices in rural areas.

Increased Malpractice Costs

The most recent malpractice crisis, characterized by increasing premiums has subsided, but there remains a serious loss of providers which persists into the 1990s. The immediate impact of the latest malpractice crisis has been its influence on the costs of care as malpractice premium increases are often passed on to patients through increased fees. Between 1980 and 1982, 7.4% of physicians nationwide had their premiums increase by 30% or more,[17] and the rate of increase has remained steady, with a slight acceleration of increase for obstetrics and gynecology.[18] Table 1 shows the changes in malpractice insurance costs for physicians of the American College of Obstetricians and Gynecologists (ACOG) from 1986 to 1989, according to data collected by a survey mailed to 4,100 members in 1990.[19]

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[17]Strunk A. "Malpractice Symposium," *Perinatal Practice and Malpractice.* University of Dentistry and Medicine, New Jersey. Academy of Professional Information Services, New York, NY. December 1983:12.

[18]Sloan and Bovbjerg, 1987.

[19]Malkasian G. "Professional Liability and the Delivery of Obstetrical Care." *American College of Surgeons Bulletin* 76 (6): 6-12.

TABLE 1
THE DISTRIBUTION OF TOTAL COST OF MALPRACTICE INSURANCE FOR MEMBERS OF THE AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, 1986-89

	percent of OB/GYNs paying:					
YEAR	<$8,000	$8,000-$14,999	$15,000-$24,999	$25,000-$34,999	>$35,000	Average Cost
1986	6.8	12.2	22.4	17.8	27.0	30,507
1987	6.2	7.1	17.9	20.3	36.5	37,015
1988	4.5	5.3	14.9	20.0	40.6	36,554
1989	3.8	5.1	15.8	18.8	43.1	38,138

Source: Malkasian, G. "Professional liability and the delivery of obstetrical care." *American College of Surgeons Bulletin*, Vol 76: (6). Page 8.

In North Carolina, both OB/GYNs and FPs have been hit with malpractice insurance premium increases. Between 1980 and 1986, OB/GYN premiums in North Carolina increased by 514%, and FP premiums went up 400% from 1986 to 1988.[20] The total cost of malpractice insurance to physicians was estimated to be $15.4 billion in 1985, or 17% of the $82.8 billion total paid to physicians in that year for care which they delivered.[21] Higher premiums are only one side of the picture affecting patient costs, however. To protect themselves against lawsuits, some physicians order unnecessary tests, which not only result in additional charges to the patient's bill, but often carry risks to the life of the patient.[22] The costs related to defensive medicine were estimated to be $12.4 billion in 1984 according to an article published in the *Journal of the American Medical Association*.[23] The increased costs of malpractice insurance have made it more difficult for doctors to continue delivering babies, adversely affecting the supply of delivery physicians. This increase in overhead costs for obstetrical providers particularly discourages them from practicing in rural areas which tend to be less affluent than urban areas, making it more difficult to recoup costs. FPs, who provide two-thirds of the obstetrical care in rural areas, are hit harder by the marginal effect of an increase in malpractice rates (which has been shown to be occurring) than their suburban or urban counterparts who have, on balance, a more affluent patient base from which to draw.[24]

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[20]Fondren and Ricketts, 1991.

[21]American Medical Association. *Trends in Health Care*. Chicago: 1987.

[22]Kaminetzky H. The Effects of Litigation on Perinatal Practice and Malpractice. University of Medicine and Dentistry, New Jersey. Academy of Professional Information Services, New York, NY. December 1986:45.

[23]Reynolds RA, Rizzo JA, Gonzalez ML. "The Cost of Medical Professional Liability." *Journal of the American Medical Association* 257(20):2776-81.

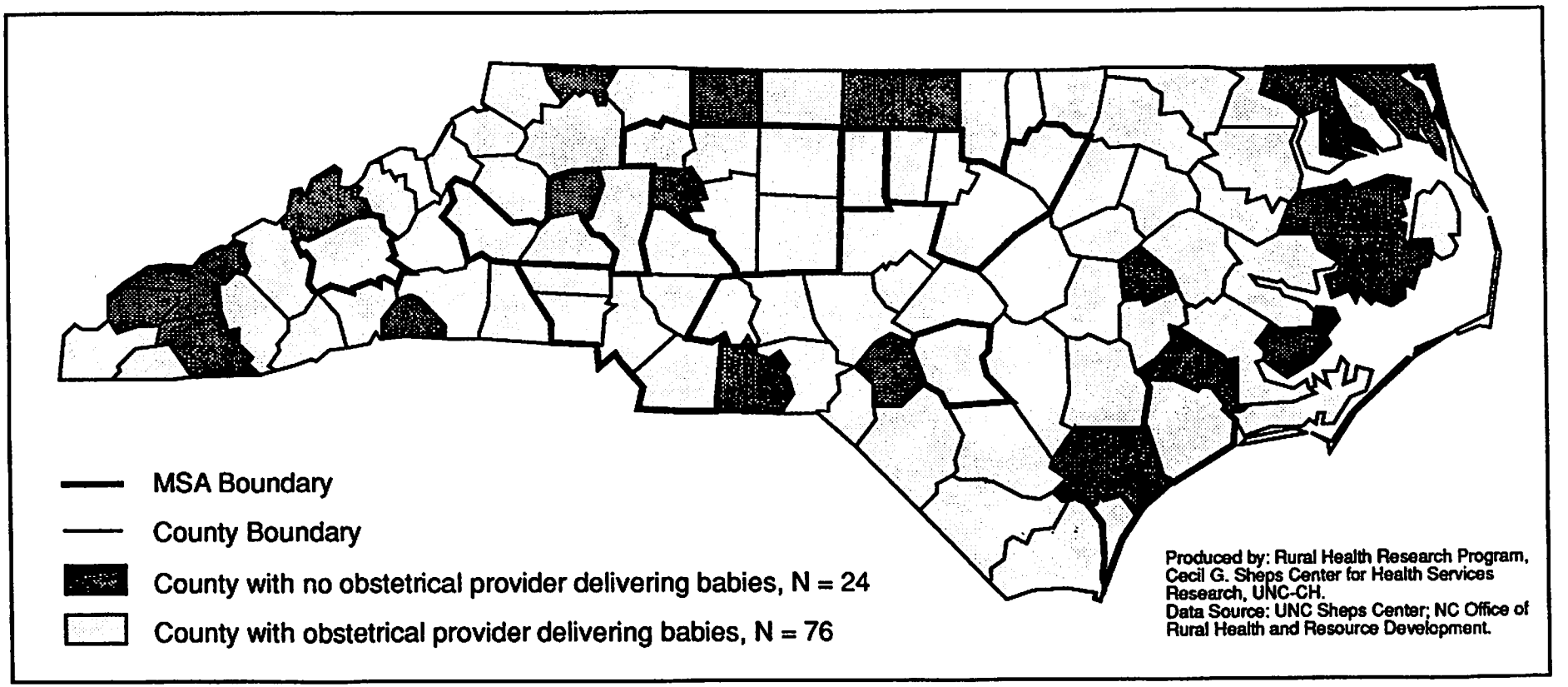
[24]T Cullen in Ricketts and Kolimaga, 1991.

Access to Obstetrical Care in North Carolina

Rising malpractice insurance costs have contributed to the lack of adequate numbers of obstetrical care providers in rural North Carolina. There were no obstetrical care providers in 24 North Carolina counties in 1989; Map 1, on the following page shows these counties. Moreover, in 1989 only 10% of the FPs and 75% of the OB/GYNs licensed in North Carolina delivered babies.[25] Map 2 shows the ratio of resident births per county to the obstetrical care providers available in that county for North Carolina in 1989. The lack of providers and facilities causes many women in rural areas to go outside of their resident county to give birth. Map 3 shows the percentage of the births to women which occurred outside their county of residence in North Carolina in 1989. It is clear that rural North Carolina does not have adequate obstetrical care providers to deliver the care needed by the women in these areas.

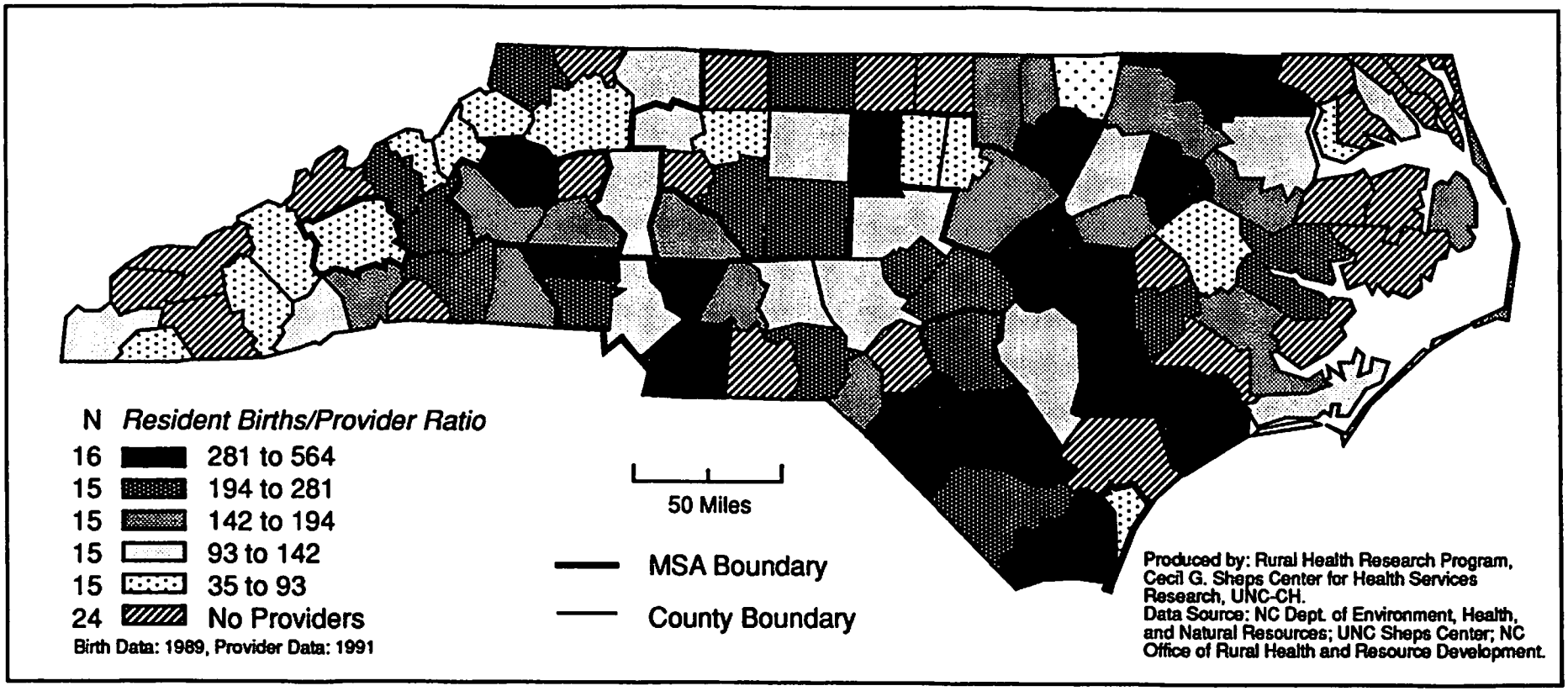
[25]Fondren and Ricketts, 1991.

Counties With No Obstetrical Providers Delivering Babies, 1991



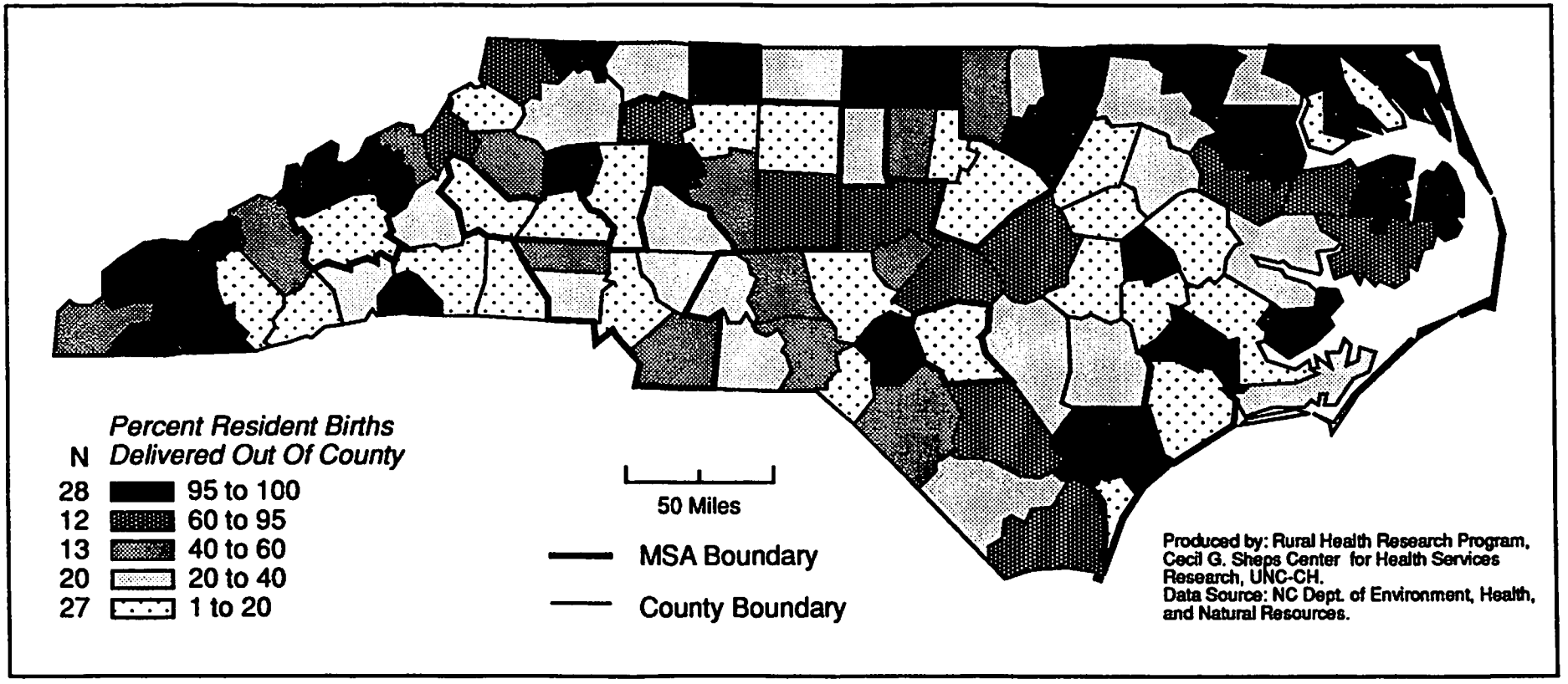
Map 1

Resident Births to Provider Ratio, 1989



Map 2

Percent Resident Births Delivered Out Of County, 1989



Map 3

The lack of accessibility to prenatal care has become a big concern. There is much evidence that poor persons and those without medical insurance have less access to care than those with insurance, and that the number of people without access to care increases as the cost of the care increases, so rising malpractice costs have a direct effect on accessibility of prenatal care.[26] This problem is especially troublesome in North Carolina, where a large portion of the State's people live in rural areas which are generally poorer than urban areas within the State. The 1989 per capita income for rural counties, defined as non-MSA counties, was $11,719 compared to $14,782 for the urban counties in the State, a 20.7% difference. The unemployment rate in the rural counties is 36.4% higher than the rate in urban counties and a larger percentage of families in rural counties receive Aid to Families with Dependent Children, (AFDC) 38% vs. 20.4% in 1989.[27] Rural counties in North Carolina have higher numbers of women enrolled in Medicaid than urban areas, lending further evidence of the higher levels of poverty associated with rural areas in North Carolina. The increased poverty of rural populations when coupled with rising malpractice insurance premiums makes obstetrical practice in rural areas unattractive to many providers, hence the lack of adequate services in these areas. The bottom line is that many women in rural areas of North Carolina do not have access to adequate obstetrical care.

To address the lack of obstetrical care, which has been at the very least exacerbated by the malpractice insurance crisis, the North Carolina General Assembly passed the Rural Obstetrical Care Incentive Act (ROCI) in the Summer of 1988. The program has been expanded in 1990 and 1991 during periods of governmental shortfalls and budget cuts. This legislation was designed to increase rural patients' access to obstetrical services by providing compensation in the form of malpractice insurance premium subsidies to family physicians and obstetricians, who would in turn provide obstetrical care to patients in rural areas of North Carolina regardless of the women's ability to pay for services. This malpractice insurance subsidy was extended to Certified Nurse Midwives (CNMs) who became eligible for the program starting in 1991. In the 1991 program year, 119 physicians and 13 Certified Nurse Midwives received a malpractice insurance subsidy through agreements with 44 county Health Departments.

This paper discusses ROCI in the context of the rising insurance premiums and declining levels of rural obstetrical care. It describes how the bill was enacted and the program implemented, the changes which have taken place since 1989, and the possible effects which this program has had on the access to obstetrical care in rural North Carolina. Case studies of rural counties participating in the program will be included to give practical examples of how the program has manifested itself at the local level. The case studies are found in Appendix 1. The paper concludes with observations plus

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[26]Cassel-Berry E. "Forum on Malpractice Issues in Childbirth." *Public Health Reports* 100(November-December 1985):631.

[27]N.C. Employment Security Commission, Labor Market Division. Raleigh, 1989.

local level. The case studies are found in Appendix 1. The paper concludes with observations plus recommendations specific to North Carolina's experience in confronting the medical malpractice insurance crisis and some broader policy considerations which are of importance to policy makers nationwide.

Methods

This paper is a reconstruction of the first three years of the ROCI program. This reconstruction is carried out by utilizing program data obtained from the the Women's Health Section, North Carolina Division of Maternal and Child Health, site visits and secondary data sources. The ROCI program data includes budgetary information, ROCI provider lists and individual counties' obstetrical care coverage plans. Additionally, site visits were conducted in seven of the ROCI counties during July of 1991, and one county, Pender, which is not a participant which was picked because it is the only county which meets all of the program criteria yet is not a part of ROCI. It serves as a comparison to the counties which are participating in the program. The counties visited were selected for their degree of underservice for obstetrical care as defined by the program criteria used by the Women's Health Section to determine county eligibility. (A list of these criteria can be found in Appendix 4.) Other factors considered when choosing counties for site visits were their geographic location and whether or not they had Certified Nurse Midwives participating in the program. When given a choice between two counties with the same degree of underservice, the one which was closest to Chapel Hill was selected. And when given a choice between a county with nurse midwives participating and one which did not, the one with the CNMs was selected for visitation. (Appendix 1 details all of the site visits.) The counties which were most underserved were seen as the ones most likely to benefit from ROCI and this is why these counties were selected. During site visits, interviews were held when possible with the County Health Director and the person at the Health Department most familiar with the program, usually the Nursing Director. Interviews were conducted with ROCI providers, both Nurse Midwives and Physicians when possible.

THE RURAL OBSTETRICAL CARE INCENTIVE PROGRAM (ROCI)

The North Carolina Rural Obstetrical Care Incentive Bill (HB2424) was introduced into the House of Representatives on June 15, 1988 (for text of the original bill and subsequent bills see Appendix 2.). The concept of a medical malpractice insurance subsidy was first discussed in 1985 by the North Carolina Academy of Family Physicians in response to concerns about increasing malpractice premiums expressed by those members who delivered babies.[28] Interest in this type of bill increased in popularity after the Academy appealed malpractice rate increases by the Medical Mutual Insurance Company to the North Carolina Insurance Commission and lost. The Academy refined the concept of the bill and retained Southern Strategy, a North Carolina lobbying group which represents the Academy's interests, to promote the bill in the North Carolina General Assembly. Southern Strategy focused on the passage of one bill introduced into the House. They felt this strategy would increase the chances of passage.[29]

The sponsor of the original bill was Representative Robert Hunter who had supported the concerns of Family Physicians in the past and whose constituency covers McDowell and Yancey counties, both of which have experienced shortages of health care personnel. Representative Hunter's position as chairman of Appropriations Committee made him an effective sponsor of the ROCI legislation.[30] The bill encountered mild resistance in the House with some arguing that lack of physicians to deliver babies is a county concern and not worthy of a statewide effort. The bill was finally passed and funded at the level of $240,000 to begin the program. This was about 25% of the $950,000 requested in the original House bill. The Rural Obstetrical Care Incentive (ROCI) Bill was folded into a larger appropriations bill, Senate Bill 257, Chapter 1086.[31] (See Appendix 2.)

Senate Bill 257, Chapter 1086 set aside $240,000 from the General Fund to fund a pilot program "to compensate family physicians and obstetricians who agree to provide prenatal and obstetrical care in counties which are underserved in respect to these services."[32] (In this case obstetrical refers to delivering of babies.) The bill itself contained general guidelines to govern the operation of the program and left the Commission for Health Services to issue first temporary rules and later permanent ones to govern the administration of ROCI. The rules have been changed over the course of the program when necessary, by the Legislature and the Commission. The Maternal Health Branch, Women's Health Section, Division of Maternal and Child Health, N.C. Department of Environment, Health and Natural Resources is responsible for the establishment, execution and reporting to the Chairmen of

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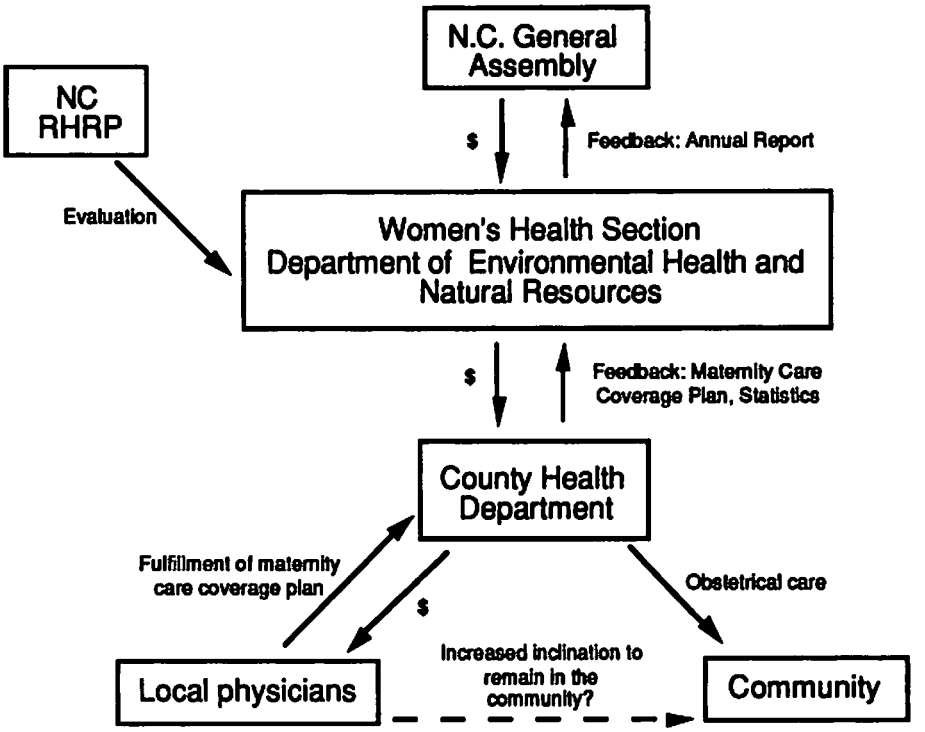
[28]Langholz and Ricketts, 1989.
[29]Langholz and Ricketts, 1989.
[30]Langholz and Ricketts, 1989.
[31]Langholz and Ricketts, 1989.
[32]North Carolina General Assembly. House Bill 2424, Senate Bill 257, Chapter 1086. 1988.

the N.C. House and Senate Appropriations Committees and the Chairmen of the Appropriations Subcommittees on Human Resources the progress in implementing and operating the ROCI program under the rules issued by the Commission for Health Services.[33] The Maternal Health Branch reported back to the chairmen of the House and Senate Appropriations Committees on the implementation of the ROCI program in 1989.[34] The following diagram illustrates the various relationships among the principal parties involved in and the intended effects of the ROCI program.

FIGURE 2
Relationship among Principal Parties in the ROCI Program



[33]North Carolina General Assembly. House Bill 2424, Senate Bill 257, Chapter 1086. 1988.

[34]Berman J. ROCI Program Manager, Division of Maternal and Child Health, N.C. Department of Environment, Health and Natural Resources. Personal Interview. November 1, 1991.

Program Goals and Aims

The original legislative intent of the ROCI program was to increase access to obstetrical care for poor, rural women in North Carolina. There has been some disagreement among interested parties about the way in which the success or failure of the ROCI program should be measured. Some have suggested that the program is meant to recruit physicians and encourage them to locate and practice obstetrics in rural parts of North Carolina. This implies that the success or failure of the program be measured against its ability to entice physicians to rural, underserved areas to practice who would otherwise not have done so. Given that many states spend hundreds of thousands of dollars each year in physician recruitment programs, the amount of money available through ROCI is unlikely to be the sole reason that a doctor chooses to locate in rural North Carolina. Another view is that the program was not intended to be a recruitment tool but a stop–gap measure designed to slow the attrition rate of physicians leaving rural, underserved areas of the State. This viewpoint suggests that the success or failure of the program not be judged solely on the number of new physicians moving to rural North Carolina, but on its ability to solidify the care available in a county at the inception of the program, by encouraging physicians and nurse midwives to continue providing care and to formalize relationships with their local Health Department. Measures important in illustrating the program's ability to do this are changes in the availability of prenatal care through Health Departments, the rate of doctors ceasing to work with the Health Department or deliver babies, and the relative ease that Medicaid patients have in receiving care since the program began. If the program is seen as a stop–gap measure to stem the tide of physicians leaving underserved areas, then success would be obtained if the situation was better than it would have been without the program.

The enabling legislation does not specifically state that the goal of the program is to recruit doctors to underserved areas. On the contrary, officials within the North Carolina Department of Environment, Health and Natural Resources (DEHNR) say that this was not the only goal of the program when it was initiated. From their standpoint, any doctor who was swayed to locate in rural North Carolina by the program was an extra bonus. They feel that the program was initiated in the face of the loss of obstetrical providers in rural North Carolina and designed to slow down the rate at which doctors stopped providing services in these underserved areas.[35] Understanding the goals of the program is key when trying to critically look at ROCI and judge its merits or lack thereof. It appears that ROCI was a response to a crisis in rural areas and was not conceived of or designed as a comprehensive recruitment tool, but rather as a simple way to respond to the malpractice crisis and thereby attempt to encourage doctors to continue providing services in rural areas.

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[35]Berman J. ROCI Program Manager, Division of Maternal and Child Health, N.C. Department of Environment, Health and Natural Resources. Personal Interview. June 4, 1991.

Program Rules and Procedures

North Carolina Administrative Code rules relating to ROCI were adopted by the Commission for Health Services in November of 1988 and updated in January of 1991, and included guidelines for formal notification and application procedures for county Health Departments interested in participating in the program. Only county Health Departments are eligible to apply for the funds, so doctors interested in the program must work with the local Health Department and develop a maternity care coverage plan for the county in order to participate. In this process, the Health Department, local physicians and nurse midwives negotiate an arrangement whereby the provider delivers prenatal and/or delivery services in return for the insurance subsidy. It is hoped that this process will increase cooperation between local Health Departments and physicians in the community.

Requests for proposals are sent out by the Division of Maternal and Child Health in early fall of each year for the next year's program and applications are expected back at the regional Health Offices within 45 days. Decisions on funding levels for each county are made after all applications are reviewed to see if they meet a prescribed set of qualifying criteria. The criteria include, among others, the availability of obstetrical providers and prenatal care as well as waiting lists of longer than 28 days where prenatal care is available. The ones which do meet the criteria are ranked according to the degree of underservice as measured by the number of criteria which the county meets. For instance, a county which meets five of the criteria would have priority over a county meeting only three of the criteria. In cases of ties, the Division of Maternal and Child Health utilizes outside information such as population-to-obstetrical provider ratios[36] and internal sources of information to make funding decisions regarding these counties. The Division of Maternal and Child Health management team makes the final decision regarding the level of funding for each county. The criteria are found in Section .0300 of the North Carolina Administrative Code which was amended February 1, 1991. (For a complete listing of the rules and regulations governing the functioning of the ROCI program, see Appendix 4.) Through the Administrative Code, the Maternal Health Branch has specifically defined levels of underservice according to the following criteria.

A County is eligible for funds if it meets any of the following:

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;

[36]Fondren and Ricketts, 1991.

4. The county has a waiting list of more than 28 days in the public prenatal clinic; 50% or more of the resident live births occur outside the county; the five year infant mortality rate or premature birth rate is worse than the State average; the percentage of resident live births to women receiving inadequate or no prenatal care is worse than the State average; 50% or less of the physicians practicing obstetrics in the county serve Medicaid patients in their private practice; more than 15% of the resident live births in a county are to women who receive prenatal care from public clinics; the percentage of resident live births to women who initiated prenatal care in the first trimester is lower than the State average; or the percentage of resident live births to women seeking prenatal care in the third trimester is higher than the State average.

Each physician who participates in ROCI is eligible to receive $6,500 per year or the additional malpractice charge which a physician incurs as a result of delivering babies, whichever is less. Physicians may participate and not deliver babies if the county through which they serve does not have a delivery facility.[37] Cullen found that malpractice premiums were, "significantly higher for family physicians who provide obstetrical services than for those who don't offer these services, and are often not worth the economic benefits accrued from offering maternal care."[38] Since 1991, A Certified Nurse Midwife (CNM) is eligible to receive $3,000 per year, or the total amount of the premium, whichever is less, to offset cost of malpractice insurance. A county Health Department may include as many physicians or nurse midwives as it wants in the ROCI program, but there is a $19,500 cap on funding for each county, regardless of the number of physicians who participate in the program, or their individual malpractice insurance costs. Physicians and CNMs are required to document the cost of their malpractice insurance and demonstrate the extra insurance cost incurred as a result of delivering babies. Once approved, physicians receive their ROCI supplement in an annual payment, usually in February of each year. Under the terms of the contract, either the participating physician or the Health Department through which doctors receive the subsidy may cancel the ROCI agreement at any time with written notice of one month. In such a circumstance, a pro-rated share of the money which a doctor receives must be paid back to the Division of Maternal and Child Health.

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[37]Berman J. Personal Interview, June 4, 1991.

[38]T Cullen in Ricketts and Kolimaga, 1991.

TABLE 2
FUNDING LIMITS FOR INDIVIDUAL PROVIDERS AND COUNTIES IN NORTH CAROLINA'S ROCI PROGRAM

Physicians	$6,500 or the difference between malpractice insurance delivering babies and not delivering, whichever is less
Certified Nurse Midwives	$3,000 or the difference between malpractice insurance delivering babies and not delivering, whichever is less
Total County Funding Limit	$19,500 regardless of the number or type of provider, to be divided among the providers as the Health Department sees fit

Source: Maternal and Child Branch, N.C. Department of Environment, Health and Natural Resources, 1991.

There is a great deal of flexibility concerning the types of services which clinicians must provide in order to participate in the program. There is a corresponding great deal of variability in the amount and setting of the services rendered by these clinicians under the auspices of ROCI. The specific responsibilities and services required of ROCI providers are defined by a negotiation process which takes place between the Health Department and the local physician. The County Health Departments are given leeway in deciding what services a physician or nurse midwife must provide in order to participate in the program. But, by accepting ROCI funds, physicians and nurse midwives agree to basic participation requirements which are espoused in the North Carolina Administrative Code Section .0306. These requirements are the guiding principles which govern the type and manner of service provided. Under the ROCI program a physician or nurse midwife shall:

A. 1. provide prenatal care to low-income women by:
   a. staffing a public prenatal clinic (physicians may provide medical back-up and supervision of physician extenders providing services in a public prenatal clinic)
   b. providing prenatal care in a private office.

   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;

   3. not refuse to provide prenatal or delivery care for any patient based on economic status or ability to pay; and

   4. participate in data collection efforts required by the Maternal Health Branch;

   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.

B. 1. 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.

C. 1. No participating physician or nurse midwife shall be required to provide delivery services if the underserved county does not have a facility for obstetrical delivery.

According to interviews conducted by the North Carolina Rural Health Research Program during the Summer of 1991 with some of the physicians participating in ROCI as well as Health Department personnel who administer the program, there have been some suggestions that the rules of the program need to be altered. Some physicians feel that the $6,500 limit for each doctor is too low, and that more funding available to physicians would increase participation in the program. That the physicians participating in the program would like to be compensated more for their work with the program is hardly a surprising finding. Some Health Department personnel also reported being interested in having the county funding caps raised for the program during these interviews. They feel that $19,500 is not enough money to induce doctors to participate in the program when divided among several physicians. This desire for an increased county funding ceiling is especially important to Health Department personnel and physicians in counties such as Sampson which divide their ROCI among seven physicians presently participating in the program. Given that the locus of decision making in this program is local, this type of situation leaves the Health Department in the uncomfortable position of having to decide how to split up the money among participants, possibly creating tension between the Health Department and the providers, and among the providers themselves. (The site visit report in Appendix 1 details this in Sampson County.) Modification of the present rules would have to be preceded by a change in the legislation by the North Carolina General Assembly which provides funding for the ROCI program, or by altering the section of the North Carolina Administrative Code which governs ROCI program administration.

Program Expansion

The ROCI program began in 1989, with the program year running from January 1, 1989 to December 31, 1989, even though the funds for the program are appropriated on a fiscal year basis with the fiscal year running from July 1, 1988 to June 30, 1989. The program received $240,000 in its first year which was available to physicians who met all the program's requirements. In the first year 52 doctors participated through 21 county Health Departments to provide obstetrical services to women seeking care through these Health Departments. From its inception, there have been several legislative attempts to expand the program. For program year 1990, an extra $1,000,000 was requested for expansion of ROCI, which would have brought the total program funds to $1,240,000 but this request was denied by the North Carolina General Assembly and the program functioned at the same monetary level in 1990 as it did in 1989. The funds available to the program more than doubled for the program year 1991, as the General Assembly approved a $300,000 increase raising the total funding for the program in that year to $540,000. This increase allowed the ROCI program to expand to 44 county

Health Departments and 119 physicians—44 Family Practitioners, 70 OB/GYNs, 2 Gynecologists, 1 Obstetrician, 1 General Practitioner and 1 Emergency Medicine physician by the end of the program year which ends on December 31, 1991. (The number of providers fluctuated somewhat during 1991 as physicians dropped out of the program and others were added. 119 physicians and 13 Certified Nurse Midwives are participating as of November, 1991.) Maps 4 and 5 show the North Carolina counties which participated in ROCI during 1991, and the types of provider by county which participated in that same year.

TABLE 3
ROCI FUNDING FROM 1988-1992

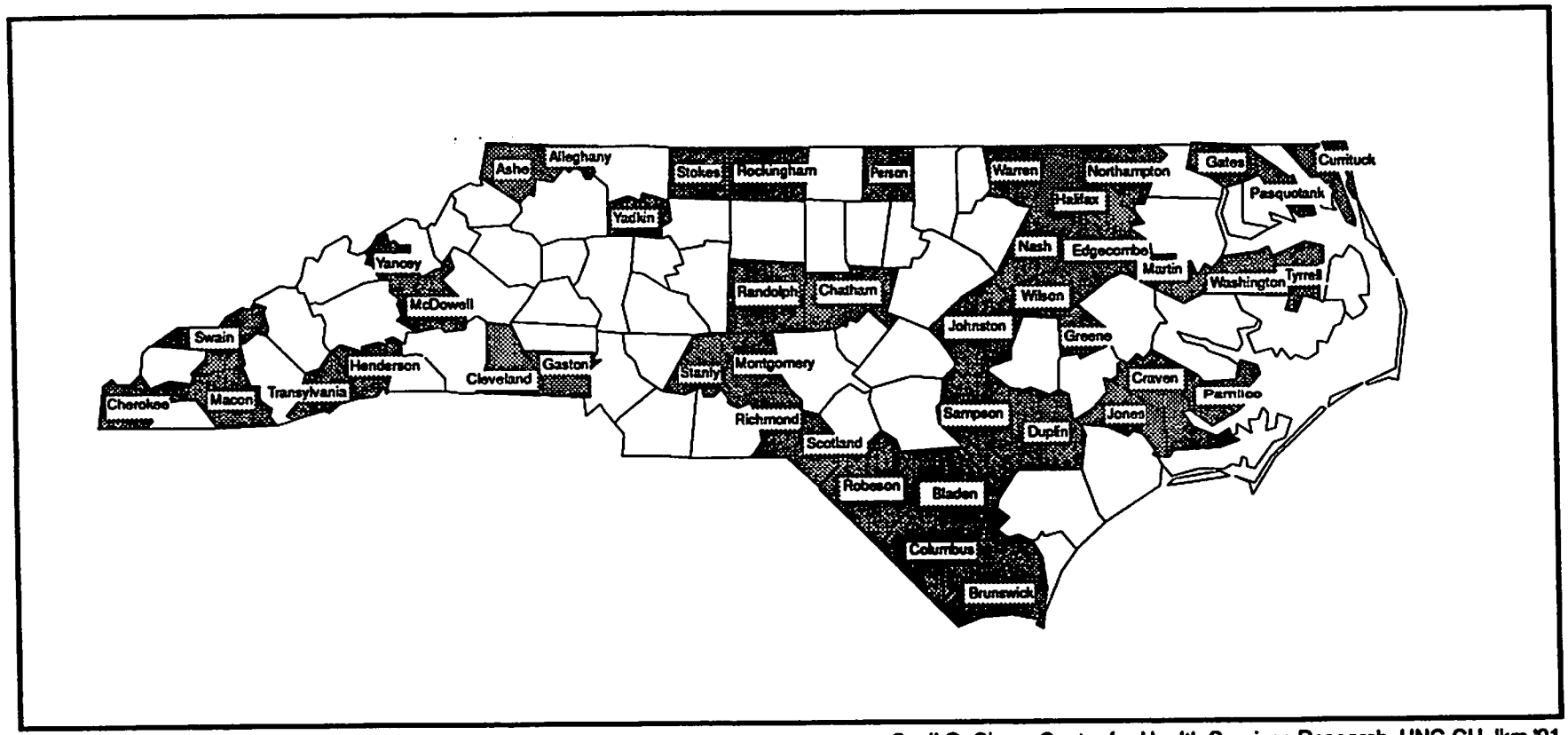
Program Year	Additional Requested	Additional Approved	$ Total Funding Level
1989	$950,000	$240,000	$240,000
1990	$1,000,000	$0	$240,000
1991	$2,000,000	$300,000	$540,000
1992	$500,000	$300,000	$840,000

Source: N.C. DEHNR, Division of Maternal and Child Health. Raleigh, 1991.

Another change took place in the program in 1991, as CNMs were added to the ROCI program. Under the present rules, a CNM is eligible to receive up to $3,000 per year. As with physicians, the level of individual funding is determined by the cost of a CNM's insurance premiums; they are eligible to receive the costs of their malpractice insurance premiums or $3,000, whichever is less. In 1991, 13 CNMs were participants in the program and were eligible to provide care under the terms of their individual ROCI contracts. (The role that CNMs are playing in ROCI is highlighted in case studies of Yancey, and Robeson counties.) There is dissatisfaction among some nurse midwives at the fact that physicians are eligible to receive more money than they, in spite of the fact that the money provided by ROCI generally covers a larger portion of the total malpractice insurance costs of midwives as compared to doctors.[39]

[39]Berman J. Personal Interview. November 1, 1991.

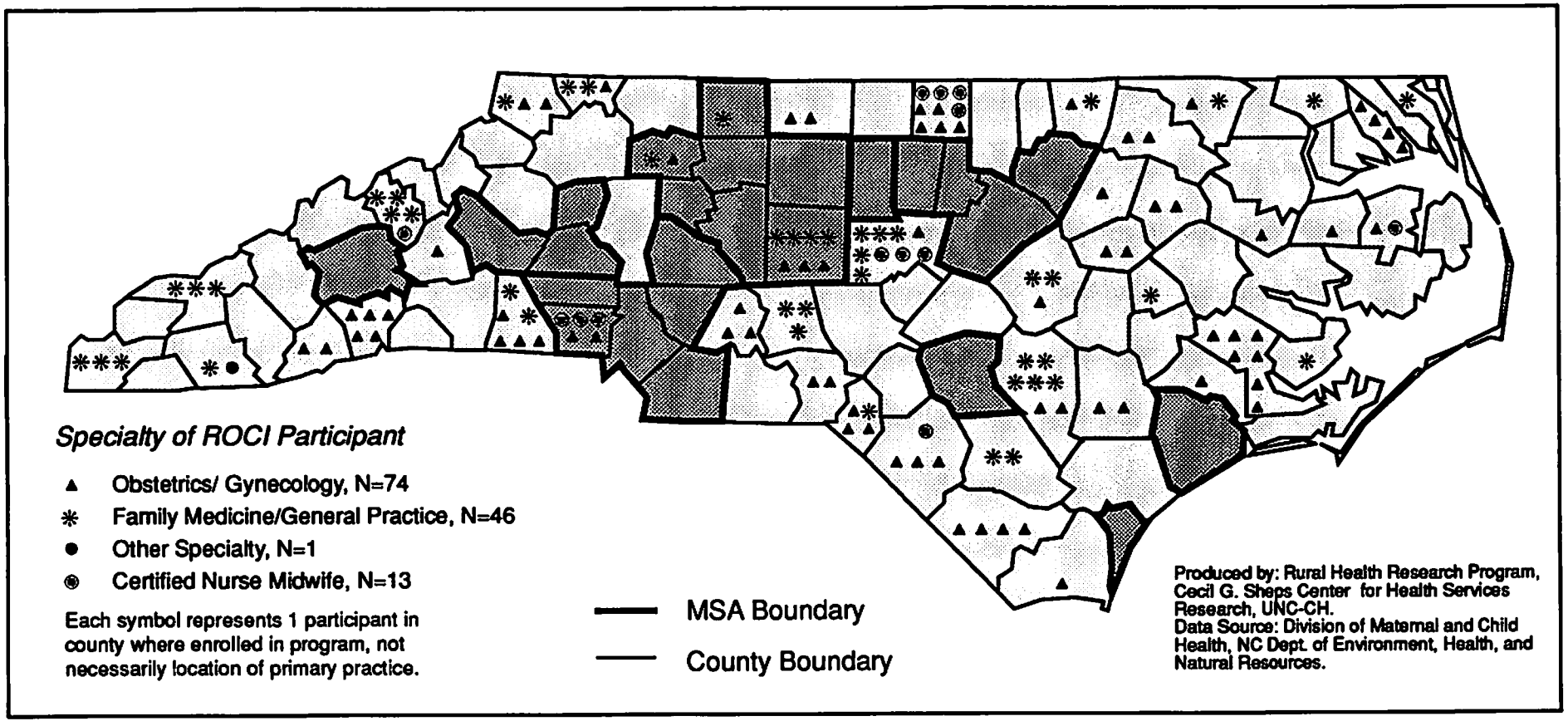
North Carolina Counties in the ROCI Program in 1991



Cecil G. Sheps Center for Health Services Research, UNC-CH, lkm '91

Map 4

ROCI Program Participants by County, 1991



Map 5

TABLE 4
EXPANSION OF ROCI PROVIDERS FROM 1989-1991

Year	Participating Counties	Participating Doctors	Participating Nurse Midwives
1989	21	52 (31 FPs & 21 OB/GYNs)	None
1990	25	55 (31 FPs & 24 OB/GYNs)	None
1991	44	121 45 FPs & 71 OB/GYNs 5 Others	13

Source: N.C. DEHNR, Division of Maternal and Child Health. Raleigh, 1991.

The ROCI program has continued to expand in spite of severe budgetary constraints which 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 to $840,000 which will be available to be distributed to doctors and nurse midwives in 1992. This fairly constant expansion in the face of fiscal hard times seems to point to a program which is politically popular and fairly secure in its likelihood of being funded in the future. The view from some State Representatives and Senators is that ROCI allows the legislature to respond to the malpractice insurance crisis, lack 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 tell their constituents that they are addressing these problems.

The Division of Maternal and Child Health has not advocated any rule changes to the General Assembly which correspond with the funding increases approved by the General Assembly during the Summer of 1991. The increased program funds will be used to extend the program to other qualified counties which have been rejected in the past because of money limitations or which have not previously applied to participate in the program. A list of the present participating counties, the number and type of provider in each county and the counties' total ROCI funding levels are located in Appendix 3.

Recruitment Efforts

The North Carolina Office of Rural Health and Resource Development works closely with the Division of Maternal and Child Health in its efforts to recruit physicians to relocate to rural areas. Since 1973, this office has programmatically addressed the problems of rural North Carolina, making it the first office of its kind in the United States. A special focus of the Office of Rural Health is the recruitment of obstetrical care providers to rural counties in North Carolina. According to *North*

Carolina HEALTH CARE this office has successfully recruited over 900 physicians to rural North Carolina in the past 16 years.[40] A portion of the money allocated to the ROCI program has been given to the Office of Rural Health by the Division of Maternal and Child Health to boost their recruitment efforts of obstetrical providers. While this is not the primary goal of the ROCI program, nor is the recruitment of new physicians to rural areas the criterion on which ROCI should be evaluated, these funds represent an important link between these two agencies as they seek to improve the obstetrical care available in rural North Carolina. For the 1992 program year, $30,000 has been designated for the Office of Rural Health for use in the recruitment of physicians.

[40]Bullard A. "A Tough Job: Rural Health Office Adds Recruiters." *North Carolina HEALTHCARE* November, 1991.

RESULTS OF THE FIRST THREE YEARS OF ROCI

The ROCI program has been an effort to increase access to obstetrical care for women in rural areas, where there are often few channels through which poor women can receive the obstetrical care that they need. The results or effects the program has had are important in identifying the accomplishments of the program in its first three years. The program, as it was considered and debated, brought much light to the medical malpractice issue and provided an opportunity for the North Carolina General Assembly to show that the issue is a priority in this state by increasing ROCI's funds while many programs were being cut. Yet, it is hard to measure the ultimate program effect on the availability of obstetrical care. However, ROCI has produced more tangible accomplishments than simply raising awareness of the malpractice crisis and its effects on availability of obstetrical care. Relations between County Health Departments and local physicians have been improved in many cases as a result of the negotiations and discussions between the two parties during the formulation of a county obstetrical care coverage plan. This process forced both the Health Department and the physician to step back and consider the needs of the female population in their area in conjunction with the services they were able and willing to provide in order to meet those needs. Improved relations and closer working relationships which were reported during site visits have taken fruition in explicit agreements between County Health Departments and the physicians. These agreements spell out what services the physician or nurse midwife agrees to provide in return for receipt of the ROCI money. Several Health Department personnel interviewed said that the ROCI money had allowed the Health Department to feel like it could 'pay its own way' to a greater extent and not rely on the physicians' good will to work in Health Department clinics or see Health Department patients in their private office. While physicians are paid by the County Health Departments and are able to receive Medicaid reimbursement, some still looked at providing large amounts of service for and through the Health Department as a financial burden, according to some of the Health Department staff interviewed during site visits. Having explicit agreements which state the services which physicians and nurse midwives will provide in return for the ROCI money allows the Health Department to depend on those services being provided. This in turn helps the Health Department plan the expenditure of its finite resources more accurately, knowing that it can count on having its obstetrical care coverage plan fulfilled by the ROCI physicians and nurse midwives. Table 5 below shows the types of services which were formally agreed to through the ROCI application process in the seven ROCI counties in which the N.C. Rural Health Research Program conducted site visit interviews during the Summer of 1991. The sources of the information in the table are the actual contracts which are on file in the Division of Maternal and Child Health and data gathered through the site visits.

TABLE 5
PHYSICIAN SERVICES FORMALIZED IN ROCI CONTRACTS FOR SEVEN COUNTIES VISITED IN SITE VISITS

SERVICES FORMALIZED THROUGH ROCI	COUNTY 1	2	3	4	5	6	7
Physicians provide direct prenatal care at normal HD prenatal clinics		●	●	●		●	●
Physicians provide backup for physician extenders working in HD prenatal clinics (CNMs, NPs, PAs, etc)	●		●		●		
Physicians deliver HD patients and drop ins	●	●	●	●	●	●	●
Physicians provide direct prenatal care to high risk patients in HD clinics		●	●	●			●
Physicians provide direct prenatal care to HD and Medicaid patients in their private office who are high risk or having an emergency	●	●		●	●	●	●
Provide consultation for nurses who work in HD prenatal clinics during and outside clinic hours		●		●	●	●	●
Refer low income pregnant women to WIC	●	●	●	●	●	●	●
Refer Medicaid pregnant women to Maternity Care Coordinator	●	●	●	●	●	●	●
Physicians regularly see HD and Medicaid prenatal patients in their private office who aren't high risk	●	●					

Source: Site Visits and the Division of Maternal and Child Health, Raleigh, 1991.

Counties are listed in the order in which they were visited which corresponds to the order in which they are listed in Appendix 1.
1=Yancey County
2=Edgecombe County
3=Robeson County
4=Johnston County
5=Richmond County
6=Duplin County
7=Sampson County

Evidence of ROCI's impact from Site Visits

Each of the ROCI counties which was visited during the summer of 1991 has distinct characteristics which describe its particular obstetrical care situation. (See Table 6 in Appendix 1) The counties are similar in that they have used the ROCI program to combat the effects of rising malpractice insurance premiums on obstetrical access in their rural, poor counties. While the monies

have been used in different ways to fund different types of arrangements, the majority of the counties appear to be offering levels of obstetrical care which might not be available without ROCI funds. Following are ways in which the ROCI funds have impacted the obstetrical care situation in each of these counties.

YANCEY COUNTY

1. A CNM who planned to stop practicing because of increased malpractice premiums has continued and has become the hub of the obstetrical care network in Yancey County; and remains the county's only provider of prenatal care.
2. A group of 4 FPs in Bakersville who participate in ROCI, had preliminary plans for at least one of them to stop delivering babies because of the cost of malpractice insurance; because of the program, the clinic director reports that they plan to all continue delivering indefinitely.

EDGECOMBE COUNTY

1. The ROCI funds facilitated improved relations between the Health Department and the two OB/GYNs who are the only delivery physicians in the entire county. While these physicians were treating all women who sought care before joining ROCI, the Health Director feels that the funds may prevent the physicians from feeling "burned out" and bitter from the increased costs of treating so many poor women, because the ROCI funds help offset their malpractice insurance costs.

ROBESON COUNTY

1. The availability of ROCI money played a part in an established physician's decision to accept a young partner interested in including Medicaid patients in their practice. The subsidy eased the financial burden of increased numbers of Medicaid patients.
2. The Robeson County Health Department has been able to expand its prenatal clinic since receiving ROCI funds because of a CNM added to the staff as a result of the program. This has resulted in shorter waiting times for women visiting the clinic.
3. Continuity of care has also been improved according to Health Department personnel since ROCI because the program arrangement has formalized relationships between the Health Department and providers which were informal and unreliable before. Now women can be more sure who will provide their prenatal care throughout pregnancy and deliver their baby.

JOHNSTON COUNTY

1. The Johnston County 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 OB/GYN (and only one at the hospital in Smithfield) has become more willing to staff these clinics.
2. The funds have also been used to encourage the only OB/GYN in the county to continue practicing; this physician has expressed a desire to quit in the past.

RICHMOND COUNTY

1. Positive results of the program in Richmond County are hard to discern. The terms of the ROCI contract have been the center of dispute between the two OB/GYN participants and the Health Department. As a result, these physicians have actually reduced services that they provide through the Health Department. In this instance, increased dealings between physicians and the Health Department backfired.

DUPLIN COUNTY

1. One of the ROCI OB/GYNs in Duplin County is a National Health Service Corps physicians who cites ROCI as one of the most positive aspects of his remaining in Duplin County after his obligation in the Corps is finished. This existence of the funds amounts to a recruitment/retention tool.
2. ROCI has also helped keep both of these physicians willing to deliver unlimited numbers of Medicaid women. A Malpractice insurance subsidy is important to them since they feel that treating high numbers of poor women increases the likelihood of their experiencing litigation.

SAMPSON COUNTY

1. Since ROCI's inception in the county there has been renewed interest in providing obstetrical care through the Health Department. In the first year of the program, 2 physicians participated; in 1991, 7 did.
2. Waiting times in the Health Department prenatal clinics have been shortened since the program began because of this increased participation which has lead to longer clinic hours.

ROCI has also served a more structural purpose by modeling how a governmental program can work in which there is much leeway granted to the local decision makers in the distribution of funds. The ROCI model may be useful to other programs which could benefit from distributing funds without having to "jump through the hoops" of regulations and rules which may stifle the number of ways local entities can respond to problems. While all types of programs may not be able to grant such a degree of autonomy to local entities, the option is a useful one for consideration.

Final Observations

ROCI has proven to be a politically popular program which has enjoyed expansion during a period of time when budgetary constraints in the State of North Carolina have been significant. This suggests that the ROCI stands a good chance of expanding even further from a political standpoint.

Perhaps the most significant consequence of the program has been the fact that relationships between the local Health Department and participating physicians and nurse midwives have been enhanced. Informal professional arrangements which existed before the program have been formalized, and new relationships have been forged. ROCI has been the catalyst for much of this change. Programs which encourage county Health Department officials and local physicians to

evaluate and address the local health situation together, as ROCI does, increase the likelihood that programs and interventions which are enacted will be effective and efficient. This has been manifest in some instances where the physicians increased their hours of care delivered at their local Health Department. Hopefully, these improved relationships will transcend the ROCI program and will not be confined to obstetrical care delivery.

ROCI has enjoyed limited success in recruiting physicians to rural areas but has had the effect of "shoring up" the care that many physicians provide through the Health Department. That is, the delivery of care has been formalized, increasing the amount of care that the Health Departments can count on being able to provide. Given the limited funds set aside for recruitment purposes ($30,000 set aside for 1992 program year) it is not surprising that recruitment efforts which are directly traceable to ROCI have not been more profound.

Medicaid expansion and the Baby Love program have changed life at the local Health Departments. According to interviews conducted with Health Department staff of certain ROCI counties, these programs ensure that virtually no women are "falling through the cracks," meaning they have no health insurance and are ineligible for Medicaid. This does not mean there are no barriers to care. Just because a woman is eligible for Medicaid does not mean she will be enrolled or will obtain the necessary care. Medicaid expansion has also made deliveries of Medicaid patients a more attractive revenue source and appears to have positively affected the availability of obstetrical care to poor women in North Carolina. Presently, a physician in North Carolina receives $1,100 for a delivery and providing prenatal care.[41]

There is some variability in the amount of service which ROCI providers deliver for Health Departments under the terms of their ROCI contract. Different providers deliver more services than others. This accentuates the flexibility of the program.

ROCI appears to be the "glue" which is holding in place the present prenatal and delivery care system in some counties. Some participants in the program and Health Department personnel say that the program is the only thing standing in the way of losing this system. While physicians may have been committed to providing services to poor women before the program, after receiving the ROCI subsidy it may be difficult to entice them to continue in the more formal arrangements which have been initiated as a result of ROCI. Should the ROCI program be discontinued by the N.C. General Assembly, the county health departments may find it even harder to provide needed obstetrical services than they did before the program began.

According to the site visits, local Health Departments appreciate and like programs such as ROCI which distribute funds with few rules and allow for much flexibility in the use of these monies.

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[41]Berman J. Personal Interview. June 4, 1991.

Having the locus of decision-making be at the county level allows the program to be more flexible in meeting local needs.

RECOMMENDATIONS

The flexibility of the ROCI program is its greatest strength. The basic guidelines provided in the funding legislation direct the use of funds but allow individual counties to use ROCI monies to best address their unique set of needs, largely utilizing local resources. The Department of Environment, Health and Natural Resources should explore other opportunities to distribute money from State government to localities with only the minimum amount of regulations. Programs at the Federal level should also look to ROCI as an example of how decision-making at the local level may facilitate a better use of funds, resulting in responses based on local needs rather than centrally-derived guidelines.

The Division of Maternal and Child Health should set about identifying a systematic means of collecting key data and disseminating these data to the proper persons. This includes deciding which measures are appropriate and cost effective for this program to collect and utilize, and developing a system to conduct such a collection. This will enable ROCI to receive feedback which can help improve the program and respond to changes in the relative needs within counties which may need to be addressed in the future.

The Federal Government and other states should look to North Carolina's ROCI program as an example of a specific means of responding to the malpractice crisis. Specifically, HR 2229, introduced into the 102nd United States Congress appears to be an excellent means of enabling individual states to respond to lack of obstetrical care in rural areas. The bill provides for the establishment of Medicaid demonstration projects ($30 million over 5 years) to encourage states to design programs to improve access to obstetrical care in rural areas. The program proposed by HR 2229 would be a positive step toward improving health care availability to women in rural areas nationwide.

APPENDIX 1

This Appendix includes reports from site visits conducted in July, 1991 in seven counties which participate in the ROCI program and one county, Pender, which did not as of November, 1991. Table 6 provides summary statistics for the counties along with comparative statewide, rural and urban statistics. The site visit reports follow this table.

TABLE 6
SUMMARY STATISTICS OF COUNTIES IN WHICH ROCI SITE VISITS WERE CONDUCTED, JULY 1991

COUNTY	'90 POP	'89 PER CAPITA$	'89 UNEMP %	'89 AFDC	'89 IMR per 1000 LBs	'90 POP/MD	'90 POP/ OB/GYN
Yancey	15,419	10,638	2.9	13.49	0	1,542	0
Edge-combe	56,558	11,203	4.5	72.97	16.2	1,950	20,044
Pender	**28,855**	**11,677**	**4.1**	**38.81**	**14.9**	**2,220**	**0**
Robeson	105,179	9,376	6.5	71.56	10.6	1,366	18,128
Johnston	81,306	12,491	3.6	28.98	9.6	1,768	40,859
Richmond	44,518	10,830	4.5	31.49	12	1,535	11,500
Duplin	39,995	10,595	4.3	39.28	13.1	1,666	13,932
Sampson	47,297	10,743	4.4	45.73	16.7	1,182	47,297
State Avg	**66,286**	**14,297**	**3.5**	**29.7**	**11.5**	**623**	**8,563**
Rural Avg	38,281	11,719	4.5	38	11.4	852	13,110
Urban Avg	150,304	14,782	3.3	20.4	11.5	465	7,515

Source: Population: U.S. Census Bureau; Per Capita Income: U.S. Dept. of HUD; AFDC: N.C. Dept. of Human Resources, Division of Social Services; Manpower ratios: N.C. Health Manpower Data Book, 1990. Unemployment: N.C. Department of Labor; Infant Mortality Rate: N.C. Department of Human Resources, Center for Health and Environmental Studies.
Pender County (in bold) is not a participant in ROCI as of 1991.

YANCEY COUNTY
July 11, 1991

Yancey is one of 44 counties which presently participate in the Rural Obstetrical Care Incentive (ROCI) Program. The county lies in the western part of North Carolina just North of Asheville. Yancey had a total population of 15,419 in 1990 who had a per capita income of $10,638. The 1989 unemployment rate was 2.9% and there were 13.49 recipients of AFDC benefits per 1,000 population. There were no infant deaths in the county during 1990. The population–to–doctor ratio was 1,542 persons for each MD in the county.[42] There are no OB/GYNs in Yancey County.

The county has no hospital so women must seek out–of–county facilities in which to deliver their babies. Most women deliver in Mitchell County which is adjacent to Yancey, at the hospital in Spruce Pine. Fewer women travel to Asheville, about 45 minutes from Burnsville, the county seat of Yancey, to deliver. The OB/GYNs in Asheville will not treat Medicaid patients who are not high risk according to staff from the Yancey County Health Department. Women with high risk pregnancies are referred to OB/GYNs in Asheville or Johnson City, Tennessee, depending on their preference and in which part of Yancey County they live. The OB/GYNs in Asheville do accept high risk Medicaid patients. Mitchell County, which is not a participating ROCI county, is very much a part of the "network" which provides prenatal and obstetrical care to the women of Yancey County. There are four FPs and one CNM who participate in the ROCI program through the Yancey County Health Department. The 4 FPs practice in Bakersville, which is in Mitchell County. Yancey, Mitchell and Avery Counties are part of the Toe River District Health Department.

The Yancey County Health Department (YHD) is the only provider of prenatal care in the entire county and serves patients with private health insurance in addition to Medicaid and uninsured patients. Since the expansion of Medicaid benefits, there are virtually no uninsured patients in Yancey or Mitchell counties according to Health Department personnel. The YHD holds a prenatal clinic once a week and a separate clinic twice a month for a woman's initial prenatal visit after she discovers that she is pregnant. A Certified Nurse Midwife (CNM) who is a participant in ROCI staffs the prenatal clinic and is considered the "lead medical" provider of prenatal care at the YHD. Two Family Nurse Practitioners (FNP) and a Registered Nurse who functions in an expanded role in maternity care and who holds a Certificate in Perinatal Nursing also provides direct medical care to prenatal patients during the weekly clinic and at all other times when the CNM is not on site at the Health Department. They receive back up from 4 FPs who work in the Bakersville Clinic in Mitchell County. These doctors are also participants in the ROCI program. The CNM can consult by phone with the back–up doctors or

[42]Population: U.S. Census Bureau; Per Capita Income: U.S. Dept. of HUD; AFDC: N.C. Dept. of Human Resources, Division of Social Services; Manpower ratios: N.C. Health Manpower Data Book, 1990; Unemployment: N.C. Department of Labor; Infant Mortality Rate: N.C. Department of Human Resources, Center for Health and Environmental Studies.

refer patients directly to the Bakersville clinic if need be. There is a high level of cooperation and trust between the CNM and the physicians who participate in ROCI. The FPs are willing to deliver patients who have received prenatal care from the CNM through the YHD and have not been seen by the doctors should the CNM not be available to do a delivery at Spruce Pine Hospital. This shows a level of trust and confidence that was not found in any other relationship between CNMs and physicians during the site visit process.

The same type of arrangement exists in the Mitchell County Health Department (MHD), with the same CNM holding prenatal clinic once a week and being backed up by the Bakersville clinic in the same manner, although a considerable number of Mitchell County women receive prenatal care directly from several doctors in Mitchell County, including the ROCI physicians. Two of the FPs from Bakersville Clinic hold a general clinic once a month in the MHD, which may include providing some prenatal care. Yancey County is officially a participant in ROCI and Mitchell County is not, but it is obvious that the doctors and the hospital in Mitchell County play a crucial role in the delivery of prenatal and obstetrical care to poor, underserved women in Yancey County.

There has not been an extremely litigious climate in Yancey and Mitchell counties over the past 5-10 years. The nursing supervisor, CNM and maternity care coordinator for the YHD could not recall an obstetrical lawsuit being filed in the past 5 years or so. The Bakersville Clinic has not been sued for any reason in the history of the Clinic, according to the Clinic administrator of 16 years. None of the persons interviewed from the YHD or Bakersville Clinic anticipate a change in this situation, although they said a change for the worse would affect the level of obstetrical service available in this area. The persons interviewed seem to feel that the commitment of the doctors and CNM to the patients is the main reason there have not been a large number of lawsuits in this area. The Clinic administrator says that when health providers develop a long term commitment to and relationship with patients, "the patients are not as quick to sue when an outcome is less than perfect."

While there has not been a great deal of local litigation, malpractice insurance premiums were becoming a problem for the CNM who began practicing in the area about 4 years ago. Spruce Pine hospital requires $1 million/$1 million coverage for a physician or CNM to deliver babies in the facility. The CNM planned to quit work as a midwife because of her inability to afford the yearly malpractice insurance cost, which was $5,400 in 1991. With the advent of the ROCI program, and its extension to CNMs for the 1991 program year, the YHD was able to hire the CNM as a full time employee and subsidize her malpractice insurance. According to the CNM, without the $3,000 subsidy from the ROCI program, the YHD would be unable to hire her. Without her present arrangement which pays 50% of her malpractice premiums, she would no longer be practicing. Her quitting could begin a spiralling process in which the Bakersville clinic doctors would no longer be comfortable delivering babies who received prenatal care solely at the Health Department from providers other than the CNM. Given the fullness of the doctors' schedules, they would be unable to provide adequate

care to all who needed it in their private office or at the YHD. In short, the ROCI money which offsets the midwife's malpractice insurance appears to be the "glue" that holds together the prenatal and obstetrical network in Yancey and Mitchell Counties. It enables the Health Departments to provide quality prenatal care to patients who have no other options and ensures that the doctors are comfortable doing deliveries of patients who received care from the Health Departments if the midwife is not available to do the delivery.

ROCI has not altered the types of patients who receive prenatal care from the YHD or the babies delivered by the Bakersville Clinic doctors. By all accounts, all patients were seen regardless of their ability to pay by the YHD, MHD and the Bakersville Clinic before the ROCI program began. So, there have been no increases of indigent and Medicaid care delivered that can be attributed to the initiation of ROCI. ROCI's role in Yancey and Mitchell Counties has been to shore up an already good prenatal and obstetrical care system and ensure that it continues to provide the same level and quality of care to poor women. According to the administrator of the Bakersville Clinic, without the ROCI insurance subsidy (which amounted to $8,400 to the clinic for 4 FPs for 1991.), the practice would be forced to drop two of its doctors from doing deliveries because of rising premiums. This would mean a shortage in the number of providers available for delivering babies. The prenatal and obstetrical care network minus the CNM and 2 doctors would probably be unable to provide adequate care to all those in need. Those without private health insurance would suffer the most as there are presently no OB/GYNs in Asheville who accept Medicaid patients in their normal practice.

Yancey County appears to be a success story. Two rural, relatively poor counties have put together a system whereby all residents are able to receive the prenatal and obstetrical care they need, largely utilizing the resources present in the area. The ROCI funds have allowed providers, who may have quit otherwise because of rising insurance costs, to continue practicing obstetrics, and enabled a highly cooperative system of prenatal and obstetrical care to be cemented in place, which pools the resources of the local Health Departments, Spruce Pine Hospital and private physicians. There have been no changes in the type of patients seen by providers because there was an existing commitment to provision of service to all women. Pregnant women in this area have long been receiving the needed care regardless of their economic status. ROCI has simply reduced some of the costs of serving a rural, poor population. As the margin which doctors and HDs have in this area shrinks, the existence of ROCI funds will grow in importance to the maintenance of prenatal and OB care. While doctors in this area have not been hit with medical malpractice suits, rising malpractice premiums have made the continuation of the present level of service questionable should the ROCI funds be lost to Yancey County.

EDGECOMBE COUNTY
July 19, 1991

Edgecombe County is in the Northeast section of North Carolina, about 75 miles Northeast of Raleigh and 20 miles North of Greenville. The county had a population of 56,588 in 1990 and a per capita income of $11,203. This part of the State relies heavily on the agricultural sector of the economy. The unemployment rate stood at 4.5% in 1989, there were 72.97 people receiving AFDC benefits per every 1,000 persons and the infant mortality rate was 16.20/1000 live births in the county during that same year. There were 1,950 citizens for each doctor and 20,044 for each OB/GYN in 1990.[43]

Edgecombe is a county which has had a commitment to providing prenatal and obstetrical care to all women since 1910 according to the County Health Director. Two OB/GYNs moved to Tarboro, the county seat, 4 years ago with the feeling that it is their responsibility to take care of the needs of the community in which they practice. This includes treating large numbers of poor patients, many of whom rely on Medicaid. The ROCI program has not brought about any change in the availability of care to poor women in Edgecombe County because the prenatal network of the area was providing the needed care prior to the initiation of the program. The Health Department, the ROCI doctors and Heritage Hospital (the only delivery facility in the county) all have commitments to serving pregnant women regardless of their ability to pay for services. As in other counties, the Baby Love program and the Medicaid eligibility expansion mean that very few women presently "fall through the cracks" and have no Medicaid or private health insurance. Edgecombe County was not funded by ROCI in the first program year because the county did not fall high enough on the scale of underservice as defined by the ROCI program criteria. This angered both the Health Department and the 2 OB/GYNs who presently are a part of the program who feel that the ROCI program should be a reward for doctors already providing care to poor women, and not a means to entice doctors to to change the manner in which they practice medicine. They feel that all physicians should treat Medicaid patients and that doctors who do not should not be given money to begin doing so.

The Health Department (HD) holds a prenatal clinic one day a week in which patients are seen by one of the two OB/GYNs in the HD. There is a waiting period of 1 week between confirmation that a woman is pregnant and her first prenatal visit. The doctors have also began to see some HD patients in their private offices, which are across the street from the HD. The two OB/GYNs who are participants in the ROCI program are the only providers who deliver babies in Edgecombe County. These doctors deliver more babies than the average OB/GYN in North Carolina–with 768 deliveries

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[43]Population: U.S. Census Bureau; Per Capita Income: U.S. Dept. of HUD; AFDC: N.C. Dept. of Human Resources, Division of Social Services; Manpower ratios: N.C. Health Manpower Data Book, 1990; Unemployment: N.C. Department of Labor; Infant Mortality Rate: N.C. Department of Human Resources, Center for Health and Environmental Studies.

between them in 1989, compared to an average of 180 deliveries per OB/GYN.[44] According to the American College of Obstetricians and Gynecologists (ACOG), the national average number of deliveries for its members nationwide was 160.8 in 1990.[45]

Most high risk cases can be handled by the doctors at Heritage Hospital in Tarboro, which has a level two nursery. Referrals are limited to mothers delivering prior to 30 weeks, who are usually referred to University of North Carolina Hospitals in Chapel Hill. Thirty of the deliveries in 1989 were to "walk in" patients—women who received no prenatal care prior to their delivery. Women receiving prenatal care through the HD comprise about two-thirds of the deliveries at Heritage Hospital, with 80-90% of the HD patients paying for care through Medicaid according to the Health Director. The HD will see prenatal patients with private health insurance in addition to any other woman, regardless of her ability to pay for services. Some women travel out of Edgecombe County to receive prenatal care and to deliver their babies. The reasons for individual decisions to do so appear to be mainly geographical. For instance, women living in the Western portion of the county tend to go to Rocky Mount for health care; those in the Southeast are more likely to go to Greenville for care according to the Health Director and the physicians.

The OB/GYNs in Edgecombe County had a commitment to treating all women before the ROCI program began. Even though there has been no change in the patient mix of the doctors or the HD, the County Health Director feels that this money has improved the HD's relationship with the doctors. By offsetting some of the costs of treating and delivering so many HD babies, the program has produced a tangible benefit to these doctors who are providing high levels of service to patients who cannot afford to pay as much as patients with private health insurance. The director feels that these doctors deserve some extra compensation for providing the level of service that they do to poor women in Edgecombe County. ROCI has not recruited new physicians to provide services but has solidified the present obstetrical care network in Edgecombe County. Not only does it help the doctors, it allows the HD to feel that it is paying for the services that it cannot provide without external help and that it does not have to rely solely on the good will of others to provide the necessary services. ROCI has improved the working relationship between the doctors and the HD according to all parties involved.

The HD is very proactive in seeking to provide prenatal care and ensure that all women get the proper amount of service. They have set up a system whereby a van will pick up any woman for prenatal visits and take them home afterwards. When the staff at the HD becomes aware of a woman who is pregnant, the HD tries to persuade her to come for care if she is inclined not to do so. The staff of the HD finds out women are pregnant through the "grapevine" many times and then seeks to get them to come in for care. Yet, some women do not receive any care or receive care that is inadequate before

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[44]Fondren and Ricketts, 1991.

[45]Malkasian G, 1991.

they give birth even though there are no financial barriers to care in this area. Social barriers exist though, as many of the women are uneducated, poor and do not see the importance of prenatal care. According to the Health Director and the doctors, the problems of low birth weight, infant mortality and poor maternal health are manifestations of larger societal problems. A vicious cycle of poverty and ignorance exists whereby the people of the county are trapped into poor health. Drugs, ignorance, crime, sexual promiscuity and the deterioration of the family as the basic unit of local society are all larger questions which must be addressed in an aggressive manner if the causes of poor maternal outcomes are to be drastically cut, according to the doctors. The Health Director sees community-based, self-supporting initiatives as the only way for real and sustained change to occur in Edgecombe County. But, ROCI is helping to ensure that a quality level of obstetrical and prenatal care is available to all women in Edgecombe County. As the Health Director said, "ROCI is a small part of the answer to improving the Infant Mortality Rate, but you can't ignore any part of the answer."

The litigation climate of Edgecombe is "about average" according to the Health Director. There have been several high profile suits in the area with a large out-of-court settlement occurring within the past year. There are usually 2 or 3 suits in progress at any time, but they are not all necessarily related to obstetrical injuries. The situation seems to be stable and not getting any worse. The 2 OB/GYNs say they do not spend time worrying about malpractice suits. They feel that you just try and do your job and accept what ever happens. They are both fairly young, in their 30s and say that they have grown up in a litigious medical climate and are more used to practicing with the threat of litigation than their older counterparts are. They both feel that a bill similar to the proposed birth impairment fund would be an appropriate response to the medical malpractice problem.[46] But, they feel that, as is, the bill is extremely unfair since it levies a flat rate fee on each birth. They point out that this flat rate harms physicians who treat larger numbers of Medicaid patients as opposed to those who treat mostly private insurance patients who not only charge more to start with, but who merely pass on the increased costs to patients. They feel that passage of the bill as is would be a tremendous disincentive for doctors to have rural OB practices.

The OB/GYNs in Edgecombe County deliver many more babies than the average OB/GYN in North Carolina. As the only two providers doing deliveries in the county, they feel that they must continue to work such a heavy load. They have considered looking for another OB/GYN who shares their same philosophy of providing care, but are unsure that there is sufficient revenue to support another OB/GYN. Presently, about 60% of their total practice is made up of Medicaid patients. The doctors have considered and decided not to pursue the possibility of hiring a CNM. They both feel

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[46]Fondren L, Watterson M, Ricketts T. Tort Reform and Access to Obstetrical Care: The Proposed Birth Impairment Fund. N.C. Rural Health Research Program, University of North Carolina at Chapel Hill. 1990.

uncomfortable with the liability issues involved in backing up a midwife. They also are uncomfortable with Family Practitioners delivering and feel that only OB/GYNs should deliver babies.

The ROCI program has not changed the manner in which poor women receive prenatal and delivery care; the doctors, HD and Hospital have always been committed to providing needed services to the community in which they live regardless of a woman's financial viability. The program has allowed the HD to reward what they feel has been sacrificial service provided by the two ROCI OB/GYNs in Edgecombe County, and feel as if they do not have to always depend on doctors providing services for reduced levels of compensation in order for the Health Department to be able to provide the needed services to the community. The relationship between the doctors and the HD has been strengthened and the women who desire to do so can receive the prenatal and delivery services they need by utilizing local resources.

PENDER COUNTY
July 22, 1991

Pender County lies on the coast of North Carolina, to the North of Wilmington. The 1990 population of the county was 28,855 with a per capita income of $11,677 in an economy which is largely agricultural. The 1989 unemployment rate was 4.1% and there were 38.81 people receiving AFDC benefits per 1,000 population. The infant mortality rate was 14.9/1,000 live births in 1989 in a county whose population-to-doctor ratio stood at 2,220 persons for each MD in 1990. Pender County does not have any OB/GYNs as of the Summer of 1991.[47] Pender County does not have any obstetrical providers presently practicing in the county.

Pender County is not a part of the ROCI program, yet it is the only county in the State which meets all 7 of the criteria for program participation. We wanted to find out why the county did not apply for ROCI program funds. We were also interested in finding out how the Pender County Health Department (HD) provides the maternity services needed by poor women in the county. The HD is located in Burgaw, a 30-45 minute drive down I-40 to Wilmington, which is to the Southeast. There are no OB/GYNs in Pender County, and no Family Practitioners who deliver babies. The Pender County Hospital stopped doing deliveries in 1977, because of concerns over liability. Neither, the Nursing Director nor the Health Director were aware of obstetrical injury lawsuits in the area in the last 10 years. But, fear of litigation from obstetrical accidents is the main reason that Pender County Hospital does not plan to do deliveries in the future, even in emergency situations. According to the Nursing Director, several times women have gone to the hospital in labor, only to be denied admission to the emergency room because the doctors in the hospital were unwilling to deliver a baby. Several women have delivered babies in ambulances on the way to Wilmington before they could reach a hospital. The HD provides maternity care through an arrangement with Area Health Education Center (AHEC) in Wilmington, whereby an OB/GYN resident from Wilmington holds prenatal clinic in the HD one full day per week to provide prenatal care. The HD employs a nurse practitioner (NP) but she works primarily with the Family Planning Clinic. The HD has considered hiring a NP who specializes in obstetrics but has not done so because of the cost of malpractice insurance. The charts of patients seen in the Pender HD prenatal clinic which is staffed by AHEC residents are sent to the back-up doctors in Wilmington every Friday for their review and classification as high risk or not. High risk patients are not seen in the HD clinic but are referred to Wilmington for prenatal care. All deliveries of HD babies are done at New Hanover Regional Medical Center in Wilmington, and all women go to the hospital for prenatal visits after 36 weeks instead of the HD. The HD pays AHEC $1,000 per month for this

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[47]Population: U.S. Census Bureau; Per Capita Income: U.S. Dept. of HUD; AFDC: N.C. Dept. of Human Resources, Division of Social Services; Manpower ratios: N.C. Health Manpower Data Book, 1990; Unemployment: N.C. Department of Labor; Infant Mortality Rate: N.C. Department of Human Resources, Center for Health and Environmental Studies.

arrangement which allows for prenatal care to be delivered within the county. Travel to Wilmington for prenatal visits and for delivery is a difficult thing for many women. Presently, the HD is the only source of prenatal care in the county according to the HD. The HD population is a poor one, and there are very few women who do not qualify for Medicaid or who do not have private health insurance since the expansion of Medicaid benefits, according to the Health Department personnel interviewed. There are no financial barriers to access to HD services though uninsured women have problems when they go to Wilmington to deliver their baby if they are medically indigent according to the HD. The HD would accept women with private health insurance but most women with private health insurance go to Wilmington for all their prenatal care.

Between July of 1987 and November of 1989 the HD did not have a maternity clinic, and women had to go to Wilmington, or Jacksonville in Onslow County, for all maternity services. During this period large numbers of women delivered babies without receiving any prenatal care. The HD reports that there are very few women who deliver now without receiving any prenatal care, although the HD is always trying to reduce this number.

The Baby Love program has improved the services the HD can offer to pregnant women, and each woman is followed up by the HD after she delivers in Wilmington. Maternity care coordination services are paid by Medicaid. Even women with private insurance as well as Medicaid patients going to the one private OB/GYN who will take Medicaid in Wilmington (very few patients) are followed through the Baby Love program. Transportation is a major concern for poor residents of Pender County. The HD presently has no transportation program to offer women and many have trouble making it into Burgaw or to Wilmington for appointments or delivery. Those most likely to miss appointments are those referred to Wilmington for the high risk clinic, which is of great concern to the HD staff. The HD has tried to work out an agreement with a local taxi company for transportation of women to Wilmington for appointments, but has thus far been unable to make a satisfactory arrangement.

There are two providers of health care in Pender County who are not presently providing any prenatal services in conjunction with the HD but who say they are willing to and desire to do so. The Penslow Clinic and the Maple Hill Health Centers are run by a semi-retired physician couple from Chicago, who desire to see prenatal patients and then refer them either to Wilmington or Jacksonville for delivery. These doctors feel that the HD is shutting them out and not allowing them to treat prenatal HD patients because the HD wants the revenue from these patients. The doctors feel that to make all the residents of Pender County travel to Burgaw for prenatal care is not good given that there are two other facilities located in other parts of the county. Penslow clinic and Maple Hill Medical Center are located in the Eastern part of the county. Residents of this part of the county can reach Jacksonville much easier than they can reach Wilmington for high risk back-up appointments and delivery. These doctors feel that the HD is penalizing the patients from this part of the county by not allowing them the choice of using facilities closer to their homes. Instead, the HD is offering only the

one option, one which makes it hard for patients from the Eastern part of the county get to appointments. One of the doctors says that the HD has not cooperated at all with them and has actually "fought them" for patients. The Health Director readily admits that Medicaid patients are seen as the lifeline of the Pender HD, possibly explaining the HD's apparent unwillingness to refer patients to other providers within the county. This doctor, who works with Penslow clinic and Maple Hill Medical Center is very critical of the HD in general and of their prenatal arrangements in particular. He feels that the HD is making access to prenatal care more difficult by making the only source of this care be the HD. The doctors do not have admitting privileges in any hospital nor do they desire them they say. They do have colleagues both in Wilmington and Jacksonville who admit patients for them. They want to improve the system whereby prenatal care is delivered and women are referred for delivery, and ensure that it is as convenient and that the care provided is of as high a quality as possible. These doctors feel that access to prenatal care is key to reducing the infant mortality rate and improving birth outcomes. This is even more important than establishing a delivery facility within Pender County Hospital according to these doctors.[48]

The Health Director seems willing to look into new means of providing and paying for the prenatal services which the HD provides and is interested in finding out how ROCI may fit into this picture. There is a climate of bad relations between the HD and at least two doctors who wish to be a part of the prenatal network in Pender County. Perhaps ROCI money could be used to contract with these two physicians to provide prenatal care for the HD for persons having difficulty reaching the Pender HD or improve the continuity of care provided in the HD by bringing the same doctors each week to staff the prenatal clinic in the HD. The ROCI funds could free up monies presently used to pay AHEC and could set up a system whereby the HD could deliver prenatal care utilizing resources within Pender County. This may improve relations between the doctors and the HD and could be the beginning of a maternity care system which would best serve the needs and wishes of the pregnant women of Pender County.

[48]Levine M. Physician in Pender County, N.C. Personal Interview. July 22, 1991.

ROBESON COUNTY
July 23, 1991

Robeson County is in the Southern part of the State, on the South Carolina border. The county had a population in 1990 of 105,179 people who had a per capita income of $9,376 in 1989. This county relies heavily on the agricultural sector of the economy. The unemployment rate was 6.5% in 1989 and 71.56 people were receiving AFDC benefits for every 1,000 citizens of the county. The infant mortality rate was 10.6/1,000 live births in 1989 and there were 1,366 residents for each medical doctor practicing in the county, and 18,128 persons for each OB/GYN.[49]

Robeson County is well known for its ethnic diversity and the problems which have resulted from its unique mixture of races and cultures. The population is split fairly evenly 3 ways–one–third Black, one–third White and one–third Native American. The county is a very poor one, having one–third the total population of Wake County, where the State Capital Raleigh is located, but roughly the same number of persons on public assistance programs, according to the Health Director. Only 25% of the adult population has graduated from high school. In 1990 the Robeson County Health Department (HD) saw 832 maternity patients of which 585 delivered babies. Sixty percent of the HD births are to unwed mothers and half of all the births at Southeastern Hospital are to HD patients. The county is a rural one with only 20,000 of the 110,000 persons in the county living in Lumberton, the county seat and largest town.

The prenatal and delivery care network is characterized by a unique arrangement between the HD and the local hospital in Robeson County. The HD and Southeastern General Hospital are considered one entity for Medicaid billing purposes for prenatal and obstetrical care. The hospital itself presently employs one OB/GYN and 1 Midwife and is seeking to hire another OB/GYN to replace one who recently left the area. These doctors work specifically for the hospital and do nothing but deliver HD babies and see high risk prenatal patients who are identified through the HD's prenatal clinics. The doctor and the midwife do not have a private practice in addition to their work for the hospital. The providers who work for Southeastern General Hospital are not participants in the ROCI program. Eventually, the hospital hopes to employ two OB/GYNs and two CNMs to deliver HD babies and provide prenatal care to high risk patients from the public clinics.

There are two OB/GYNs and one Certified Nurse Midwife (CNM) who are actively participating in ROCI in Robeson County in 1991, and who provide prenatal care and back-up for the prenatal clinic in the HD. Another ROCI physician has taken medical absence since the Spring of 1991 and is not presently providing care. The doctors from Southeastern Hospital see the charts of all the

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[49]Population: U.S. Census Bureau; Per Capita Income: U.S. Dept. of HUD; AFDC: N.C. Dept. of Human Resources, Division of Social Services; Manpower ratios: N.C. Health Manpower Data Book, 1990; Unemployment: N.C. Department of Labor; Infant Mortality Rate: N.C. Department of Human Resources, Center for Health and Environmental Studies.

HD patients, and try and see each of them at least once before the time of their delivery. The HD patients' other prenatal visits are handled by the hospital midwife, the HD midwife, the two nurse practitioners who work for the HD or three ROCI providers. (two OB/GYNs and one CNM who all practice together)

The HD holds prenatal clinics on Mondays and Wednesdays from 8-6:30 and 8-5 respectively. The prenatal clinic hours were extended January 1, 1991 and outreach efforts of the HD have been very aggressive, including a transportation program which picks up patients for their prenatal visits and returns them home, and an incentive program in which a person bringing a pregnant women to the HD in her first trimester receives a gift certificate for $50, and for a woman in the second trimester one for $25 dollars.

Waiting times for appointments in the prenatal clinic have gotten shorter since expansion of the Clinic with a woman now being seen 3 weeks after a positive pregnancy test. Waiting times at the HD are a problem though—the initial prenatal visit at which a complete medical history is taken is 3-4 hours long. On some days, women have to wait 2-3 hours to be seen for their prenatal appointments. These waiting periods are of concern to the Nursing Supervisor, and make future expansion of the HD's clinic space a priority. The Nursing Supervisor also reports that the clientele of the HD is expanding to include higher socioeconomic status people. Patients with private health insurance are treated at the HD and she feels that the HD enjoys a good reputation in the community as a provider of prenatal care to all groups of people. But, this reputation is dependent upon the HD being able to keep good doctors working through the HD prenatal clinics, according to her. ROCI has helped to ensure that the HD can keep good doctors affiliated with its prenatal clinics she feels.

A big concern of the HD staff and the private ROCI providers is the lack of prenatal care which many women receive before giving birth. Last year 13% of the county's women sought prenatal care in their first trimester, with 49% and 38% seeking it in their second and third trimesters respectively.[50] An estimated one baby per week is delivered at Southeastern General Hospital after having no prenatal care at all according to the ROCI CNM. The HD is struggling to make prenatal care become more of a priority to the women of this area through education and outreach activities. The HD staff expresses frustration at many women's disinterested attitude toward prenatal care. There are no financial barriers to care in Robeson County, only social ones. People do not understand the importance of prenatal care or do not see it as a high priority, so it tends to be neglected according to the Nursing Supervisor. As in most other counties, the expansion of Medicaid eligibility means that virtually no woman is "falling through the cracks" and is without access to private health insurance or Medicaid. The private OB/GYNs in the county have begun to take some Medicaid patients in response to the

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[50]Smith B, Britt R. Health Director and Nursing Director, Robeson County, N.C. Health Department. Personal Interview, July 23, 1991.

increase in reimbursement for deliveries and the desire of one of the ROCI physicians to begin treating some Medicaid patients as part of her basic practice. The private OB/GYNs had all stopped treating Medicaid patients in the mid-1980s. The HD treats all pregnant women regardless of their ability to pay for services.

There are other providers of prenatal care in the community in addition to the HD and private OB/GYNs. Robeson Health Care is a federally-funded Rural Health Clinic which provides prenatal care until the 32nd week of a woman's pregnancy, at which time they are usually sent to Scotland County for additional prenatal care and delivery. This health center does not send patients to Southeastern General Hospital because it will only grant delivery privileges to OB/GYNs or to CNMs who are backed up by an OB/GYNs, and the doctors at Robeson Health Care are FPs. Some of this Center's patients are referred to the HD, and some come to the HD from outlying areas in the county after being turned away by the health center because they were too far along in their pregnancy. The Center must meet federally-determined guidelines about the percentage of their patients receiving prenatal care in the first trimester. Presently, 60% of their patients first seek prenatal care in their first trimester. About one-third of the total births to Robeson residents occurred outside of the county in 1988. Most of these were for geographical reasons. For instance, a person living in Maxton, in the Northwest portion of the county is closer to Laurinburg, in Scotland County than to Lumberton, the site of the Southeastern General Hospital.

The litigation climate in Robeson County is on the minds of some prenatal and delivery providers and not on the mind of others. The Southeastern General Hospital will only let OB/GYNs or CNMs backed-up by an OB/GYN deliver at the hospital because of liability concerns, according to the Health Director and the ROCI CNM. And according to one of the ROCI doctors, there has been a "million dollar suit" in Robeson County and he feels that litigations will only get worse. He said he desires to quit delivering babies as soon as is financially feasible for him. He feels that lawsuits are like a "hammer over your head" when a doctor is doing deliveries. There has already been one OB/GYN in the county who quit delivering babies because his malpractice premiums became too expensive after a lawsuit. But, all providers are not equally worried about the possibility of being sued. The CNM who is a participant in ROCI says that litigations do not bother her. "You do what you are supposed to do and then you can't worry about it any more." The other ROCI OB/GYN concurs with the CNM in not worrying very much about medical malpractice litigation. The Medical Director feels that the litigation climate in Robeson is not abnormal and that there are "one or two suits all the time."

To all parties involved, the ROCI money appears to be a drop in the bucket. $6,500 per year is not enough money to make someone radically change the number of Medicaid patients they treat, or begin delivering babies if they did not already do so according to the ROCI doctors and the HD staff interviewed. But, the program is not without impact. While the Health Director said that the money

available is not enough to recruit a new doctor in the traditional sense, it does allow the HD to compensate the doctors who provide services for them more fairly. "It allows the HD to give better continuity of care without having to beg the doctors to provide services." Arrangements which before may have depended on good will from doctors have now been formalized as a result of the ROCI program's implementation. An additional benefit of ROCI is that lines of communication between the HD and doctors have been improved. The HD feels that this increased cooperation and communication will be beneficial to the HD in the long run. The ROCI doctors report that they feel comfortable working with the HD since the present Director came in 1988. This program allowed the HD to be more confident of the services they could count on as they seek to provide the services needed by the pregnant women in the community. ROCI came about at a time when the HD was considering hiring a full time OB/GYN to work exclusively at the HD. Because the HD can get the needed services from private providers with the help of ROCI, this plan is on hold at present.

JOHNSTON COUNTY
July 24, 1991

Johnston County lies 30 miles East of Raleigh, the State Capital. The county is rural and relies largely on agriculture for its economic well-being. The county has a growing migrant population as many of the Eastern counties do, placing extra pressure on an already burdened social services sector. The total population in 1990 was 81,306 and the per capita income was $12,491 in 1989. The unemployment rate in that year was 3.6% and there were 28.98 recipients of AFDC benefits for each 1,000 persons in the county. The infant mortality rate was 9.6/1,000 live births in 1989. There were 1,768 residents for each medical doctor and 40,859 for each OB/GYN in Johnston County.[51]

About 54% of the total births in the Johnston County Hospital in Smithfield are to HD patients according to the Health Director. There were about 800 total births at the hospital in 1990. The Johnston County Health Department (HD) holds a high and low risk prenatal clinic for a full day on Tuesdays in response to the needs of pregnant women in this area. There is one OB/GYN who is a participant in ROCI and he attends this clinic in the HD as part of his ROCI obligations. New patients to the maternity clinic come each Monday for lab work, records, WIC eligibility, etc. The county has an eligibility specialist who helps ensure that patients make use of programs for which they are eligible.

There has been an increase in the prenatal clinic hours offered by the HD since Johnston County joined the ROCI program in 1989, the first year of the program. After the program began, the one OB/GYN in the county was willing to increase the hours he worked at the HD each week according to the Health Director. There is presently a two-week wait for a woman to have her first prenatal visit after confirmation that she is pregnant, and only 10% of the maternity patients at the HD seek prenatal care within the first trimester of their pregnancy. This is very disturbing to the staff of the HD. The Health Director and Nursing Director feel that cultural, social and educational barriers are what keep women away—there are no financial barriers to care at the HD for pregnant women. The staff at the HD feel that pregnant women do not understand the importance of this care and thus do not make it a priority to visit the HD. Many miss appointments which they do make. Five percent of the deliveries at the Johnston County Hospital are "drop-ins," women who have received no prenatal care at all. (There were about 40 births with no prenatal care in 1990.) Lack of transportation is the most commonly cited reason women give for not seeking prenatal care. But, the Nursing Director feels that women have no trouble "getting to the mall" but they say they cannot get to the HD. The HD is

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[51] Population: U.S. Census Bureau; Per Capita Income: U.S. Dept. of HUD; AFDC: N.C. Dept. of Human Resources, Division of Social Services; Manpower ratios: N.C. Health Manpower Data Book, 1990; Unemployment: N.C. Department of Labor; Infant Mortality Rate: N.C. Department of Human Resources, Center for Health and Environmental Studies.

considering more aggressive outreach methods to attempt to improve the rate of women seeking prenatal care in their first trimester.

The doctors participating in ROCI through Johnston County in addition to the county's only OB/GYN include a FP who works for the Tri County Rural Health Center in Newton Grove and another FP who practices in Smithfield. The OB/GYN and the FP in Smithfield are the only two providers who deliver babies at the Johnston County Hospital. The FP, who works exclusively for the Tri County Health Center, does not deliver babies at any facility, but provides prenatal care to any woman regardless of ability to pay. Another FP from Benson was a participant in the ROCI program but he and three other FPs dissolved their practice on May 1, 1991, leaving the town of Benson, the second largest in Johnston County, without a doctor providing obstetrical care. This doctor is no longer a part of the program, and he received a pro-rated share of the ROCI money, based on the time he delivered services. There are other FPs in the county and some OB/GYNs who no longer deliver, but none of them are interested in delivering babies in the future, largely because of liability concerns, according to the Health Director and the Executive Director of Tri County Rural Health Center.

The two ROCI doctors who are delivering are facing a very large patient load, with the two of them being the only providers to deliver babies in a hospital that saw about 800 deliveries in 1990. The average number of deliveries for an OB/GYN in North Carolina in 1989 was about 180; 40 for FPs.[52] The Johnston County Hospital has been actively recruiting a new OB/GYN for the area for the past four years, but all efforts have been unsuccessful. High risk deliveries are referred to Wake Medical Center in Raleigh or to University of North Carolina Hospitals in Chapel Hill.

The Tri County Rural Health Center in Newton Grove serves the migrant worker population in Johnston, Harnett and Sampson Counties. The Center holds prenatal clinic all day on Thursday, but drop-ins can be seen by the doctor for prenatal care at any time. Fifty percent of the Center's patients seek prenatal care in the first trimester and there is a two-week wait for a prenatal appointment. The Center has a working relationship with the HD whereby the HD refers Spanish-speaking patients to the Health Center and the Health Center refers Johnston County residents who are not Spanish speakers to the HD. Transportation is provided for these transfers. The Health Center ideally refers migrant women to UNC Hospitals in Chapel Hill for delivery, but in reality the majority of its patients who are residents of Johnston County come to Johnston County Hospital to deliver, so copies of the prenatal records of Tri County Health Center's patients are sent there. The hospital accepts this situation and seeks to ensure that eligibility for social programs has been checked. There are very few women who slip through the cracks and are uninsured since the expansion of Medicaid, but undocumented workers or illegal aliens are not eligible for Medicaid or other assistance programs. In previous years, about one-half of the women coming to the HD were medically indigent; that is, they

[52]Fondren and Ricketts, 1991

have no private insurance and are ineligible for Medicaid benefits. There are some State Migrant Funds which can be billed for medical care of workers who are not eligible for Medicaid, usually because they are undocumented, but these funds are generally depleted during the period from May to August, the harvesting season when there are more migrants in the State according to the Health Department.

Litigation is of large concern to the medical community in this area. The Executive Director of the Tri County Health Center said that litigation is always on their minds and each patient is seen as a potential litigant even though the Health Center has never been sued before. The Health Director feels that litigation concerns are a major factor in preventing FPs who are practicing in Johnston County from delivering babies, although he does not feel that the climate in Johnston has gotten more litigious over the last few years.

While the two delivering doctors in Johnston County are extremely busy, it is very doubtful that CNMs will be used in this area. The OB/GYN is wary of backing up a CNM for liability reasons. According to the Tri County Health Center's Director, the FPs in the area resent the idea of a CNM delivering babies in the area. The OB/GYN has a friend who was sued for a midwife's mistake, and he is unwilling to provide back-up to a CNM, and there is no desire by the FP involved in delivering babies to see CNMs begin delivering in Johnston County. So, it appears that unless the county is successful in recruiting another OB/GYN, the two delivering physicians will continue to do many more deliveries than normal.

The introduction of ROCI money into Johnston County has allowed for an increase in the hours of prenatal care offered at the HD and has been a catalyst for improved relations between the HD staff and the two delivering physicians who participate in ROCI. The Executive Director of Tri County Health Center feels that the benefit of the program cannot be measured in monetary terms alone. "The program helped build interaction with the Health Department. It improved relations all around." As well, the HD has been able to provide the OB/GYN with a higher level of compensation—which they feel he deserved. According to the Health Director, the OB/GYN feels less "put upon" since the HD is able to provide him with $6,500 a year. And the HD is glad to be able to pay for services which it can not provide without outside help so they do not feel like a "charity case all the time." This helps the HD keep relations with him good; yet problems still exist. The OB/GYN is very overworked and says he is thinking of discontinuing obstetrical services for the patients of the HD. The HD does not feel this is an attempt to threaten them, but an honest response to difficult circumstances. The ROCI money has helped to shore up the level of care available to poor women in Johnston County and may be one of the only things standing in the way of a total collapse of the prenatal and delivery network of the area.

RICHMOND COUNTY
July 26, 1991

Richmond County is located in the southern part of North Carolina and sits on the South Carolina State line. The county had a total population of 44,518 in 1990 and a per capita income of $10,830 in 1989. The unemployment rate in 1989 was 4.5% and there were 31.49 recipients of AFDC benefits per 1,000 persons in the county in that year. The infant mortality rate was 12/1,000 live births in 1989 and there were 1,535 residents for each medical doctor in the county, 11,500 for each OB/GYN.[53]

The Richmond County Health Department (HD) has suffered a series of setbacks in the past year—the Health Director resigned in December as did the nurse practitioner who worked in the prenatal and family planning clinics. In addition, the County Manager is new and the chairman of the County Commissioners recently died, meaning that this is a time of transition for the entire social services system in Richmond County. This is the backdrop against which one must view the first year of the ROCI program in Richmond County. The county first received ROCI funds for the 1991 program year.

Richmond is a poor county. The HD used to serve many women who had no health insurance and who were unable to meet the Medicaid eligibility requirements; they were "slipping through the cracks" of the health care system and were medically indigent. Since the expansion of Medicaid benefits, the Health Director says that about 95% of the HD maternity patients are enrolled in the program and that there are not many women who presently are medically indigent. She feels that many of those who are not enrolled in the program have not followed through with the application process. The HD has an eligibility specialist who tries to ensure that pregnant women are aware of all the programs and services for which they are eligible. The HD does not see private insurance patients and they are referred directly to the OB/GYN's private office. The county administers a federally funded grant which pays for transportation for those lacking this type of service through a taxi company which has been contracted to provide transportation to HD patients.

Two of the three OB/GYNs presently practicing in Richmond County.are participants in the ROCI program. The third OB/GYN does not provide any services for the HD but does deliver babies at the Richmond Memorial Hospital, the only delivery facility in the county. The ROCI doctors have always had a commitment to delivering any woman regardless of her ability to pay or amount of prenatal care she has received according to the Health Director and the doctors themselves. The main referral pattern for high risk patients is for them to be sent to high risk clinics in the Moore and Scotland County Health Departments and to University of North Carolina Hospitals in Chapel Hill

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[53]Population: U.S. Census Bureau; Per Capita Income: U.S. Dept. of HUD; AFDC: N.C. Dept. of Human Resources, Division of Social Services; Manpower ratios: N.C. Health Manpower Data Book, 1990; Unemployment: N.C. Department of Labor; Infant Mortality Rate: N.C. Department of Human Resources, Center for Health and Environmental Studies.

for delivery. Some moderate risk deliveries are managed by the two ROCI doctors through their office and delivered in Richmond Memorial Hospital. In 1990, the two ROCI doctors delivered a total of 350 babies between them. About one third of the county's residents who have babies deliver outside of Richmond County, with most of these people being private insurance patients who generally go to Moore County to deliver, the Health Director reports.

The HD holds a prenatal clinic each Wednesday with high risk patients being referred to the offices of the two ROCI doctors in Rockingham and then further referred if necessary. One of the ROCI doctors (they are partners) has been providing prenatal care at the HD prenatal clinic for about 3 years—before Richmond was part of the ROCI program. (1991 is the HD,s first year of participation in ROCI.) But, as of May 1, 1991, this doctor was no longer holding prenatal clinic in the HD, and the clinic has been cut back as a result of the decreased availability of physician services. The HD has sought ways to provide the needed prenatal care without the services of this doctor and has begun sending some patients to private doctors in Moore County through an arrangement whereby the HD does all lab and background work and sends the women to the private doctors in Moore County to be seen. A local General Practitioner has agreed to come during his lunch hour on Wednesday's to hold an abbreviated prenatal clinic, in order to keep at least some prenatal care available at the Richmond County HD.

The doctor who has stopped providing prenatal care at the HD has done so for "personal reasons" according to him. He says that he has become too overworked and tired and could no longer afford to spend the time necessary to staff a prenatal clinic each Wednesday in the HD. He and his partner's schedule has been aggravated by the fact that the hospital in Anson County has stopped delivering babies, meaning that women from this adjoining county have been coming to Richmond Memorial Hospital to deliver.

There has been some misunderstanding in this situation between the HD and the doctors, and this has strained relations between the doctors and the HD. A compromise has been worked out and the ROCI contract with the HD has been revised and the ROCI money which was being held until this matter was cleared up has been released to the physicians. They already have been and plan to continue serving the indigent and Medicaid patients, but say that they wish to reserve the right to refuse treatment to some patients who they say can pay but do not do so. They feel that there are people who are eligible for Medicaid but who have not applied for the funds. They simply get seen and do not pay. The doctors also wish to refuse patients who they feel are more litigious than others, particularly ones who have threatened to sue them in the past or have actually sued other doctors.

A newly hired full-time physician's assistant has enabled the HD to begin to increase the hours and services offered by the HD's prenatal clinic in the near future, but the HD still desires to work as closely as possible with the local OB/GYNs. This type of arrangement is needed to ensure that poor women are receiving adequate prenatal care. The Health Director fears that the number of women

delivering with no prenatal care will increase if the HD is unable to provide all the needed services. The HD staff thinks that the percentage of women delivering without receiving prenatal care increased after the ROCI physicians stopped holding clinic at the HD.

The use of Certified Nurse Midwives (CNM) has been explored by the County Board of Health, although there are no plans to do so immediately. There are several barriers to their use in Richmond County according to the Health Director. First, there are not many educational opportunities for CNM candidates in North Carolina—for instance, she said it would take two to three years to get a person accepted into ECU's new midwifery program. And the OB/GYNs in the area are not very supportive of the idea since they feel the CNMs will get the "cream of the crop," the low risk patients, and they (the OB/GYNs) will get the higher risk ones. They say they are unwilling to provide back up to CNMs at this point.

The doctors feel that $6,500 each is not enough money to warrant being obligated to provide the level of care which their ROCI contract stipulates. The doctors feel that their commitment to treating the poor and disadvantaged of Richmond County speaks for itself. They do and always have delivered any woman regardless of her ability to pay according to the HD, and state that they must absorb several thousand dollars worth of uncollected bills each month. They feel that 80-90% of the women in this county are on Medicaid and that 10-20% of the babies they deliver are to mothers who receive no prenatal care at all. Their delivery charge for private insurance patients is $1500, less than many OB/GYNs charge throughout the state. Medicaid reimburses $700 for a delivery alone, $1100 for prenatal and delivery care.[54] The doctors see the client base as more litigious than average because their lower Socioeconomic Status (SES) puts them at higher risk for poor birth outcomes. They feel this situation will only get worse. The HD on the other hand does not feel that Richmond is overly litigious or getting more so. The Health Director and Nursing Supervisor know of two settled lawsuits and one which is still pending. The two doctors stated that their combined malpractice insurance cost is $123,000 per year—a large portion of the $300,000 in fixed expenses that the doctors say they must defray before making any profit. This is difficult given the poverty level of the county's patients, according to the doctors. They both say that their "roots and hearts" are in Richmond County. They feel as though they are doing their share to care for the poor women of Richmond County, and resent being held to the details of a contract they say they did not fully understand when they were entering into it.

Tension definitely exists because of the misunderstanding between the HD and the two ROCI doctors. This tension threatens the prenatal care delivery system in the county and potentially jeopardizes access to health care for poor women. One of the goals of the ROCI program is to foster better relations between doctors and the local HD. In this case, the ROCI money and the services

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[54]Berman J. Personal Interview, June 4, 1991.

provided are the root of some discontent between the two parties. This tension has been resolved for the time being. An effective working relationship between the HD and the ROCI doctors is crucial if the women of Richmond County are to get the best maternal care available given the present situation and resources.

DUPLIN COUNTY
July 30, 1991

Duplin County lies to the Southeast of Raleigh, the State Capital. I-40 connects Duplin County with Raleigh and Wilmington. The county is a large one which relies on agriculture for a large portion of its livelihood. The total population in 1990 was 39,995 and the per capita income was $10,595 in 1989. The unemployment rate in 1989 stood at 4.5% and there were 39.28 recipients of AFDC benefits per 1,000 residents of the county. The infant mortality rate was 13.10/1,000 live births in 1989. There were 1,666 persons for each medical doctor in the county in 1990 and 13,932 residents for each OB/GYN.[55]

Duplin County began participating in the ROCI program in 1989, the first year that funds were available. The first OB/GYN came to Duplin county in 1983. Prior to this FPs delivered babies or women went to several adjacent counties for delivery. There is still a significant number of women who leave Duplin County to deliver; 40.8% of the resident live births in the county in 1988 occurred in other counties. Geography seems to be the biggest determinant of why women deliver out of county. Wilmington, Goldsboro, Clinton, Jacksonville and Kinston are places where Duplin County women go for deliveries, depending on the part of the county in which they live. The Nursing Supervisor and Health Director feel that a larger proportion of women with private health insurance deliver out of county, as opposed to Medicaid recipients who tend to deliver in the county.

Presently, the county has two OB/GYNs, both of whom are participants in ROCI. One of the ROCI doctors is the original OB/GYN who came to the area in 1983; he began receiving ROCI funds in the first program year, 1989. The other doctor is a National Health Service Corps physician who came to Duplin County in 1989, but did not begin participating in the ROCI program until this year. He says that he did not know about ROCI before he came to the area. Both of these doctors attend the prenatal clinic at the Duplin County Health Department (HD) which is held one full day each week. The doctors come in the afternoon and see patients on alternating weeks. There is also a Public Health Nurse who is the county's Maternity Care Coordinator who sees patients on a daily basis and is available for emergencies or questions regarding maternity care for walk-ins.

The HD sees almost no women who are ineligible for Medicaid benefits and who have no health insurance with which to pay for services according to the HD staff. This does not include illegal immigrants to the United States who are ineligible for any type of government assistance program. The HD does not see women with private health insurance in the prenatal clinic, but instead refers them to the OB/GYNs in private practice. The Medicaid expansion is responsible for the decrease in medically indigent patients. The HD staff reports that three to four years ago up to 80% of

[55]Population: U.S. Census Bureau; Per Capita Income: U.S. Dept. of HUD; AFDC: N.C. Dept. of Human Resources, Division of Social Services; Manpower ratios: N.C. Health Manpower Data Book, 1990; Unemployment: N.C. Department of Labor; Infant Mortality Rate: N.C. Department of Human Resources, Center for Health and Environmental Studies.

the women who came to the HD "fell through the cracks," i.e., had no private health insurance and were ineligible for Medicaid benefits. This is rare now. The HD shares a full time eligibility specialist with the local hospital and has done so for three years, which has also ensured that women are not indigent merely because they have not accessed all the assistance programs for which they are eligible.

The nurses provide the majority of the prenatal care to women at the HD, with doctors themselves seeing patients on their first prenatal visit, then at 28, 36, 40 weeks and after. The HD tries to provide 12-15 prenatal visits per woman during her pregnancy, and there are 60-70 women enrolled in the maternity clinic at any one time. Last year, about 30% of the women coming to the HD for prenatal care did so in their first trimester of pregnancy, 50% and 20% coming in their second and third trimesters respectively. About 8 women "dropped-in" at the Duplin County General Hospital for delivery after receiving no prenatal care last year. Duplin County General is the only delivery facility in the county. There were 240 deliveries to HD patients last year according to the HD staff. The OB/GYNs who work with the HD prenatal clinic are the only two providers presently doing deliveries at this hospital and there are presently no other providers who are interested in delivering babies in the county. Until 10 years ago, a general practitioner in Rose Hill had a birthing center connected to his private office and according to the Nursing supervisor "delivered 1/2 the people in the county there." But, as the demands on the two OB/GYNs grow, the county is being forced to consider some alternatives to continue providing the needed prenatal and obstetrical care. The use of Certified Nurse Midwives has been considered, but the two doctors are not interested at present, though one of them says they are open to the concept if needed in the future.[56] The Nursing Director of the HD feels that the women of the county would readily accept a nurse midwife.

The HD has a low risk prenatal clinic and cannot manage any high risk pregnancies. The two OB/GYNs do manage some high risk prenatal cases through their office. The referral patterns for high risk patients who cannot be handled locally are sent to Kinston for the more moderate cases and to Greenville or Wilmington for more severe high risk cases. Duplin County does not have a pediatrician, reducing the ability of the hospital to deliver more high risk women in the county. Last year about 5% of the women in the HD prenatal clinic were high risk, and could not be managed at the HD.

The migrant worker population in Duplin County is expanding rapidly, placing pressure on the HD which has found it difficult to provide the care needed by these workers in the last few years. In the past year, one-half of the maternity clinic's patients were migrants, with up to 90% of them not having legal status in the United States according to the Nursing Director. Illegal status renders migrant workers ineligible for public assistance programs like Medicaid and WIC, meaning that the cost of their care must be absorbed by other sources. This situation has led the HD to restrict the number

[56]Draughn R. ROCI Physician, Duplin County, N.C. Personal Interview, July 30, 1991.

of migrant women who are allowed to participate in the maternity care clinic at any one time to 12. This past winter, 8-10 migrant women were always on the waiting list for this clinic and many of these women were unable to receive prenatal care since it was not available to them at the HD. The number of pregnant migrants increases each Summer, meaning that even more women would have to be turned away by the HD. No women who go to the hospital to deliver are turned away, but continuation of the HD's refusing migrant women access to the maternity clinic will possibly result in an increase in the number of women delivering without any prenatal care. But, during the Summer of 1991, the State Migrant Fund began reimbursing one of the ROCI doctors to see these women in his office and provide prenatal care. These funds are limited though, and are expected to run out by the end of August after which time the Goshen Health Center will reimburse Dr. Draughn for the services he provides. This Center, which is located in Faison, treats large numbers of migrant workers. Tri-County Health Center in Newton Grove does not treat resident migrants from Duplin County. The HD feels that the migrant issue is the most pressing problem facing the HD. The HD staff feel that there must be a permanent solution put in place to deal with the migrant population's maternal health needs.

The legal climate in Duplin County is growing more litigious according to Health Department staff interviewed. Medical malpractice is very much on the minds of the HD staff and doctors in Duplin County as one of the ROCI doctors just went through a lawsuit, which he eventually won. But, the ROCI doctor interviewed said that you can not worry about malpractice every day, and that the climate in Duplin County is less litigious than where he completed his residency—New York City. But, he added it "just takes one" to file a lawsuit. Additionally, his malpractice insurance is quite low, $7,200 per year according to him.

ROCI has been very important in improving the HD's relationship with the OB/GYNs in Duplin County. Because they deliver such a large number of HD and Medicaid patients their insurance premiums are increased over what they would be if they treated mainly private insurance patients, according to the physician interviewed. The county supplements the hourly rate the doctors receive for working at the HD prenatal clinics but they say this is not enough. "ROCI is the only thing we have to offer" in their attempt to keep the doctors cooperating with the HD. Especially important are recruitment efforts according to the Interim Health Director and Nursing Director. They have had no success in persuading the National Health Service Corps physicians who have come to Duplin County to stay after their commitment is over. The National Health Service Corps physician who is a participant in ROCI is through with his commitment at the end of 1992 and the HD very much wants him to stay. They feel that if he leaves then the other ROCI physician may go as well, leaving the county without an OB/GYN again. The original OB/GYN has said he will never practice again in that manner. Their quitting would decimate the prenatal and delivery network which presently provides service to the women of Duplin County regardless of their financial status. According to the NHSC physician, ROCI is a plus for staying in the area but he sees many negatives. The large Medicaid

population which means "you have to work twice as hard to make the same amount of money as an urban OB/GYN," the lack of back up and time off which comes from a big practice and family ties in another state are impetuses to leave when his obligation is over.

The ROCI program has allowed the HD to provide extra compensation to the doctors who provide valuable services to the HD, and has offset the insurance costs of the two OB/GYNs. According to the Nursing Director, the original ROCI doctor would probably not be working for the HD without the program to meet the extra liability expense incurred as a result of delivering so many HD babies. ROCI is also serving as the only incentive the HD has to offer to the NHSC physician who will complete his commitment next year. These funds have not been able to entice local Family Practitioners to begin delivering babies but it has helped formalize and stabilize the maternity care that poor women have access to in Duplin County. The money may not have initiated any new types of care opportunities, but its continuation may be the only thing standing in the way of a total collapse of the prenatal and delivery care system in Duplin County.

SAMPSON COUNTY
July 30, 1991

Sampson County is in the Eastern part of the State, and linked with Raleigh and Wilmington by I–40. The county's economy is largely comprised of agriculture and related industries. The total population of the county was 47,297 in 1990 and the per capita income was $10,743 in 1989. The unemployment rate in 1989 was 4.4% and there were 45.73 AFDC recipients for each 1,000 persons in the county. The infant mortality rate in 1989 was 16.70/1,000 live births and there were 1,182 persons for each medical doctor.[57]

Sampson County joined ROCI in 1989, the first year that program funds were available. Sampson County's experience with the program has been atypical of most other participating counties. Whereas many counties have had trouble convincing doctors to be participants in the program, Sampson has had numerous doctors interested in the ROCI program. During 1991, seven physicians, (five FPs and two OB/GYNs) are participating in ROCI, up from the two OB/GYNs who participated in the first program year. These doctors each participate in prenatal clinics at the Sampson County Health Department (HD) as well as deliver babies who receive prenatal care from the HD, and any other women presenting to deliver at Sampson Memorial Hospital. The HD holds 1 1/2 days of prenatal clinic per week with a full day on Tuesdays staffed by the 5 FPs (one per week on a rotating basis) and a one–half day clinic on Wednesdays staffed by the 2 OB/GYNs (one per week) for high risk patients. There are 2 obstetrical call rotations at Sampson Memorial Hospital, which has a level 2 nursery, meaning that some high risk patients can successfully be delivered there. This is the only delivery facility in the county. When a patient who has received prenatal care through the Tuesday clinic presents at the hospital ready to deliver, one of the 5 FPs who make up one OB rotation is called; when a woman presents who receives care through the Wednesday clinic, one of the two OB/GYNs are called. The typical referral hospital for a high risk patient requiring care beyond that available at Sampson Memorial Hospital is University of North Carolina Hospitals in Chapel Hill.

There are presently 100 maternity patients enrolled in prenatal clinics, with approximately one–half of these patients being delivered by the two OB/GYNs and one–half by the five FPs. 33.6% of the women who are seen through the HD receive prenatal care in their first trimester; 40.9% in their second; and 25.4% in the third according to the Nursing Director. There are a few women each year who "drop in" to deliver at the hospital and who have received no prenatal care. If a woman comes to the HD in her third trimester then she is given highest priority and is seen by a doctor at the next prenatal clinic. Otherwise, there is approximately a three week wait for a woman to receive her first prenatal

[57]Population: U.S. Census Bureau; Per Capita Income: U.S. Dept. of HUD; AFDC: N.C. Dept. of Human Resources, Division of Social Services; Manpower ratios: N.C. Health Manpower Data Book, 1990; Unemployment: N.C. Department of Labor; Infant Mortality Rate: N.C. Department of Human Resources, Center for Health and Environmental Studies.

visit after she finds out she is pregnant. Many of the women who do not receive care until the third trimester are women having repeat births who feel that they "know the ropes" and do not need care. Twenty percent of the maternity patients are migrants, with 11% of the migrants being illegal, meaning that they are ineligible for government welfare programs such as Medicaid and WIC according to the Nursing Director. All patients receive the services they require regardless of their ability to pay, although there has been some uneasiness from the two OB/GYNs about treating illegal workers. They feel that by doing so, they are aiding people in breaking the law. The migrant population is growing in Sampson County, and the Nursing Director feels that this is one of the biggest problems facing the HD.

Transportation is a barrier to care for some women as Sampson is a large and rural county. The Tri County Health Center in Newton Grove provides transportation services to migrant workers. They pick up migrant workers and take them to the Sampson HD for prenatal visits. Migrant women who are residents of Sampson County receive prenatal care from the Sampson County HD because the delivering physicians do not want to deliver a patient to whom they have not provided prenatal care. The Tri County Health Center supports this arrangement even though they are willing to provide prenatal care up to 32 weeks.

Sampson County is a poor one, with 379 of the 656 total births occurring in the county being Medicaid births in 1989 according to Health Department staff. Since the Medicaid program expansion, there are very few women who are coming to the HD and "falling through the cracks" or having no private medical insurance and not qualifying for Medicaid, except for the illegal aliens according to the Nursing Director. Previously, about 5% of the HD patients were uninsured. The HD uses presumptive eligibility for Medicaid and has an eligibility specialist who works for the HD. The HD has been able to use the rules of Medicaid to benefit illegal workers for a short time and offset the cost of the care they receive through the HD. Under the rules of Medicaid, a woman can receive benefits on a presumptive basis for up to 60 days. That is, it is assumed that she qualifies and receives benefits until her qualification is confirmed or denied, a process which one has 60 days to complete. So, illegal migrants are put on Medicaid presumptively and receive benefits until they have their qualification confirmed or 60 days, whichever is first. The HD does not go out of their way to ensure that these illegal migrants go to Social Services and have their status checked.

According to the Nursing Director, the medical malpractice climate of the county is not very litigious. She said that she did not know of many lawsuits involving obstetrical injuries in this area. And the doctors of the area desire to deliver babies unlike many other places. But, liability concerns are probably one of the reasons that the doctors who deliver HD patients do not want to deliver migrant women who received prenatal care from another doctor. Midwives have not been talked about much in Sampson County and would probably meet with great opposition from the local doctors.

Sampson County is not a place where there are no doctors to provide prenatal and delivery services to poor women. According to the Nursing Director, the FPs here enjoy doing deliveries and do

not desire to stop this part of their practice as some FPs in other areas do. The doctors and the HD both desire more money to divide between the doctors. Deciding how to divide $19,500 between seven doctors was very difficult according to the Nursing Director, and caused strain between the physicians and the HD. The HD would like to have some type of standardized formula with which to divide the ROCI money in the future, so as to make their job easier when dealing with differing interests.

While the Nursing Director feels that ROCI has helped improve the HD's relationship with the doctors and allowed them to give the doctors "something for their time and effort" the money is just a drop in the bucket. The Nursing Director feels that the doctors would continue working with the HD if the program were discontinued, but the program has solidified the relationship between the HD and the doctors. The program has helped make the physicians feel more appreciated and has increased their ties to the HD. The money has also allowed the HD to show "good faith" to the doctors and acknowledge that many HD patients are high risk. In addition to the ROCI money, the doctors are paid the maximum hourly rate for providing prenatal care at the HD. When extra doctors were added to the program this year, the debate over how to divide the funds actually made relations between the HD and the original OB/GYNs tense. Overall, the Nursing Director feels that ROCI has been a positive development and has helped get more doctors involved with the HD. From one of the participating doctors' standpoint, ROCI is merely a "stop-gap" measure. He does not feel that ROCI can bring back doctors who stopped delivering babies in the last five years, but hopes that it can improve the number of FP graduates making delivery a part of their practices. He said that in 1985 350 FPs in North Carolina delivered babies and in 1987 only 100 did, with most of those being faculty members of medical schools. He also said that in 1985 65% of the FP residents did deliveries and in 1987 only 19% were delivering. He feels that the State must come up with incentives for new doctors to deliver babies. He also says that without ROCI funds he would not be working for the HD.

ROCI has helped to shore up the prenatal and delivery care system in place to provide services to poor women in Sampson County. The program appears to be making a positive contribution toward ensuring that adequate prenatal and delivery care are available to the women of Sampson County.

APPENDIX 2

This Appendix contains copies of the enacting legislation of the ROCI program, continuing legislation and a proposed bill, HR 2229 which has been introduced into the U.S. Congress and which is similar to a Federal ROCI program.

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1987

HOUSE BILL 2424

Short Title: Rural Obstetrical Care Incentive

Sponsors: Representatives Hunter, E. Warren, Woodard, and Bowman.

Referred to: Appropriations

June 15, 1988

A BILL TO BE ENTITLED

AN ACT TO APPROPRIATE FUNDS TO THE DEPARTMENT OF HUMAN RESOURCES TO ESTABLISH A PROGRAM TO COMPENSATE FAMILY PHYSICIANS AND OBSTETRICIANS WHO AGREE TO PROVIDE PRENATAL AND OBSTETRICAL SERVICES IN COUNTIES THAT ARE UNDERSERVED WITH REGARD TO THESE SERVICES.

Whereas, there are currently 22 counties in the State which have no physicians to provide prenatal or obstetrical care in those counties, most of which are rural counties; and

Whereas, there are 20 counties in the State in which more than half of the expectant mothers must leave the county for obstetrical care because there are not enough physicians in their home county to provide obstetrical care; and

Whereas, prior to 1985 nearly 500 family physicians in North Carolina were providing obstetrical care; and

Whereas, after severe increases in liability insurance premiums, some in excess of three hundred fifty % (350%), the number of family physicians providing obstetrical care has dropped to 189, and numerous obstetricians have dropped that part of their practice; and

Whereas, it is in the interest of the State to provide quality prenatal and neonatal care and to provide access to health care for all its citizens; Now, therefore, The General Assembly of North Carolina enacts:

Section 1. From the funds appropriated from the General Fund to the Department of Human Resources there is established a reserve of nine hundred and fifty thousand dollars ($950,000) for the 1988-89 fiscal year to fund a new program to compensate family physicians and obstetricians who agree to provide prenatal and obstetrical services in counties that are underserved with regard to these services. The Division of Health Services shall adopt rules determining the counties that are underserved in respect to obstetrical care that are to be part of the program; the scope of the obstetrical services that are to be provided by a physician for that physician to be eligible to receive assistance under the program; and the amount and nature of the assistance to be provided to eligible physicians. Specific rules issued by the Division of Health Services governing this new program shall include:

1) A physician who provides obstetrical care in a county that is designated as being underserved for prenatal and obstetrical care by the Division of Health Services will be compensated for either the difference between his premiums without obstetrical care coverage, or six thousand five hundred dollars ($6,500), whichever is less;
2) Physicians providing obstetrical care through an arrangement with their local Health Department shall have the option of providing care at their offices or at the facilities of the Health Department obstetrical clinic;
3) No physician shall be required to assume management of the care of any obstetrical patient if the level of care required is beyond the professional competence of that physician;
4) Physicians eligible for payment under this program shall be licensed to practice medicine in this State;
5) Participating physicians shall provide complete care for covered patients including prenatal care and delivery; provided, however, physicians in a county without a facility for obstetrical delivery are still eligible if they provide only prenatal care;
6) The liability insurance rates for obstetrical care to be used to determine compensation under this program shall be based on obstetrical premiums of $1,000,000/$1,000,000 coverage at a mature rate; and
7) Any physician compensated under this program shall not refuse to provide obstetrical care for any patient based on the patient's economic status or ability to pay.

Sec. 2. This act shall become effective July 1, 1988.

SENATE BILL 257, CHAPTER 1086

APPROPRIATIONS

Requested by: Representative Hunter, Senators Walker, Plyler

RURAL OBSTETRICAL CARE INCENTIVE

Sec. 39.3. (a) From the funds appropriated from the General Fund to the Department of Human Resources in Section 3 of Chapter 1086, Session Laws of 1987, there is established a reserve of two hundred and forty thousand dollars ($240,000) for the 1988-89 fiscal year to fund a new pilot program to compensate family physicians and obstetricians who agree to provide prenatal and obstetrical services in counties that are underserved with regard to these services. The Commission for Health Services shall adopt rules determining the counties that are underserved with respect to obstetrical care that are to be part of the program, the scope of the obstetrical services that are to be provided by a physician for that physician to be eligible to receive assistance under the program, and the amount and nature of the assistance to be provided to eligible physicians. Specific rules issued by the Commission for Health Services governing this new program shall include:

1) A physician who provides obstetrical care in a county that is designated as being underserved for prenatal and obstetrical care by the Commission for Health Services will be compensated for coverage and his premiums without obstetrical care coverage, or six thousand five hundred dollars ($6,500) whichever is less;
2) Physicians providing obstetrical care through an arrangement with their local Health Department shall have the option of providing the care at their offices or at the facilities of the Health Department obstetrical clinic;
3) No physician 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;
4) Physicians eligible for payment under this program shall be licensed to practice medicine in this State;
5) Participating physicians shall provide complete obstetrical for covered patients including prenatal care and delivery; provided, however, physicians in a county without a facility for obstetrical delivery are still eligible if they provide only prenatal care;

6) The liability insurance rates for obstetrical care to be used to determine compensation under this program shall be based on obstetrical premiums of $1,000,000/$1,000,000 coverage at a mature rate; and

7) Any physician compensated under this program shall not refuse to provide obstetrical care for any patient based on the patient's economic status or ability to pay.

The Division of Health Services shall establish the pilot program provided by subsection (a) of this section. The Division of Health Services shall report, by April 1, 1989, to the chairmen of the House and Senate Appropriations Committees and to the Chairmen of the Appropriations Subcommittees on Human Resources on the progress in implementing and operating the pilot program mandated by this section.