REPORT OF THE
PERINATAL/EARLY CHILDHOOD
SUBCOMMITTEE OF THE MATERNAL
AND CHILD HEALTH COUNCIL ON

IMPROVING ACCESS TO PERINATAL CARE IN RURAL AND UNDER SERVED AREAS

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

HOUSE DOCUMENT NO. 9

COMMONWEALTH OF VIRGINIA
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Department of Health
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COMMISSIONER

TDD 1-800-828-1120

October 1, 1997

TO: The Honorable George Allen

and

The General Assembly of Virginia

This report contained herein is pursuant to House Joint Resolution 617, agreed to by the 1997 General Assembly.

This report constitutes a response, requesting the Maternal Child Health Council, in conjunction with the Regional Perinatal Coordinating Councils, the Virginia Chapter of the American College of Nurse Midwives, the Virginia Council of Nurse Practitioners, the Virginia Academy of Family Physicians, the Virginia Chapter of the American College of Obstetricians and Gynecologists, the Virginia Chapter of the American College of Pediatrics, and the Commissioner of Health prepare a recommendation for a coordinated plan for improving perinatal health care access in under served areas. On September 17, 1997, the Maternal and Child Health Council voted to approve this study, and submit it to the Joint Commission on Health Care.

Respectfully Submitted,

Carolyn L. Beverly, M.D., M.P.H.
Chair
Perinatal/Early Childhood Subcommittee of
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Respectfully Submitted,

Robert C. Metcalf
Chair
Maternal and Child Health Council
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HOUSE JOINT RESOLUTION 617 IMPROVING ACCESS TO PERINATAL CARE IN RURAL AND UNDER SERVED AREAS OF THE COMMONWEALTH

submitted by the:
Perinatal and Early Childhood Subcommittee
Maternal and Child Health Council
October 1, 1997

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EXECUTIVE SUMMARY

In February 1997, the General Assembly of Virginia adopted House Joint Resolution 617, which requested the Maternal and Child Health Council, in conjunction with other entities, to review current data on improving access to perinatal care in rural and under served areas of the Commonwealth. The General Assembly Resolution noted that various studies have reported a shortage of prenatal care in certain areas of the Commonwealth and that an analysis of the incentives and disincentives to providing care for the under served was necessary.

The Assembly's concern is supported by research literature linking continuous prenatal care to healthy birth outcomes. In 1995, 18 percent of the state's pregnant women failed to enter into prenatal care during the first trimester.

The Perinatal/Early Childhood Subcommittee of the Maternal and Child Health Council discussed in detail the definition of the concept "under served." Based on this discussion and a review of the research literature, the Council determined that under served should be defined based upon both manpower availability and underutilization of services.

Key informant interviews were used as a primary data collection tool to develop strategies for the improvement of care in under served areas. The survey, which contained both quantitative specific choice questions and open-ended qualitative questions, was completed by fifty-seven respondents representing providers, medical schools, managed care organizations, hospitals and payers of health services.

The results of the survey indicate that ready access to perinatal care in some rural areas is a significant and persistent concern due to manpower shortages. In addition, the data indicate that the underutilization of services and the associated outcome of low birth weight and infant mortality is a great concern, even in areas that have a sufficient number of providers.

The results of the survey also show that multiple strategies must be used to improve access to perinatal care in under served areas. Collaborative training models in medical and nursing schools are strongly encouraged by the survey respondents. In the opinion of the survey respondents, barriers to care that inhibit broader participation by perinatal providers should be removed. Incentives for collaborative practice should be strengthened. Access to care should be enhanced by transportation programs and education.

Solutions are more likely to be successful when they are locally driven. Reliance on local data has thus been used to determine under served areas as compared to incomplete manpower data banks. Any statewide plan must rely on the interest and commitment of local communities to seek creative ways to solve perinatal access problems.

Options have been developed through discussions by the perinatal workgroup using findings from the survey of key informants. The options focus on the (1) recruitment of perinatal providers to the designated under served areas, (2) promotion of collaborative practice arrangements in rural and under served areas and (3) strategies to encourage women to seek perinatal services. These policy options are all predicated on the designation of under served areas as determined by this report.

- Direct the Virginia Department of Health to recognize the perinatal under served areas as defined by this study, and assume responsibility for annual updates, in conjunction with the Regional Perinatal Coordinating Councils.

(1) Recruiting Perinatal Providers to Practice in Under Served Areas

- Recommend legislation that would allow the Board of Directors of the Birth-Related Neurological Injury Compensation Program to reduce the participation fee for all providers practicing in the perinatal under served areas due to manpower deficiencies. This action requires no funding.

- The Governor and/or the 1998 General Assembly should provide funding to establish and maintain the manpower data base on licensed health care professionals. Previous investigation revealed an estimated cost of $175,000.00 to establish and pilot test all data from licenced health care professionals. Options for funding this program could include any combination of the following:

    1. Fund the establishment and ongoing aspects of the program by appropriating monies from the general fund.
    2. The 1998 General Assembly could provide the initial program development and pilot, and the annual cost be provided through increasing licensure fees for all health professionals.
    3. Increase licensure fees for all health care professionals.
    4. Each state agency using the data could provide funds on an annual basis.
    5. 1998 general funds provide the initial program development and pilot and 60 percent of the annual cost of maintaining the database. The difference would be supplemented by revenues generated from the sale of the data to private and public agencies.

- Recommend that legislation in the 1998 legislative session be considered to direct the Virginia Department of Health to include the criteria for perinatal under served due to manpower deficiencies in the state scholarship and tuition reimbursement programs. This action requires no additional funding.

- Recommend that the Virginia Department of Health (VDH) include in the state physician loan repayment programs, the manpower deficiencies criteria for perinatal under served areas. This should be implemented as soon as possible. Legislation was passed in 1994 to establish this program, but no mechanism for funding was provided. General funds should be appropriated.

(2) Promotion of Collaborative Practice Models in Under Served Areas

- Recommend the State Council of Higher Education convene a task force within calendar year 1998, to develop a collaborative training model for professional education programs. This task force would consist of representatives of medical and nursing schools, Area Health Education Centers, Community Health Centers and private/public hospitals. The purpose of the task force is to develop a core curriculum for collaborative classroom, as well as clinical, practice to be used in every program. The task force could initially contact the W. K. Kellogg Foundation in order to learn about collaborative programs that have been provided through grants.

- Recommend that the Virginia Health Care Foundation give priority in awarding grant funds to innovative projects that utilize collaborative practice models in the delivery of perinatal health care in rural and under served areas. Recommend that this process begin in FY98. This action requires no additional funding.

- Recommend that the State Corporation Commission convene a task force including representatives of insurance companies, managed care organizations and the Department of Medical Assistance to re-examine the fee and reimbursement differentials for prenatal health care and delivery services, so that providers are more equitably compensated for their services. These organizations will work with representatives of the medical societies, the Virginia Chapter of the American College of Nurse Midwives and the Virginia Council of Nurse Practitioners in order to achieve this goal. This meeting should be convened no later than December 1998. This action requires no additional funding.

- Recommend that further progress be made toward full implementation of the 1998 Joint Legislative and Audit Review Commission (JLARC) recommendations with regard to the basis for determining the local match requirement in the cooperative budget based on ability to pay.

(3) Strategies to Encourage Women to Seek Perinatal Services

- Recommend that VDH direct the Regional Perinatal Coordinating Councils (RPCCs) collaborate with other perinatal programs to implement public education campaigns emphasizing the importance of preconception and prenatal care. The planning phase should begin in FY99 and should not require additional funding.

- The Resource Mothers Programs should be given additional funding from the 1998 General Assembly through general funds to establish and/or expand perinatal services to these areas.

- Recommend the Department of Medical Assistance Services (DMAS) study and make recommendations on Medicaid transportation with special emphasis on rural and under served areas. The study should be accomplished in one year and recommendations be presented to the General Assembly no later than FY 2000. This is an initial step to address the more complex problem of lack of transportation in the Commonwealth; however, further studies for overall solutions will be needed. Recommend general funds support this study.

- Recommend that the Department of Medical Assistance Services (DMAS) collaborate with other agencies to expand outreach efforts to increase participation by enrolling Medicaid eligible pregnant women.

- The Department of Housing and Community Development (DCHD) should designate the improvement of perinatal care and access to health care as top priorities for the Appalachian Regional Commission (ARC) funding for 1999. The ARC, at the federal level, includes prenatal care and access to health care among its funding priorities. Virginia can also designate these as top priorities. The DCHD should also include the development of primary health care to include perinatal health care as an economic development project which can be given priority for funding from other sources.

INTRODUCTION

OVERVIEW AND PURPOSE

The 1997 General Assembly passed House Joint Resolution 617, which requested the Maternal and Child Health Council, in conjunction with other professional medical organizations to review current reports, surveys, recommendations and data on improving access to perinatal care in rural and under served areas, including those emanating from the study pursuant to the 1996 House Joint Resolution (HJR)110, and prepare a recommendation for a coordinated plan for improving access in under served areas. The Maternal and Child Health (MCH) Council referred this study to the MCH Perinatal/Early Childhood Subcommittee. This subcommittee created a perinatal workgroup, which consisted of members of the Maternal and Child Health(MCH) Council Perinatal/Early Childhood Subcommittee, the Regional Perinatal Coordinating Councils (RPCCs), the Virginia Chapter of the American College of Nurse Midwives (VCACNM), the Virginia Council of Nurse Practitioners (VCNP), the Virginia Academy of Family Physicians (VAFP), the Virginia Chapter of the American College of Obstetricians and Gynecologists (VCACOG), the Virginia Chapter of the American Academy of Pediatrics (VCAAP), and the Commissioner of Health (See Appendix A for the copy of the resolution and Appendix B for a list of perinatal workgroup members).

HISTORICAL BACKGROUND

Prenatal Care and Access

It is widely reported that early and continuous prenatal care is associated with improved pregnancy outcomes (Brown, IOM, Quick, McLaughin). Efforts to reduce poor pregnancy outcomes, as indicated by infant mortality rates and the percentage of low birth weight infants, have focused upon increasing the participation of women in prenatal care. In 1995, 18 percent of pregnant women living in Virginia failed to enter into prenatal care in the first trimester. Statistics indicate that even though Virginia's rate of infant mortality is improving, the percentage of low birth weight infants is increasing.

In Virginia, there are significant differences in these rates depending on race, age, education, and geographic region. Even though some rural areas have significant inadequacies in resources available to provide perinatal health care, pregnancy outcome as measured by mortality and birth weight may be good. In contrast, some urban areas with numerous resources have some of the highest infant mortality rates and largest incidences of low birth weight. Physical access to health care alone will not prevent illness or poor outcomes (Lee).

Availability of prenatal care refers to the supply of health resources and services relative to the needs and/or demands of the community. Perinatal health care systems are services that are

available to an individual when she can obtain them, at the time and place that she needs them, and from the appropriate personnel. Transportation and geographic distance from care are components of availability of care. In the literature, any discussion of access to care includes a review of factors which affect the utilization of care. Factors identified in the literature which affect access to care are: financial inability to purchase care; prevalence of poverty in the target population; prevalence of underinsurance and lack of insurance in the target population; physical and social barriers to care, such as distance and lack of transportation; inability to leave the worksite for health care appointments; cultural and language barriers; complexity of the health care system; and other higher personal priorities than health (Augustyn, Brown).

Access to care incorporates the two concepts of acceptability and availability of care, which are frequently used interchangeably but truly have different meanings and dictate separate approaches. Access to care refers to the ability of women to obtain needed care and services. The acceptability of that care refers to ones' overall assessment of the medical care available to them. The cost, and convenience of care, as well as provider attitudes, will determine the acceptability of available health care services. The compatibility of care with the woman's lifestyle and beliefs are critical components of acceptability of the care.

Utilization of prenatal care will be affected by both the acceptability and availability of that care. A woman and her family's perception of the pregnancy, her past experience and attitudes toward prenatal care, her knowledge, cultural beliefs and a variety of other personality and personal characteristics will impact the frequency with which she seeks or continues prenatal care. Availability of that care will also impact the utilization. A complex mixture of psychological, social and cultural factors determine if and when a woman seeks prenatal care. In order to design successful models to impact pregnancy outcomes, all of these issues must be considered (Augustyn and Maiman).

One indication of the complexity of this issue is demonstrated by the statistics from two southwest Virginia localities. Dickenson is a very geographically isolated county that has no hospital labor and delivery services or prenatal services. Women have to travel long distances over mountain roads to reach medical services. Yet the percentage of women in 1995 who began care in the first trimester was 81.6 percent, very close to the state average (82.4 percent). However, Bristol is a small city that does have the advantages of public transportation, and yet the percentage of women obtaining first trimester care (80.3 percent in 1995) is much lower than the state average (82.percent in 1995). Statistics like these suggest that the simple availability of medical services may not be sufficient for many families.

As reported in several other legislative studies in Virginia, the lack of perinatal providers in under served areas are associated with a maldistribution of obstetricians, lack of the use of family physicians, certified nurse midwives and nurse practitioners in the provision of perinatal health care, and barriers to practice (See Appendix C for a summary of related legislative studies). The vast majority of obstetricians and certified nurse midwives are located in urban areas because rural areas do not provide a sufficient population base necessary to support an obstetrical practice. Family

physicians are more widely distributed across rural areas than obstetricians but few of them provide perinatal services. Recruitment of perinatal providers to under served areas is needed to allay problems women are experiencing in accessing perinatal health care.

Virginia has addressed primary health care access issues for many years. A Primary Health Care Policy Forum was held in 1988, and a proposed Five Point Plan for Strengthening the Primary Care System (Five Point Plan) (Statewide Health Coordinating Council, et. al., 1989) presented information regarding the recruitment and retention of qualified providers. A revised Medical Scholarship Fund, establishment of a Physician Loan Repayment Program, and development of the Statewide Area Health Education Center (AHEC) Program were additional components of that plan.

The Center for Primary Care Resource Development (hereafter referred to as the Center) administers the Virginia Medical Scholarship Program. This program awards $10,000 scholarships to medical students and first year residents in primary care fields who agree to practice in medically under served areas in Virginia. The scholarships cover tuition costs. Scholarship recipients must practice in a Virginia medically under served area (VMUA) one year for each year of financial assistance. Since VDH assumed the responsibility of administering the program in Fiscal Year 1990-91, scholarships have been awarded to 83 recipients. This amounts to more than 150 years of medical practice in Virginia's under served communities. Fifteen recipients are currently practicing in the under served areas. Of the four participating medical schools, one school prefers the loan repayment program over the scholarship. The amount budgeted in FY 97 was $445,000, of which 73 percent was spent. Potential recipients report the lack of participation is due to the triple payback requirement in the event of default.

The Virginia Nurse Practitioner/Nurse Midwife Scholarship Program is also administered by the Center. Established in 1993, this program has awarded fifteen $5,000 scholarships which partially covers tuition costs. It mirrors the repayment structure of the medical scholarship program; for each year of scholarship the recipient commits to a year of service in a medically under served area as defined by the state. Two years ago, there was a legislative proposal to increase the scholarship amount; however, it failed.

The Center also administers the National Health Service Corps (NHSC)-Virginia Loan Repayment Program. Loan repayment incentives are offered to primary care physicians, nurse practitioners and physicians in exchange for their agreement to work in federally designated health professional shortage areas (HPSA). Program participants must work a minimum of two years in a HPSA. Participants are awarded $25,000 a year to use toward the repayment of educational loans for each year of the two-year commitment. To date, four physicians have participated in the loan repayment program in Virginia. One recipient is still practicing in the HPSA and two recently entered the program.

The Center also houses the Virginia Practice Sights Initiative which serves as a coordinating body for recruitment and retention of primary health care providers for Virginia's medically under served areas. Current activities include the development of a statewide primary care provider data

base and the development of a community profile data base. A toll-free number for recruitment and retention purposes has been established. The Center surveyed primary care practices across the State and has developed a pool of practice opportunities which is updated on an ongoing basis. At the same time, a pool of candidates is being identified. The provider recruiter is currently meeting with all primary care residents across the state in an attempt to recruit their services in Virginia's medically under served areas. Health care organizations such as the Virginia Primary Care Association, Virginia Academy of Physicians, Virginia Medical Society, Virginia Health Care Foundation, and community-based Area Health Education Centers(AHECs) are promoting the Center as the clearinghouse for information on recruitment needs. Marketing materials promoting the toll-free recruitment line have been developed. Marketing efforts will initially target Virginia's residency programs, medical schools, nurse practitioner programs, and physician assistants program. Future efforts will expand marketing to Virginia medical school graduates who are in out-of-state residency programs.

The increased participation of family physicians in the provision of obstetrical care has been identified as a key factor for improving access to perinatal care. Many previous studies and reports have examined the issue, including cost of malpractice insurance, fear of litigation, disruption of personal life, availability of professional consultation, and back-up (House Document No. 56, Larimore, 1991). Recently family physicians have reported that reasons to maintain perinatal services within their practices include increased financial and professional satisfaction, a more diverse and comprehensive hospital and office practice and fewer malpractice claims and lawsuits (Larimore, 1995; Bagley). In a survey conducted in June, 1997, by a representative of the perinatal workgroup, eleven family physicians responded to questions of why they maintained active obstetrical practices. All indicated they planned to continue their obstetrical services, citing pragmatic as well as personal reasons. The availability of adequate clinical obstetrical experiences during the family practice residency program was identified as a concern by one physician. He sees a growing interest in obstetrical care among residents; however, clinical placements are often in larger, urban facilities due to the volume of deliveries available. (See Appendix D for survey results). Thus, the residents are not exposed to the positive aspects of a practice in a rural area and may not consider these areas after their residency is complete.

The literature also reports that the increased utilization of certified nurse midwives and nurse practitioners may also increase access to perinatal health care (Southern Regional Project on Infant Mortality, Senate Document No. 45, 1994; Senate Document No. 13, 1992).

At the same time, it is important to note that there are a large number of families at significant risk for poor pregnancy outcomes because of social factors such as youth, poverty, family dysfunction, or lack of understanding of the importance of prenatal care. These at-risk families need more support, more personal outreach and a different approach to care in order to improve their chances of a healthy birth outcome.

Legislative Background

Over the past ten years, there have been numerous legislative reports regarding issues of access to prenatal care in Virginia (See Appendix C for a synopsis of related studies). Many agencies and organizations have deliberated on access to obstetrical care and made numerous recommendations. Several of these studies strongly suggest that Virginia does not lack obstetrical care providers, rather there is a maldistribution of these providers. Recommendations have included: efforts to address provider availability and distribution; practice barriers for all providers; increased utilization of advanced practice nurses and family physicians in providing obstetrical services; provider education; cooperation among providers; transportation issues; professional guidelines; legal issues; data collection; and the designation of under served areas in Virginia. In all of these studies, the term under served has been broadly used and has usually referred to rural areas.

Senate Joint Resolution (SJR) 331 from the 1995 General Assembly directed the Joint Commission on Health Care to study access to obstetrical care for the women of rural Virginia. One of the issues this study addressed was the availability of providers in rural Virginia. House Joint Resolution (HJR) 110, Establishment of Professional Guidelines for Obstetrical Care (House Document No. 56) from the 1996 General Assembly discussed access to perinatal care, specifically issues relating to provider availability and distribution, provider practice environment, collaboration among providers, including family physicians and advanced practice nurses, and standards of obstetrical care. As a result of these most recent reports, the Medical Society of Virginia (MSV) convened two meetings in the fall of 1996, to address access to obstetrical care in rural and under served areas in Virginia. Representatives from the Virginia Department of Health, members of the task force for HJR 110, insurance providers and nurse midwives met with family physicians and obstetricians. The discussions focused on defining under served areas in Virginia and ways to attract professionals to these rural and/or under served areas. It became evident in these two discussions that no clear definition of under served areas was being consistently used by participants. The conclusion from these two meetings convened by the Medical Society of Virginia was that a statewide plan to address access to perinatal care in rural and under served areas was needed. The Maternal and Child Health Council was thought to be the appropriate body to develop that plan. As part of that plan, under served would be defined and a method to designate the under served areas would be developed.

DESIGNATIONS OF UNDER SERVED AREAS

Background

A review of the literature reveals that existing criteria designed to designate under served areas are intended to identify "medically" under served areas (See Appendix E for medically under served and health professional shortage areas in Virginia). The methodology focuses on primary care in general rather than on a specific health care service, such as perinatology. The two major tools used nationally for measuring health care manpower are Health Professional Shortage Areas (HPSA) and Medically Under Served Areas (MUA). HPSA designations rely on three basic criteria:

geographic area involved, physician to population ratio, and access to contiguous area resources. MUA criteria include physician to population ratio, poverty level, percent of population over 65 years of age, and five-year average infant mortality rate. Programs using the MUA designations include the Community and Migrant Health Centers, Rural Health Clinic Programs, the Medicare Incentive Payment program, and the Area Health Education Center (AHEC) program. A third methodology used in Virginia is the Virginia Medically Under Served Areas (VMUA). VMUA relies on primary care physician to population ratio, percent of population with incomes at or below 100 percent of the federal poverty level, percent of population 65 years of age or older, five-year average infant mortality rate, and the most recent annual civilian unemployment rate (See Appendix E for the designation of the Medically Under Served and Health Professional Shortage Areas in Virginia).

There are several limitations to using existing definitions to identify areas without adequate perinatal services. Existing methods of manpower needs analysis do not include non-physician providers (nurse practitioners and certified nurse midwives). Factoring the 65 year and older population into this designation is irrelevant because they are not reflective of perinatal health care needs. Factoring infant mortality would include infant deaths due to injuries, Sudden Infant Death Syndrome, and other causes which are not associated with prenatal care.

These formulas also do not address the practice patterns of providers. As many as 40 percent of physicians reported in localities may not be providing obstetrical services because they are retired, limit practice to gynecology, or maintain a license in Virginia but practice in another state (Olchanski). Family physicians may be providing obstetrical services but would not be identified as a perinatal provider. In addition, there is no manpower database available in Virginia which captures statewide practice patterns of physicians or advanced practice nurse providers.

Manpower Data Base

On April 20, 1994, the Virginia General Assembly enacted Code 54.1-2506.1, which enabled the levy and collection of fees for application processing, examination, registration, certification or licensure and renewal that are sufficient to cover all expenses for the administration and operation of the Department of Health Professions (DPH), the Board of Health Professions and the health regulatory boards. The Code expressly authorized the DHP to require licensed professionals or applicants for licensure "to provide information in addition to that which is required to determine the individual's qualifications to be licensed."

Specifically, the law also states that the Department of Health Professions is "...authorized to require persons applying for initial licensure and those who are licensed to practice medicine, dentistry, or to practice as a physician's assistant, nurse practitioner or dental hygienist, to provide information in addition to that which is required to determine the individual's qualifications to be licensed. Such additional information shall identify the individual's specialty and subspecialty; credentials and certifications issued by professional associations, institutions and boards; and locations of practice and number of hours spent practicing at each practice location. Such

information shall be collected and maintained by the Department for manpower planning purposes in cooperation with agencies and institutions of the Commonwealth and shall be released by the Department only in the aggregate without reference to any licensee's name or other individual identifying particulars. Prior to collecting any information described in this section from individual licensees, the Department shall first attempt to obtain from other sources information sufficient for manpower planning purposes." The purpose of the legislation was to provide the data which could be used for manpower planning and to improve access to health care in medically under served communities.

Even though the Code allows for collection of this data, an issue of funding has prohibited this database from being developed. The increasing of licensure fees has been proposed. A letter dated August 1997, from the Attorney General's Office advised that the database not be funded through licensure fees based upon an earlier court decision in California which held that professional licensure fees could not be used to support governmental activities unrelated to the specified functions of professional regulation. In February 1995, the Department of Health Professions obtained a bid from the Virginia Commonwealth University Survey Research Laboratory to implement the data bank of manpower information. They offered to establish and pilot test all data from licenced health care professionals for $173,268.00. The absence of a comprehensive, current manpower database has greatly hindered efforts to objectively assess the availability of perinatal services.

METHODOLOGY

On March 12, 1997, the Maternal and Child Health Council directed the Perinatal/Early Childhood Subcommittee to respond to the request of HJR 617, Improving Access to Perinatal Care in Rural and Under Served Areas of the Commonwealth. The Chair of the Perinatal/Early Childhood Subcommittee convened the perinatal workgroup as designated by HJR 617 and began the development of a coordinated plan for improving access to perinatal health care in under served areas. The perinatal workgroup is comprised of Perinatal and Early Childhood Subcommittee members of the Maternal and Child Health Council, representatives from provider professional organizations representing medicine and nursing, the Regional Perinatal Coordinating Councils and the Virginia Department of Health, including local health directors. All perinatal workgroup members contributed information in their areas of expertise. Since extensive legislative studies have been done in Virginia regarding perinatal care, the perinatal workgroup reviewed these studies. These findings and the recommendations were considered in the development of the statewide plan.

PERINATAL WORKGROUP DESIGNATION OF UNDER SERVED

Early discussions of the perinatal workgroup revealed the great difficulty in defining under served areas that accurately reflect perinatal health care. The seven Regional Perinatal Coordinating Councils (RPCCs), represented on the perinatal workgroup were established in 1992, and are funded by Title V Maternal and Child Health Block Grant funds administered by the Virginia Department of Health. These councils were developed as public-private collaborative networks to improve the

systems of perinatal health care in the Commonwealth (See Appendix F for a map of the perinatal regions). They operate by providing education to health care professionals and providing mechanisms for community-based problem solving. They provide a unique local perspective of the problems of access to care within their communities. They also have close communication with local perinatal providers, as well as others responsible for the delivery of perinatal services. For these reasons, the perinatal workgroup assigned the RPCC representatives the difficult task of developing the methodology to define the under served areas of the Commonwealth.

The perinatal workgroup determined that the criteria for defining under served areas should fall into the following two categories: first, under served due to manpower and resource inadequacies; second, under served due to underutilization of perinatal care.

Under Served Due to Manpower and Resource Inadequacies:

The criteria for the designation of under served due to manpower and resource inadequacies is as follows:

(a) Those counties who have more than 200 births per full-time-equivalent provider of prenatal care services and at least 50 percent of the population must drive 45 minutes or more one-way to access prenatal care. The numbers of perinatal providers in those areas were determined by the RPCC recent needs assessment of their regions in collaboration with local health department directors. All privately and publicly employed obstetricians, family physicians and nurse practitioners, including certified nurse midwives, were identified as perinatal providers. There is no statewide mechanism to collect travel distance data. The travel distances were estimated by the RPCC representatives in consultation with physicians and other providers in their localities.

(b) Those counties/cities having no labor and delivery services in the county/city and at least 50 percent of the clients must drive greater than one hour one-way for delivery services. A chart with data ratio of births to providers and travel times is included (See Appendix G).

Under Served Due to Underutilization of Perinatal Care

There is no nationally accepted indicator of adequate access to care (CDC, Brown). In perinatal health, the month of entry into prenatal care in combination with the number of prenatal visits related to gestational age is the most accepted measure of adequacy of prenatal care (IOM, 1988). An assumption of this study is that women who have services available to them and/or have the psychological and social factors that support early prenatal care, will enter prenatal care in the first trimester. Therefore, late or no prenatal care indicates a problem with access to obstetrical care.

For the purpose of this study, under served due to underutilization of care was determined using entry into prenatal care and birth outcomes (perinatal mortality rate, percentage of low birth weight, and the percent of congenital anomalies). The state average for failure to enter prenatal care in the first trimester was eighteen percent using 1995 birth records. Localities are considered under served due to underutilization where failure to enter prenatal care in the first trimester was one and a half times the state average which is equal to 27 percent or below 73.6 percent entry into care. In addition, those jurisdictions where the percentage of women entering care in the first trimester was below the state average percent, and the combined birth outcome variance indices exceeded the state average by at least 25 percent (or varience was >3.75), are considered under served areas. The most recent 5-year average of available state data from the birth registry for perinatal outcomes was used to assess all counties and cities. In order to provide sufficient data, five-year averages were used to reveal meaningful changes and decrease the fluctuations in statistics that can occur with small numbers (See Appendix H for data from all cities and counties and Appendix I for Descriptions of Perinatal Regions).

An important task completed by the subcommittee perinatal workgroup involved the review and critique of a survey that was prepared by outside consultants used to conduct key informant interviews. The subcommittee also responded to the revised draft of the survey to conduct key informant interviews.

KEY INFORMANT SURVEY INTERVIEWS

A key informant telephone survey of fifty-seven knowledgeable individuals was conducted during the summer of 1997 (See Appendix J). Key informants are knowledgeable and interested individuals who work in the arena of perinatal health care and who can provide an in-depth understanding of concerns and broad range of solutions related to the provision of perinatal services in under served areas of the Commonwealth.

The survey objectives were carefully defined by the researchers by reviewing the appropriate research literature, the actions of the Virginia General Assembly and the minutes of meetings and the workplan of the Perinatal and Early Childhood Subcommittee of the Maternal and Child Health Council. The researchers also held discussions with staff and service providers. The perinatal workgroup approved the final objectives.

Based on this review the following five broad categories of survey objectives were identified as the focus of the survey:

(1) Strategies for recruiting perinatal providers to practice in under served areas
(2) Strategies for development of collaborative training models in medical and nursing schools
(3) Removing barriers in hospitals to perinatal practice in under served areas
(4) Incentive programs for collaboration in providing perinatal services
(5) Ideas for improving access for women needing perinatal care

Key informants specifically selected for this study were chosen because they represented a wide range of perspectives on the issue of providing perinatal service in under served areas of the Commonwealth. In addition, each of the key informants possessed a high level of knowledge that represented diverse institutional affiliations (See Appendix D).

The perinatal workgroup members were included as survey respondents. Other professional organizations represented were: the Virginia Perinatal Association; Old Dominion Medical Society; Virginia Primary Care Association, and the Association for Women's Health, Obstetric and Neonatal Nurses. In addition, schools of nursing that represented advanced practice programs, schools of medicine (Obstetrical and Family Practice residency programs), managed care organizations, hospitals, and insurers were included. Finally, other groups with interest in perinatal health care were the March of Dimes, Board of Health, Department of Health Professions, Virginia Health Care Foundation, Virginia Statewide Area Health Education Centers, and the Health Systems Agencies. Selection of these key informants included not only the above groups but also took into consideration the statewide geographic areas that they represented.

The survey items were based on the objectives for the study. Care was taken to insure that the questions were clear, unbiased and easy to understand. The survey was structured to obtain both quantitative and qualitative responses. This format, frequently used in survey research, presents respondents with a statement and asks them whether they "strongly agree", "agree", "neither agree nor disagree", "disagree", or "strongly agree". These response categories were then assigned a value ranging from 5 (strongly agree) to 1 (strongly disagree). The scale enables the researcher to judge the relative strength of agreement intended by the respondents to the survey. The survey contained 31 questions.

The open-ended questions related directly to the five survey objectives discussed earlier. In each question, respondents were asked to discuss specific concerns, suggestions and incentives for improvement and strategies for funding (See Appendix K) for a copy of the complete survey).

Pretesting the Survey

The draft survey was pretested on informed individuals to locate ambiguities in questions, determine the length of the survey and to ascertain if the survey adequately covered the issues under

consideration. Based on the pretest results, improvements were made in the survey. The final survey resulted from the pretests and review by the perinatal workgroup.

Telephone Interview Procedures

During the months of June and July, the telephone interviews were conducted using the survey as the interview guide. Interviewers were instructed to ask the survey questions in sequence and in exactly the same manner. The interviewers first asked a series of structured questions and then probed deeper using the open ended questions contained in the survey. This type of interview combines the benefits of both the structured and the unstructured interview.

The interviewers recorded the responses during the interview by circling the appropriate response category and by taking notes on the interview guide. Immediately after the interview, the qualitative responses were transcribed. Respondents were then assigned an identification code to protect their privacy.

Data Entry, Analysis and Presentation

The quantitative survey data were entered using the Statistical Package for the Social Sciences. Various forms of statistical analysis, including frequencies, percentages, means and tests of significance, were conducted for the 31 items. The data are presented in the form of tables, charts and graphs.

The qualitative data was transcribed and analyzed using pattern matching techniques to determine general response categories. The qualitative data are summarized and presented by category based on the objectives of the survey. The findings of these interviews were presented to the perinatal workgroup and a final statewide plan was developed with policy options.

FINDINGS

The perinatal workgroup findings are based upon the data analysis for the designation of perinatal under served areas, responses to the key informant interviews, consideration of the current literature on perinatal care and consideration of the past related legislative studies.

DESIGNATION OF PERINATAL UNDER SERVED

As a result of the analysis based on under served due to manpower and resource inadequacies, 14 jurisdictions have been identified as under served. The analysis of under served due to the underutilization of perinatal services indicated that 30 jurisdictions meet this criteria of under served (See Table 1 and details of each region are provided in Appendix I).

Table 1. Perinatal Under Served Areas

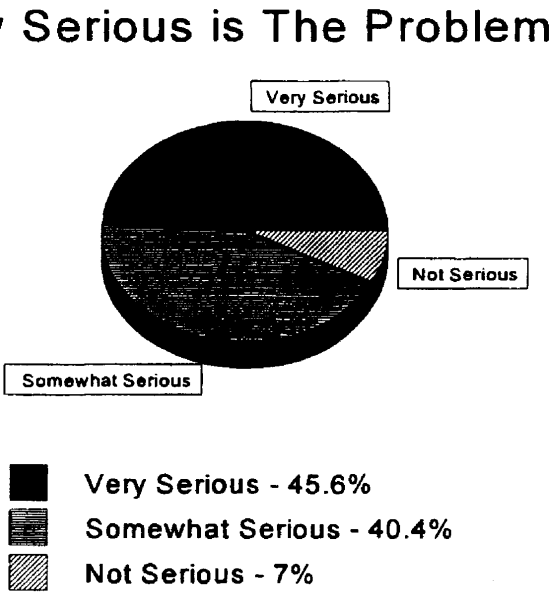
Perinatal Under Served Areas		
Region	**Manpower and Resource Deficiencies**	**Underutilization (late entry into care and poor outcomes)**
Region I	Buchanan Dickenson Scott	Dickenson Lee
Region II		Martinsville Giles Henry Patrick
Region III	Pittsylvania Charlotte	Charlotte Halifax/South Boston
Region IV	Bath* Highland*	Staunton Winchester
Region V		Alexandria Arlington
Region VI	Brunswick King & Queen Nottoway Lunenburg Essex Surry	Brunswick King & Queen Nottoway Emporia Richmond County Lancaster Mecklenburg Greensville Petersburg Williamsburg Northumberland Lunenburg Richmond City
Region VII	Matthews*	Accomack Northampton Norfolk Portsmouth Hampton

*These are counties with small number of births; therefore, provision of services locally is impractical and requires systems to make sure that women obtain service as near as possible (Refer to Table 1).

KEY INFORMANT INTERVIEWS

Most survey respondents view the problem of perinatal care in under served areas as, at least, "serious," with over 45 percent considering the problem to be "very serious" (See Figure 1).

Figure 1. Perceived Seriousness of the Problem of Access to Perinatal Care in Under Served Areas



Analysis of survey data provided an indication as to the strength of agreement with various approaches to addressing perinatal care in under served areas of the Commonwealth. The tables below provide mean responses from survey participants, indicating their level of agreement or disagreement. As an index of central tendency, the mean is by far the most important. A mean score of 5 indicates strong agreement, a mean score of 4 indicates agreement, a mean score of 3 indicates neither agree nor disagree, a mean score of 2 indicates disagreement, and a mean score of 1 shows strong disagreement. If the response was "I don't know," a zero was recorded as an answer. Because there were very few "1s" (strongly disagree) and "2s" (disagree) in our survey results, the reader should be careful in interpreting the results of questions with mean responses around "3." Most respondents tended to agree or strongly agree. Scores of "3" do not necessarily indicate disagreement. They simply indicate that the strength of agreement is not as strong as higher scores, but they also indicate that there is still agreement. In addition, below each table are a sampling of quotes from all of the qualitative responses that capture the key themes reflected in the qualitative portion of the survey.

There is a high level of agreement among the survey respondents with each of the strategic options for recruiting obstetrical providers to practice in under served areas. Slightly over half of the respondents agreed or strongly agreed that encouraging family practice physicians and obstetricians who have left the practice of obstetrics to resume their practice was a good idea. Two thirds or more of the respondents agreed or strongly agreed with the other strategies listed below (See Table 2).

Table 2. Strategies for Recruiting Obstetrical Providers to Practice in Under Served Areas

Do You Think It's a Good Strategy To:	Mean Response
Encourage family practice physicians and obstetricians who have left the practice of obstetrics to resume their practice of obstetrics.	3.24
Grant preferred medical and nursing school admissions to applicants from under served areas.	3.84
Provide financial support for Virginia residents to attend both in state and out of state certified nurse midwife training.	3.94
Establish other incentive programs encouraging enrollment in certified nurse midwife programs.	3.85
Fund scholarship programs for perinatal providers for practice in perinatal under served areas.	3.96
Increase funding for the Virginia Physician Loan Repayment Program.	3.61
Develop educational opportunities for perinatal providers in rural or under served areas via telecommunications.	3.80

Options suggested in the survey responses included providing liability insurance protection assistance for those providers working in under served locations, an increased use of telemedicine technology, and an assurance of some level of backup for perinatal care. It was suggested that sufficiency of backup may be fostered by collaboration between family physicians, obstetricians, certified nurse midwives and nurse practitioners.

In the area of providing funding, respondents emphasized "increasing funding for graduate education for midwives and nurse practitioners," "developing loan repayment programs," "providing financial incentives to hospitals,"and "the funding of programs that commit to providing care in rural areas." The funding suggestions range from providing "income guarantees," "funding medical schools" and "increasing reimbursement for services."

It was also suggested that the J-1 Visa Program obligation could be extended beyond the current three years. This strategy would increase the likelihood that the participants would remain in the area for a longer period of time.

The use of telemedicine with perinatal professionals to provide immediate access to higher levels of care (e.g., via computers, teleconferencing, etc.) was important. The respondents felt that telecommunications were costly but important and needed to be stressed. The expansion of using teleconferencing capabilities for undergraduate distant learning nursing programs was proposed as bringing advanced nursing education to students in rural and under served areas. Increased funding for more continuing medical education opportunities including the increased use of telecommunications was also stressed.

A major concern is that lifestyle is what keeps physicians out of rural environments. Repeatedly, survey respondents identified that schools, cultural activities, social events, shopping, and spousal employment are important factors in decisions regarding practice site. Physician scheduling to allow more time with families must be addressed if we want physicians to provide obstetrical services. Providers cannot leave the area if coverage is not available. Salaries also must be commensurate with the expectations placed upon the providers who agree to go to under served areas.

There was a high level of agreement among survey respondents with six of seven options for developing collaborative training models in medical and nursing schools. Only 12 percent of respondents agreed or strongly agreed that increasing the size of obstetrical programs in the Commonwealth was a good strategy. Between 72 percent to 90 percent of respondents agreed or strongly agreed with the other strategies offered in the survey (See Table 3). Developing programs to ensure that family practice residents are adequately trained to meet the demands of rural obstetrical practice and educating physicians on the benefits of utilizing advanced practice nurses in perinatal practices are particularly well supported.

Table 3. Developing Collaborative Training Models in Medical and Nursing Schools

Do You Think It's a Good Strategy To:	Mean Response
Increase size of obstetrical training programs in the Commonwealth.	2.35
Increase opportunities for obstetrical and family practice residents to deliver babies.	3.68
Educate physicians on the benefits of utilizing advanced practice nurses in perinatal practices.	4.21
Encourage Managed Care Organizations to work with public institutions to increase opportunities for obstetrical training.	3.87
Develop mechanisms by which private hospitals can work with public institutions to increase opportunities for obstetrical training.	4.14
Develop collaborative training models incorporating obstetrics, family practice, and nursing education.	4.12
Develop programs to ensure that family practice residents are adequately trained to meet the demands of rural obstetrical practice.	4.29

There is clear consensus that the strategies to develop training models must be inclusive of all providers in perinatal service delivery and must be built along a team approach. Comments included the need for educators of all involved programs to come together in some forum to discuss how all disciplines could provide collaborative training experiences. Consistently, respondents emphasized the need for disciplines to be exposed to other professionals within both classroom and clinical activities. It was generally accepted that the best way to promote collaborative practice in communities is to establish collaborative training experiences.

A general theme among respondents was the need for candid discussions about the nature of collaborative practice in rural areas. These discussions should include, but are not limited to business arrangements, professional, and personal interactions, including legal issues. Emphasis on community-based training to provide not only clinical experiences, but to gain familiarity with the rural community was suggested.

The survey respondents had a high level of agreement with strategies for removing barriers for perinatal practice in under served areas (See Table 4). From 56 percent to 93 percent of respondents agreed or strongly agreed with the strategies offered in the survey. Removing the difficulty in obtaining hospital privileges sometimes faced by certified nurse midwives/nurse practitioners is particularly well supported. The lack of acceptance of nurse practitioners and midwives by physicians and hospitals has been identified as a practice barrier.

Table 4. Removing Barriers to Perinatal Practice in Under Served Areas

How Do You Feel About Each of These Strategies?	Mean Response
Allow for broader participation by nurse practitioners, including certified nurse midwives in the delivery of inpatient obstetrical services.	4.26
Allow for broader participation by family physicians in the delivery of prenatal services.	4.05
Allow for broader participation by family physicians in the delivery of inpatient obstetrical services.	3.92
Minimize potential malpractice liability in physician/nurse practitioner collaboration.	4.33
Remove the difficulty obtaining hospital privileges sometimes faced by certified nurse midwives and nurse practitioners.	4.56
Increase limited prescriptive authority for nurse practitioners.	3.82
Provide partial payment for medical liability insurance premiums for all perinatal providers in under served communities.	4.07
Increase assumption by the Commonwealth for the financial risk of medical liability judgement for all perinatal providers.	3.52
Enhance the financial incentive package to attract providers to under served areas.	3.80

A significant barrier to perinatal practice in under served areas is economics. Several respondents expressed concern regarding the inadequate volume of patients to support the revenue requirements of rural practitioners. Specific suggestions were to subsidize housing and fund children's college education for providers recruited to under served areas. Cost of malpractice premiums is another economic barrier to practice in under served areas.

Certificate of Need (CON) and licensure laws have been identified as a major issue for rural hospitals to maintain OB services. Respondents in small hospitals expressed concern about the ability of opening and maintaining obstetrical units.

The survey respondents had a high level of agreement with three of the four incentive programs for collaboration in providing perinatal services in under served areas (See Table 5). Fifty percent of respondents agreed or strongly agreed that increasing providers participation in the Birth Injury Fund was a good strategy. From two-thirds to three-quarters of respondents agreed or strongly agreed with the other strategies listed below. Encouraging private insurance and/or managed care organizations to offer affordable plans that include maternity coverage to small business employers and providing third party reimbursement to nurse practitioners and certified nurse midwives in under served areas are particularly well supported.

Table 5. Incentive Programs for Collaboration in Providing Perinatal Services

Strategies for Incentive Programs for Collaboration in Providing Perinatal Services	Mean Response
Provide third party reimbursements to nurse practitioners and certified nurse midwives in under served areas.	3.78
Increase providers participation in the Birth Injury Fund(also known as Virginia Birth Related Neurological Act) by obstetricians, certified nurse midwives, and family physicians.	3.26
Encourage private insurance and/or managed care organizations to offer affordable plans (that include maternity coverage) to small business employers.	4.14
Create a balanced fee structure between prenatal, labor and delivery charges.	3.64

Other ideas offered by the survey respondents included using multidisciplinary teams, reimbursement for specific elements of care, and starting training programs early in career training. Particularly when care is provided by a team of providers, the fee and reimbursement structures should be equitably compensated for the service provided. These fee and reimbursement structures should be applied to pre-pregnancy and family planning services as well as perinatal services. Recruiting obstetricians more aggressively and assisting in the development of practice design, practice management and practice subsidization were also suggested. Education for established physicians on the benefits of collaborative practice was proposed. Several respondents felt that medical schools should play a key role in changing attitudes and in fostering collaborative practices.

The survey respondents had a high level of agreement with three ideas for improving access for women needing perinatal care (See Table 6). From 77 percent to 83 percent of respondents agreed or strongly agreed with the strategies listed below. The importance of providing transportation was mentioned numerous times in the survey.

Table 6. Ideas for Improving Access for Women Needing Perinatal Care

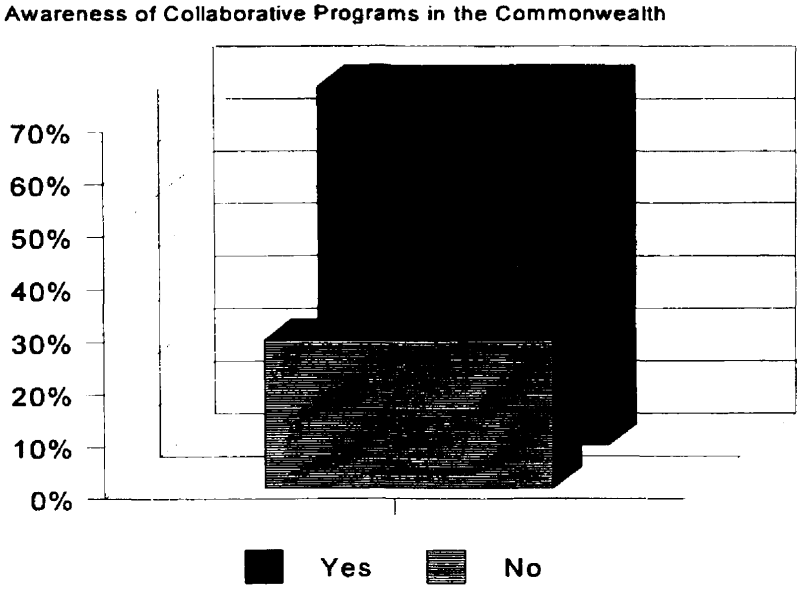
Ideas for Improving Access for Women Needing Perinatal Care	Mean Response
Increase availability of transportation for women to perinatal care providers.	4.05
Expand Medicaid eligibility to at least 185 percent of the poverty level for perinatal planning services (currently 133 percent).	4.14
Provide funding and manpower for joint public and private programs that provide perinatal care regardless of patient's payment source.	4.00

The means for using the Medicaid taxis could be improved. The Medicaid eligibility application process should be as streamlined and uniform as possible. Clinical services need to offer one stop shopping so that prenatal visits can provide comprehensive services and referrals beyond the traditional medical services (e.g., WIC, Resource Mothers). Baby-sitting services in a variety of settings, including clinics and offices, should be made available to all women, so that the issue of child care is not a barrier to care. Incentive programs should be developed that will encourage women to seek regular care. These could include gifts, prizes, food, money, etc.

Respondents indicated that the top three barriers faced by women in under served areas seeking access to perinatal care are: (1) transportation, (2) education about the importance of perinatal care, and (3) the ability to pay for care emerged as the key factor determining access to care. Other barriers include the lack of providers and hospitals, attitudes of service providers, cultural differences, lack of child care and inconvenience. All of these strategies need to be individualized and community specific.

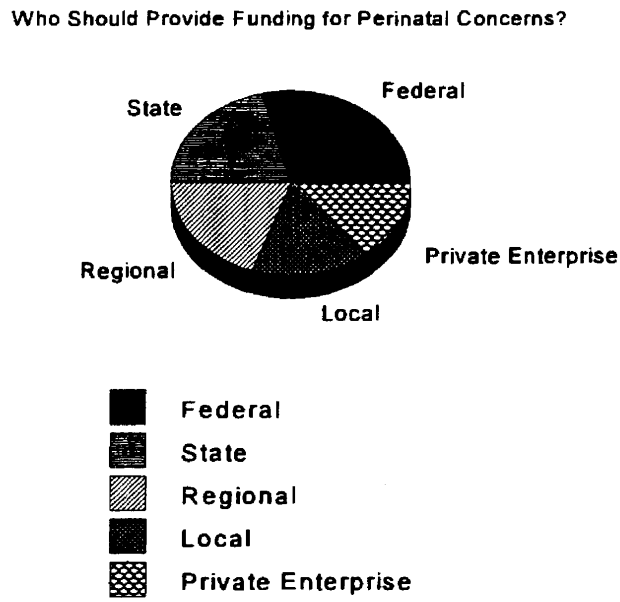
Seventy percent of the key informant survey respondents are aware of collaborative programs in the Commonwealth (See Figure 2). This suggests that an educational program to enhance the level of awareness would be useful.

Figure 2. Collaborative Perinatal Program Awareness



When asked what type of funding should be provided to encourage collaborative practices in under served areas, the survey respondents offered the full range of government support and the private sector support. It is significant to note that respondents do not feel that any one level should have primary responsibility (See Figure 3).

Figure 3. Funding Source Level Recommendations



CONCLUSIONS

The designation of under served areas in Virginia is a cornerstone of a statewide plan which can address some of the issues of access to perinatal care identified by several previous legislative studies. Public and private entities will be able to utilize the designation to target resources to the most needy areas of the state. Accurate and timely data to assist localities in determining health manpower profession manpower needs is critical. Solutions are more likely to succeed when they are found at a local level; therefore, city and county specific data has thus been used to determine the perinatal under served areas.

The results of this study emphasize the fact that access to perinatal care in rural and under served areas is a complex and multifaceted issue which will dictate multiple strategies. The major areas of concern to be addressed relate to the (1) recruitment of perinatal providers to the designated under served areas, (2) promotion of collaborative practice arrangements in rural and under served areas and (3) strategies to encourage women to seek perinatal services.

Quality of life issues are a very important consideration for providers choosing to practice in rural areas. Professional isolation presents concerns for providers, particularly when medical consultation is needed quickly. This isolation can be significantly reduced through the use of current information technology that would include such avenues as the use of training and educational opportunities within the community, computer training, telemedicine and telecommunication. Relationships between the Area Health Education Centers (AHECs), RPCCs and training institutions could be strengthened to implement the use of the newer technology in rural areas. Also, adequate medical coverage to enable the practitioner to have opportunities for vacations and time off is an important factor in the recruitment of providers to rural areas.

More practice models that use multidisciplinary teams in which prenatal care may be delivered separately from delivery services by various professionals, could increase access to perinatal care for women. The greater utilization of family physicians, certified nurse midwives and nurse practitioners in rural and under served areas could also increase access to care. Expanded practice for family practitioners could foster more opportunities for teamwork with certified nurse midwives and nurse practitioners and strengthen the obstetrical and family practice collaboration.

The degree of independence exercised by certified nurse midwives in their practice needs further clarification and possibly a change in statue. The feasibility of developing a separate licensing board for certified nurse midwives and nurse practitioners should also be explored. As a result of HJR 110, Establishment of Professional Guidelines for Obstetrical Care, representatives from the Virginia Chapter of ACOG and Virginia College of Family Physicians have met to discuss issues of collaboration. Certified nurse midwives and nurse practitioners will be included in these discussions within the next six months.

Efforts must be made to ensure that services are available at convenient times for these pregnant women. This includes providing evening and weekend hours, as well as mechanisms that would take services to the patients, such as mobile units, worksite clinics, birthing centers, schools and public health departments. Obstetrical services at community health centers need to be expanded. All perinatal providers should be encouraged to accept Medicaid. The Medicaid eligibility application process should be as streamlined and as uniform as possible. Clinical services need to offer one stop shopping so that prenatal visits can be combined with comprehensive services and referrals beyond the traditional medical services (e.g., WIC, Resource Mothers). Baby-sitting services in a variety of settings, including clinics and offices, should be made available to all women, so that the issue of child care is not a barrier to access. Incentive programs should be developed that will encourage women to seek regular care. These could include gifts, prizes, food, money, etc. Another significant barrier is the lack of transportation. Mechanisms need to be developed that ensure that these women have access to all currently available means of public transportation and options for increasing modes of transportation must be explored. The means for using Medicaid taxis should be improved. All of these strategies need to be developed at community levels.

Communities must assess their needs and develop specific strategies to recruit, retain and support perinatal providers. Exposure to the benefits of rural life should be enhanced through internships, residency training programs and preceptorships offered in these areas. Programs to attract perinatal providers to these areas must recognize that family issues, such as spousal employment, are an essential concern in attracting perinatal providers. Incentive programs should use a total systems approach and focus on finding ways to minimize or eliminate barriers to developing successful collaborative practices. Local systems of perinatal health care should develop economic incentive programs to attract providers.

PERINATAL PLAN OPTIONS

Options have been developed through discussions by the perinatal workgroup using findings from the survey of key informants. The options focus on the (1) recruitment of perinatal providers to the designated under served areas, (2) promotion of collaborative practice arrangements in rural and under served areas and (3) strategies to encourage women to seek perinatal services. These policy options are all predicated on the designation of under served areas as determined by this report.

- Direct the Virginia Department of Health to recognize the perinatal under served areas as defined by this study, and assume responsibility for annual updates, in conjunction with the Regional Perinatal Coordinating Councils.

(1) Recruiting Perinatal Providers to Practice to Under Served Areas

- Recommend legislation that would allow the Board of Directors of the Birth-Related Neurological Injury Compensation Program (BRNICP) to reduce the participation fee for all providers practicing in the perinatal under served areas due to manpower deficiencies. This action requires no funding.

  At present, the BRNICP Board of Directors do not have the authority to reduce the participation fee on the basis of location of practice. If the participation fee were reduced, it could help to alleviate some of the financial burden in providing care. House Joint Resolution 641 is a study currently underway that is addressing ways to enhance the scope and magnitude of this program, which was created to make obstetrical malpractice insurance less costly. That study will be completed by the 1998 General Assembly.

- The Governor and/or the 1998 General Assembly should provide funding to establish and maintain the manpower data base on licensed health care professionals. Previous investigation revealed an estimated cost of $175,000.00 to establish and pilot test all data from licenced health care professionals. Options for funding this program could include any combination of the following:

  1. Fund the establishment and ongoing aspects of the program by appropriating monies from the general fund.
  2. The 1998 General Assembly could provide the initial program development, pilot and the annual cost be provided through increasing licensure fees for all health professionals.
  3. Increase licensure for all health professionals to provide the initial program development, pilot and annual cost.

4. Increase licensure fees for all health care professionals.
5. 1998 general funds provide the initial program development and pilot, and 60 percent of the annual cost of maintaining the database. The difference would be supplemented by revenues generated from the sale of the data to private and public agencies.

Collection of a manpower data base on licensed health care professionals has been mandated by Code 54.1-2506.1 but has not occurred. Implementation of this law requiring the collection of manpower data on provider specialties and details of their practice would result in a more accurate reflection of the availability and location of providers. This data base is essential in order to more accurately identify under served areas as well as provide a tool for better planning and targeting of limited resources. The Center for Primary Care Resource Development of the Virginia Department of Health will collaborate with the Department of Health Professions in order to receive manpower data that is mandated to be collected but not presently implemented in the Commonwealth. This option will take a minimum of three years to implement and until this has occurred, the Regional Perinatal Coordinating Councils will continue to monitor their regions and assess the need for perinatal providers. They will report this information on an annual basis to the Center for Primary Care Resource Development.

- Recommend that legislation in the 1998 legislative session be considered to direct VDH to include the criteria for perinatal under served due to manpower deficiencies in the state scholarship and tuition reimbursement programs. This action requires no additional funding.

- Recommend that the Virginia Department of Health include in the state physician loan repayment programs the manpower deficiencies criteria for perinatal under served areas. This should be implemented as soon as possible. Legislation was passed in 1994 to establish this program, but no mechanism for funding was provided. General funds should be appropriated.

(2) Promotion of Collaborative Practice Models in Under Served Areas

- Recommend the State Council of Higher Education convene a task force within calendar year 1998, to develop a collaborative training model for professional education programs. This task force would consist of representatives of medical and nursing schools, Area Health Education Centers, Community Health Centers and private/public hospitals. The purpose of the task force is to develop a core curriculum for collaborative classroom, as well as clinical, practice to be used in every program. The task force could initially contact the W. K. Kellogg Foundation in order to learn about collaborative programs that have been provided through grants.

Students would learn how each professions' unique roles and skills compliment each other and maximize the efficiency in providing comprehensive care in settings with

limited resources. This approach might overcome some of the attitudinal barriers that have hindered successful collaborative practices in the past. This would also expose them to successful collaborative models at an early stage in their education.

- Recommend that the Virginia Health Care Foundation give priority in awarding grant funds to innovative projects that utilize collaborative practice models in the delivery of perinatal health care in rural and under served areas. Recommend that this process begin in FY98. This action requires no additional funding.

  The Virginia Health Care Foundation has been funded by the General Assembly and private institutions to improve access to primary health care across the Commonwealth. Therefore, they are the logical organization to fund this project. Since local solutions are most effective, the Virginia Health Care Foundation can be an important contributing factor in encouraging this initiative. Communities located in under served areas can use these funds to improve access to perinatal care.

- Recommend that the State Corporation Commission convene a task force including representatives of insurance companies, managed care organizations and the Department of Medical Assistance to re-examine the fee and reimbursement differentials for prenatal health care and delivery services, so that providers are more equitably compensated for their services. These organizations will work with representatives of the medical societies, the Virginia Chapter of the American College of Nurse Midwives and the Virginia Council of Nurse Practitioners in order to achieve this goal. This meeting should be convened no later than December 1998. This action requires no additional funding.

  Currently the Medicaid reimbursement rate for 7 or more prenatal visits is $394.02. Routine delivery and post-partum care reimbursement is $791.55, whereas, the reimbursement for surgical delivery and post-partum care is $1,003.55. Thus, the provider who cares for a patient throughout pregnancy, and even during labor, would only be reimbursed a maximum amount of $394.02 compared to the attendant at delivery, who would be reimbursed at one of the higher rates.

- Recommend that further progress be made toward full implementation of the 1988 Joint Legislative and Audit Review Commission (JLARC) recommendations with regard to the basis for determining the local match requirement in the cooperative budget based on ability to pay.

  Each under served area has unique features and obstacles that have led to such a designation, and a global strategy to rectify the problem throughout the Commonwealth may only partially ameliorate the situation in each area. In order to provide additional funding to enable under served areas to develop and implement specific strategies to combat their unique conditions, further progress for these areas toward the complete implementation of the JLARC recommendations with respect

to cooperative funding for the Virginia Department of Health in these areas should be made. Of the 37 areas that have been designated as under served within this report, 26 of them (70.3 percent) would have a drop in the requirement for local matching funds if such further implementation of the JLARC funding percentages occurred. The following jurisdictions are affected: Lee, Scott, Buchanan, Dickenson, Giles, Henry, Patrick, Martinsville, Pittsylvania, Halifax, Charlotte, Brunswick, Mecklenburg, Lunenberg, Nottoway, Richmond, Greensville, Sussex, Emporia, Petersburg, Williamsburg, Norfolk, Portsmouth, Hampton, Accomack, and Northampton.

(3) Strategies to Encourage Women to Seek Perinatal Services

- Recommend that VDH direct the Regional Perinatal Coordinating Councils (RPCCs) to collaborate with other perinatal programs to implement public education campaigns emphasizing the importance of preconception and prenatal care. The planning phase will begin in FY99 and should not require additional funding.

  This education should focus on a wellness approach. Education strategies must be marketed so that all materials are appropriate and appealing for the targeted audiences. RPCCs and other organizations providing perinatal education must ensure that patients are active participants in defining barriers and solutions within their communities.

- The Resource Mothers Programs should be given additional funding from the 1998 General Assembly through general funds to establish and/or expand perinatal services to these areas.

  Resource Mothers and other home visiting programs, such as CHIP and Healthy Families, have been proven to be cost effective and successful. In general, every dollar spent on prenatal care saves over three dollars in spending on medical care for low birth weight babies in their first year of life. Expansion by 50 percent of the Resource Mothers Programs currently listed in the perinatal under served areas due to underutilization, as well as developing new sites, would cost approximately $642,541.00.

- Recommend that the Department of Medical Assistance Services (DMAS) study and make recommendations on Medicaid transportation with special emphasis on rural and under served areas. The study should be accomplished in one year and recommendations be presented to the General Assembly no later than FY 2000. This is an initial step to address the more complex problem of lack of transportation in the Commonwealth; however, further studies for overall solutions will be needed. Recommend general funds support this study.

- Recommend that the Department of Medical Assistance Services (DMAS) collaborate with other agencies to expand outreach efforts to increase participation by enrolling Medicaid eligible pregnant women.

  The Department of Medical Assistance Services and other health care organizations are aware that there are many eligible pregnant clients who are not enrolled in Medicaid.

- The Department of Housing and Community Development (DCHD) should designate the improvement of perinatal care and access to health care as top priorities for the Appalachian Regional Commission (ARC) funding for 1999. The ARC, at the federal level, includes prenatal care and access to health care among its funding priorities. Virginia can also designate these as top priorities. The DCHD should also include the development of primary health care to include perinatal health care as an economic development project which can be given priority for funding from other sources.

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APPENDIX A

HOUSE JOINT RESOLUTION NO. 617

Requesting the Maternal and Child Health Council, in conjunction with other entities, to review current data on improving access to perinatal care in rural and underserved areas.

Agreed to by the House of Delegates, February 20, 1997
Agreed to by the Senate, February 19, 1997

WHEREAS, quality perinatal care is an essential element of effective maternal and child health care and is paramount to reducing low birth weight and infant mortality rates in Virginia; and

WHEREAS, assuring quality perinatal care delivery in underserved areas of Virginia depends upon a variety of issues including: adequate provider capacity; cooperation among providers; competition between medical malpractice insurance carriers; access to cooperative learning programs developed by schools of medicine; adequate recruitment and retention programs; access to transportation; quality of life educational opportunities; and other elements; and

WHEREAS, various studies have indicated a shortage of perinatal care in certain areas of Virginia, but the need also exists for accurate, usable, coordinated data to determine access to perinatal care; and

WHEREAS, nine reports over the last seven years have been presented by agencies and organizations such as the Virginia Health Planning Board, the Medical Society of Virginia, the Task Force of Nurse Practitioners, the Joint Commission on Health Care and others depicting incentives and disincentives to improving perinatal care with suggestions for improving access; and

WHEREAS, the Virginia Academy of Family Physicians, the Virginia Chapter of American College of Obstetricians and Gynecologists, and the Virginia Chapter of the American College of Nurse Midwives have met with the Department of Health, the Medical Society of Virginia, state medical malpractice carriers and others to discuss solutions related to collaborative practice; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Maternal and Child Health Council, in conjunction with the Regional Perinatal Coordinating Councils, the Virginia Chapter of the American College of Nurse Midwives, the Virginia Council of Nurse Practitioners, the Virginia Academy of Family Physicians, the Virginia Chapter of the American College of Obstetricians and Gynecologists, the Virginia Chapter of the American College of Pediatrics, and the Commissioner of Health be requested to review current reports, surveys, recommendations and data on improving access to perinatal care in rural and underserved areas, including those emanating from the study pursuant to House Joint Resolution No. 110 (1996) and prepare a recommendation for a coordinated plan for improving access in underserved areas. The plan shall include, but not be limited to seeking and developing financial mechanisms to assist in improving access; developing a coordinated mechanism for gathering and interpreting data on perinatal manpower data; clarifying perinatal health shortage areas; determining the need for medical school training models for coordinating nurse midwifery, family practice, and obstetrician partnership arrangements; researching the need and feasibility of establishing collaborative perinatal programs in each perinatal council; identifying and studying ways hospitals in underserved areas may remove barriers to all perinatal providers; and introducing incentives for practitioners willing to serve in such areas of need.

The Council shall present its initial findings and plans to the Joint Commission on Health Care by October 1, 1997, and shall complete its work in time to make recommendations to the Governor and the 1998 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

APPENDIX B

PERINATAL/EARLY CHILDHOOD SUBCOMMITTEE MEMBERS

MATERNAL AND CHILD HEALTH COUNCIL

Carolyn Beverly, M.D., M.P.H., Chair Division of Women's and Infants' Health Virginia Department of Health Richmond, Virginia	The Honorable Louis L. Lucas* Virginia Senate Portsmouth, Virginia
Bruce Campbell, M.D.* Free Union, Virginia	David B. Berry, M.D* Fairfax, Virginia
Cawood B. Fitzhugh, R.N., M.S., F.N.P.* Family Medicine of Albermarle Charlottesville, Virginia	Vicky G. Gray* Tidewater Health Care Virginia Beach, Virginia
Michele Baker for Joe Teefey* Department of Medical Assistance Services Richmond, Virginia	Charles Zimmerman, M.D. Virginia Chapter of the American College of Obstetricians and Gynecologists Hampton, Virginia
Jessica Jordan, R.N., C.N.M. Virginia Chapter of the American College of Nurse Midwives Richmond, Virginia	Mary Barker, R.N.C., F.N.P., M.S.N. Virginia Council of Nurse Practitioners Virginia Beach, Virginia
Robert Boyle, M.D. Virginia Chapter of the American Academy of Pediatrics Charlottesville, Virginia	Michael J. Petrizzi, M.D. Virginia Academy of Family Physicians Mechanicsville, Virginia
William Boone, B.A. Region I Perinatal Coordinating Council Abingdon, Virginia	Harriett Mullins, R.N.C, M.S., Coordinator Region II Perinatal Coordinating Council Roanoke, Virginia
Debbie Erickson, R.N., A.N.P. Region III Perinatal Coordinating Council Lynchburg, Virginia	Vicky Krohn, R.N. Region IV Perinatal Coordinating Council Culpepper, Virginia

APPENDIX B

PERINATAL/EARLY CHILDHOOD SUBCOMMITTEE MEMBERS

MATERNAL AND CHILD HEALTH COUNCIL

George Barker Region V Perinatal Coordinating Council Falls Church, Virginia	Theresa Rhodes, M.P.P. Region VI Perinatal Coordinating Council Richmond, Virginia
Edward Karotkin, M.D. Region VII Perinatal Coordinating Council Norfolk, Virginia	Thomas R. Coleman, M.D., M.P.H. Southside Health District Virginia Department of Health Halifax, Virginia
G. Douglas Larsen, M.D. Central Shanandoah Health District Virginia Department of Health Staunton, Virginia	Joan Corder-Mabe, R.N., M.S., W.H.N.P. Division of Women's and Infants' Health Virginia Department of Health Richmond, Virginia
Wolfgang Pindur, Ph.D. Research Consultant Old Dominion University Norfolk, Virginia	Mary Donlan, M.A. Research Consultant Norfolk, Virginia
John Keifer, Ph.D. Research Consultant Norfolk, Virginia	

*Maternal and Child Health Council Members

APPENDIX C

SYNOPSIS OF RELATED STUDIES REGARDING OBSTETRIC CARE

1989 **Medical Society of Virginia. Problems and Solutions to Access to Obstetrical Care Virginia Physicians Respond.** The Medical society conducted a comprehensive survey of family physicians and obstetricians/gynecologists throughout the state regarding their views of potential solutions in improving accessibility to obstetrical services. The conclusion of that study was there was a moderate to serious access to care problem in Virginia, particularly for the Medicaid and indigent populations, and that there are relatively few obstetricians currently located in sparsely populated areas of the state. Resolutions included:

[1] Stemming the flow of physicians leaving the practice of obstetrics by utilizing alternative options, including no-fault compensation for certain events, such as the Virginia Birth-Related Neurological Injury Compensation Act, the AMA Specialty Society Medical Liability Project, private contracts, an economic damage guarantee, and social insurance.

[2] Enlarging the pool of physicians willing to provide obstetrical services:

[a] encouraging family practice physicians and obstetricians who have left the practice of obstetrics to resume practicing that specialty,

[b] placing greater emphasis on obstetrical training programs for family practice physicians,

[c] considering whether the size of obstetrical training programs in Virginia should be increased,

[d] supporting recruitment programs designed to encourage family physicians from Virginia, and from other states, to settle in Virginia.

[3] Attract physicians willing to provide obstetrical services to under served areas by:

[a] manipulation by family practice and obstetrics training programs,

[b] concentrated recruitment efforts, and

[c] investigation of medical school admissions policies which consider the area of origin of the applicant.

[4] Remove barriers to participation in programs serving the financially needy obstetrical patient with the following changes:

[a] Increase reimbursement,

[b] Reduce paperwork and,

[c] Provide financial assistance with malpractice premiums.

[5] Encouraging a systems approach to the delivery of obstetrical care in under served areas to coordinate the delivery of care among existing providers. Depending upon the area, the providers involved may include the local Department of Health, local family physicians, nurse practitioners supervised by physicians, community-based hospitals and/or obstetricians.

1990 **Virginia Health Planning Board Senate Document No. 27. (SJR 168) Access to Obstetrical Care.** This study identifies general barriers that exist within many parts of Virginia which must be eliminated or significantly reduced if access to obstetrical care is to be improved.

Recommendations include:

[I] In order to ensure providers are available throughout the state for all women regardless of their ability to pay, the Virginia Health Planning Board recommends that the governor and the Virginia General Assembly:

[A] support funding requests to increase access to basic medical care services by supporting and expanding the Commonwealth's primary care system;

[B] empower the Boards of Medicine, Nursing, and Pharmacy to pursue the changes necessary to allow for broader participation by nurse practitioners, including nurse midwives, as appropriate, in the delivery of obstetrical care services; and

[C] provide funding and manpower to assist all localities in the replication and expansion of joint public and private programs, providing greater access to quality prenatal care regardless of the patient's payment source.

[II] In order to remove financial barriers to care, the Virginia Health Planning Board recommends that the Governor and the Virginia General Assembly:

[A] fund the increase in Medicaid reimbursement rates sufficiently to attract and retain physician participation, incorporate regional variations, and include an automatic inflator to allow reimbursement rates to keep pace with increases in cost of care; phase in eligibility increments as authorized by Federal regulations, to 133% of the poverty level as mandated in the federal Budget Reconciliation Act an ultimately to the fullest extent permitted under federal law;

[B] enact legislative changes as required to enable private insurance and/or health maintenance organizations to offer affordable plans to small business employers such as has been proposed by Blue Cross and Blue Shield of Virginia, and require those plans to include maternity coverage for their employees and dependents;

[C] focus existing resources and efforts to increase the availability of for transportation for women to obstetrical care providers;

[D] implement such approaches to the medical liability insurance issue as:

[1D] paying part of the medical liability insurance premiums for medical providers of obstetrical care for medically under served communities and medically indigent,

[2D] endorsing those recommendations of the legislative study group researching the Birth-Related Neurological Injury Compensation Act which would enhance its utilization and effectiveness,

[3D] the Commonwealth assuming some or all of the financial risk

of medical liability judgements against medical providers who provide obstetrical care for Medicaid and medically indigent patients in collaboration with the Department of Health,
[4D] encouraging statewide proliferation of medical mediation services such as those offered by the University of Virginia's Center for Public Service
[5D] incorporating, within Virginia's approach to managing claims, elements of the administrative review system advocated by the Institute of Medicine.

[III] In order to enhance the system's policies and practices that have a positive effect on women's attitudes toward obtaining prenatal care, the Virginia Health Planning Board recommends that the Governor and the Virginia General Assembly:

[A] support funding needed to provide the manpower necessary to implement initiatives such as case management for high risk women;
[B] support funding needed to expand programs providing counseling and support to adolescents;
[C] support other related health programs such as family planning and family life education;
[D] encourage volunteerism by such means as providing for the inclusion of activity under agencies' liability policies.

[IV] In order to increase public awareness of the importance of early perinatal care, the Virginia Health Planning Board recommends that the Governor and the Virginia General Assembly:

[A] support funding to extend existing public education and information programs, such as the Beautiful Babies program, especially to localities with high infant mortality and low birth weight rates;
[B] adopt a joint resolution to endorse formally those activities, both public and private, that promote the adoption of early prenatal care by and for all pregnant women, regardless of individual circumstances and to call for the removal of all barriers to care.

1990 **Task Force on the Practice of Nurse Practitioners, Virginia Department of Health Professions. A Survey of Physicians in Virginia and a Survey of Nurse Practitioners in Virginia.** This report presents results obtained form the nurse practitioners and physicians surveys.

The relevant findings from the physician survey:

[1] Most physicians had some experience working with nurse practitioners.
[2] Physicians indicated that the most important incentives for practicing in collaboration with nurse practitioners were to allow more time to spend with their patients and to provide more preventive services.
[3] Physicians reported that the most important disincentives for practicing in collaboration with nurse practitioners were potential malpractice liability and the

time required for supervision.
[4] Most physicians were opposed to extending eligibility for direct third party reimbursement to nurse practitioners.
[5] Most physicians support extending hospital privileges to nurse anesthetists but are opposed to extending the same privileges to primary care nurse practitioners and nurse midwives.
[6] Most physicians were supportive of extending prescriptive authority to nurse practitioners with certain limitations.
[7] Most physicians who support limited prescriptive authority for nurse practitioners would prefer a written protocol developed collaboratively by nurse practitioners and their supervising physicians as the mechanism for specifying limitations on prescriptive authority. The relevant findings from the nurse practitioners survey:

[1] One-half of all nurse practitioners were between the ages of 36 and 47.
[2] The great majority (82%) of nurse practitioners are female. However, one-in-three nurse anesthetist is male.
[3] The nursing preparation of nurse practitioners falls into three groups. The largest group (32%) report holding a master's degree, 24% earned a nursing diploma, and 22% earned a bachelor's degree.
[4] A majority (73%) practice (either exclusively or primarily) as employees. Thirteen percent are employed but not practicing as a nurse practitioner. Eight percent are self-employed. Four percent are unemployed, and two percent are retired.
[5] Nurse practitioners work primarily in urban and suburban areas.
[6] Few nurse practitioners (7%) practice in non-metropolitan under served areas.
[7] Most nurse anesthetist (86%) have hospital privileges. Less than half (46%) of nurse midwives have such privileges, and relatively few (20%) primary care nurse practitioners have hospital privileges.
[10] Nurse practitioners were asked to note limitations on prescriptive authority which would be acceptable if they were granted authority. Over one-half (56%) noted that limiting prescriptive authority to drugs used in the nurse practitioner's and supervising physician's specialty area would be an acceptable condition, either exclusively or in combination with other conditions.
[11] Nearly one-half (49%) reported that lack of prescriptive authority has resulted in brief to moderate delays in patient treatment. One nurse practitioner in ten noted that lack of prescriptive authority has resulted in long delays in treatment with significant negative impacts on patient health.
[12] Nurse practitioners believe overwhelmingly that the ability to directly bill third party payers is desirable and important to their practice and to the practice of other nurse practitioners.

[13] Very few nurse practitioners (5%) indicated ever having been named in a malpractice suit. Even fewer (1.6%) noted that a malpractice judgement, based on actions the nurse practitioners may have taken, had been entered against a physician with whom they have collaborated. Only six individuals (0.6%) indicated that a malpractice verdict had been entered against them personally.
[14] The majority of nurse practitioners report that physicians and hospital administrators are generally supportive of their involvement in providing patient care.

1990 **Virginia Health Planning Board. Alternative Providers in Medically Under Served Areas.** This study focuses on utilization of primary care nurse practitioners and certified nurse midwives to improve access to primary care services.
Recommendations:

[1] Increase the level of Medicaid reimbursement to primary care physicians to more appropriately reflect the true cost of providing primary care services to Medicaid recipients and thereby encourage the acceptance of the uninsured as patients.
[2] Remove barriers to third party reimbursement for midlevel provider services delivered to patients in medically under served areas.
[3] Develop accessible educational opportunities providing baccalaureate level degree programs in nurse practitioner education in rural areas through the use of existing telecommunications technology.
[4] Expand clinical experiences in medically under served areas for midlevel educational programs.
[5] Establish a scholarship program for the education of midlevel providers which includes provisions for practice in a medically under served area upon graduation.
[6] Increase funding for the Virginia Physician Loan Repayment Program.
[7] Provide incentives within the Virginia Physician Loan Repayment program to encourage the use of midlevel providers.
[8] Encourage professional groups, educational institutions, and local health planning boards to present programs for physicians that explain the roles, functions, and benefits of utilizing midlevel providers in primary care medical practices.
[9] Increase the utilization of midlevel providers in local health departments by increasing the number of providers and expanding protocols, and implement innovative models for delivering primary care services as presented in the report.
[10] Authorize limited prescriptive authority to nurse practitioners throughout the Commonwealth, in accordance with the recommendations of the Subcommittee on Limited Prescriptive Authority.

1991 **Task Force on Access to Obstetric Care. Issues and Recommendations Relating to Obstetrical Care in Virginia.** The Virginia Hospital Association in collaboration with

the Virginia Obstetrical and Gynecological Society created a task force in September of 1989, to look at the various issues relating to access to obstetrical care in the Commonwealth. The Health Planning Board's Report on Access to Obstetrical Care and the Medical Society of Virginia's survey, Problems and Solutions to Access to Obstetrical Care: Virginia Physicians Respond, were reviewed.

Recommendations:

[1] State health officials must develop a fundamental, statewide policy which commits Virginia to ensuring that adequate obstetrical care is available to all women regardless of where they live in Virginia or their ability to pay.

[2] Because the problems with access are so unique to each locality, localized efforts will be necessary to determine the needs of that particular population. One suggestion is the creation of local advisory boards to health departments.

[3] Reimbursement to providers caring for Medicaid patients should continue to be increased and maintained at a level which is reflective of the costs incurred by providers for the care they give.

[4] Local health departments must be given more autonomy and flexibility in order to meet the locality's special needs. Perhaps block grants could once again be utilized to afford health departments greater latitude in developing locality-specific programs which could better meet the needs of the community.

1992 **HJR 235 Requesting the Commission on Health Care for All Virginians to study the actuarial basis for the costs of malpractice insurance for obstetricians and for others who offer obstetric services.** The State Corporation Commission's Bureau of Insurance was requested by the 1992 General Assembly, pursuant to House Joint Resolution No. 235, to study the actuarial basis for the costs of malpractice insurance for obstetricians, certified nurse-midwives, and other licensed physicians who offer obstetrical services. The conclusion from that study was: the premiums paid by OB/GYNs and certified nurse-midwives in Virginia are actuarially justified. The Bureau maintains an aggressive posture regulating rates for medical malpractice insurance. The high rates for OB/GYNs are due to claim frequencies that are four to five times higher than the claim frequencies for all classes of physicians combined.

1992 **Report of the Department of Health Professions and the Virginia Health Planning Board. The Potential for Expansion of the Practice of Nurse Midwives (HJR 431 Requesting the Health Planning Board in conjunction with the Department of Health Professions to study the potential expansion of the practice of nurse midwives).** Recommendations included:

[1] Endorse the collaborative practice concept of physicians and nurse-midwives.

[2] Directed the General Assembly to provide funding and determine the site for an accredited nurse-midwife education program to be established.

[3] Provide incentives for prenatal and obstetric care for the under served.

[4] Establish a scholarship program for nurse-midwifery students based upon the

student's agreement to practice in medically under served areas of the Commonwealth for a minimum time period.
[5] Appropriate state agencies develop financial incentives for health care practitioners, hospitals, and local health departments who agree to work with certified nurse mid-wives to provide perinatal services in medically under served areas or for medically under served populations.
[6] The Department of Medical Assistance Services consider providing incentive payments for prenatal and obstetric services to Medicaid recipients provided by collaborative physician/nurse-midwife practices.
[7] The Commission on Health Care for all Virginians initiate and support legislative proposals to amend open staff provisions of current hospital licensing statutes to include certified nurse-midwives whose collaborating physicians have privileges.
[8] Endorses the concept of perinatal regional care practiced in a manner systematically related to the essential perinatal care needs of individual communities and the regions. To assess local needs and priorities and to develop strategies to meet these needs at a local level, community advisory panels should be developed to include local health department representatives, hospital officials, family practitioners, obstetricians, certified nurse-midwives, and citizens.
[9] The Virginia Health Planning Board study the efficacy of birthing centers in extending access to obstetric care.

1993 **Report of the Special Advisory Commission on Mandated Health Insurance Benefits. Direct Reimbursement of Certified Nurse-Midwives House Document No.38.** This report documents a study conducted by the Special Advisory Commission on Mandated Health Insurance Benefits to assess the social and financial impact, and medical efficacy of House Bill 1089 (1992 Session) regarding the proposed mandate of direct reimbursement of certified nurse-midwives by insurers.
Recommendations:

[1] The proposed revisions contained in House Bill 1089 and requiring direct reimbursement of certified nurse-midwives not be enacted;
[2] Coverage for maternity care is generally available in the absence of a mandate of direct reimbursement to certified nurse-midwives; and
[3] Mandating direct reimbursement has not been determined to be an effective or necessarily appropriate means of encouraging expansion of the practice of certified nurse midwives and; therefore, increasing access to care.

1994 **Ways to Create and Maintain Effective Maternal Health Services for Pregnant Women in Crisis. Senate Document No. 45.** The study defined a crisis pregnancy and identified what services pregnant women need. Women at risk for a crisis in pregnancy are often poor, young, homeless, and addicted to drugs. These same women are also often at risk for not receiving services.
Recommendations focused on those strategies that would assist women in resolving their

crisis.

[1] Programs that serve pregnant women in crisis should be expanded, and should provide or assure risk-appropriate health care.

[1a] Support funding to expand the three existing programs: Healthy Start, Resource Mothers, and Project Link.

[1b] Encourage private and volunteer organizations that provide shelter for women in crisis to increase the number of pregnant women they serve, and to develop appropriate systems to refer for prenatal care.

[1c] Encourage the expansion of existing efforts of private organizations that provide support and education for all pregnant women.

[2] Maternity health services, including family planning, should be included in primary health care for women. Expand Medicaid eligibility to 185% of poverty for maternity and family planning services.

[3] Pregnancy planning or preconceptional care should be a standard service in primary care, and be included in the training of health care professionals.

[4] Adoption should be made more accessible to a pregnant woman in crisis.

[4a] Request the General Assembly to take steps to streamline the adoption process.

[4b] Request the Department of Health and Social Services to provide adoption training to local health department maternity and family planning staff.

[4c] Encourage the expansion of the One Church, One Child Program, the adoption program of African-American Churches.

[5] There should be increased utilization of midlevel health care providers, specifically nurse practitioners and certified nurse-midwives.

[5a] Request that insurers and Medicaid extend third party reimbursement to all nurse practitioners who provide primary care to women.

[5b] Encourage health professional organizations, and medical schools to provide programs on the utilization of nurse practitioners and nurse midwives in provision of primary care of women.

[5c] Encourage the medical schools to include in their curriculum and practice the nurse midwife model for obstetric care.

[6] The Regional Perinatal Coordinating Councils should address pregnant women in crisis in their region by identifying the gaps in delivering comprehensive prenatal services, providing perinatal outreach education, and encouraging the coordination of care.

1995 **Report of the Secretary of Health and Human Resources. House Document No. 24: An Initial Evaluation of Precedent, Need, Support and Desirability of Including Obstetricians/Gynecologists in Legislative Definitions of Primary Care Provider.** Legislative action for the purpose of categorizing obstetricians and gynecologists as primary care physicians was not recommended.

1996 **Report of the Virginia Department of Health on Women's Health Status in Virginia. House Document No. 53.** The report served as the basis for identifying the health-related problems which disproportionately affect women. Specific issues, problems, and recommendations were identified and formulated through focus groups, review of the literature, and individual contacts. A Women's Task Force of persons with expertise in women's issues reviewed the findings and recommendations. Those recommendations regarding reproductive health:

[1] Upon release of the evaluation of the seven teen pregnancy programs, programs showing positive outcomes should be replicated in other high-risk communities.

[2] The Secretary of Health and Human Resources should develop a consolidation plan for all state-level teen pregnancy prevention support and coordination activities.

[3] The Department of Medical Assistance should obtain a federal waiver to extend Medicaid coverage to two years past delivery for those women currently covered at 133 percent of poverty and for only 60 days postpartum.

[4] The Departments of Education, Health, Mental Health and Mental Retardation and Substance Abuse Services, and Social Services should increase staff training on abstinence skills development for teens, and require all family life programs in these agencies to use abstinence skills as a major part of their sex education program. Staff training should include themes consistent with Campaign for Our Children to coordinate efforts with this program.

[5] All participating partners should continue to work together to expand the Campaign for Our Children strategy to other media markets and enhance with teaching materials for communities.

[6] The Virginia Department of Health should provide consultation to localities on how to organize teen pregnancy prevention coalitions, and develop local community-based programs known to work to prevent teen pregnancy.

[7] Health care providers in both private and public health settings should screen for high risk sexual practices, and provide counseling to prevent unintended pregnancies, and to help ensure that all women are prepared for pregnancy before it occurs.

[8] Providers of services and programs to parenting teens should target their efforts to prevent repeat pregnancies in this high-risk group.

1996 **Report of the Joint Commission on Health Care. Senate Document No. 13. Study of Access to Obstetrical Care for the Women of Rural Virginia Pursuant to SJR 331 of 1995.** This report addresses several barriers to obstetrical care in rural areas which must be addressed if Virginia is to make continued progress toward improved maternal and infant health. Many pregnant women still lack health coverage and thus the ability to pay for needed health care services. At the same time, the supply of obstetrical providers--including obstetricians, family physicians, and nurse midwives-- is dwindling in rural areas, at least partly due to economic disincentives and a lack of adequate collaboration

between different provider groups. These issues, combined with educational and social problems, result in complex challenges which defy simple solutions.
Options:

[1] The General Assembly may wish to consider requesting the Secretary of Health and Human Resources to study available options for expanding Virginia Medicaid coverage for pregnant women and infants.

[2] The General Assembly may wish to consider requesting the Secretary of Health and Human Resources, in cooperation with the State Corporation Commission's Bureau of Insurance and the Worker's Compensation Commission, to evaluate the impact of the Virginia Birth-Related Neurological Injury Program in rural areas and recommend policies for improving the utility of the program for rural providers.

[3] The Virginia Academy of Family Practice and the Virginia Obstetrical and Gynecological Society should consider establishing a joint task force to establish standards and protocols for prenatal care, detection of high risk cases, obstetrical referral, and backup.

[4] Virginia's academic health centers should evaluate their programs for obstetrical training of family medicine residents to ensure that they produce graduates who are adequately trained to meet the demands of rural obstetrical practice within a collaborative environment with obstetricians.

[5] The General Assembly may wish to consider appropriating state funds to establish a nurse midwifery program at the Virginia Commonwealth University - Medical College of Virginia.

1997 **Department of Health. <u>Establishment of Professional Guidelines for Obstetrical Care House Document No. 56</u>.** House Joint Resolution 110, passed by the 1996 General Assembly, requested the Commissioner of Health to appoint a task force to establish professional guidelines for obstetrical care. In appointing the task force the Commissioner is directed to include representatives of the Virginia Academy of Family Physicians, the Virginia Obstetrical and Gynecological Society, the Virginia Chapter of the American College of Nurse Midwives, the Virginia Chapter, American Academy of Pediatrics, nurse practitioners, and the State Department of Health. The resolution specifies that such professional guidelines as may be established shall include, but not be limited to, prenatal care, detection of high-risk cases, and obstetrical consultation and referral. Lack of available consultation, and appropriate referral has been identified as the primary barrier to obstetrical care across rural areas, not a lack of professional guidelines. Lack of affordable malpractice insurance and fear of litigation have been widely reported to have decreased the numbers of obstetrical providers. The consensus of the task force is that while increased malpractice risks have dissuaded providers of obstetric care from practice, other issues related to lack of collaboration and acceptance of family physicians, nurse midwives or nurse practitioners as obstetrical providers are important contributing

factors. With increased communication and collaboration among all providers of perinatal services, there will be increased adherence to established guidelines and ultimately improved quality of obstetric care. The recruitment of all types of providers into these rural areas is important.

Following options recommended:

[1] Encourage all providers of obstetrical care to utilize established standards of obstetrical care such as Guidelines for Perinatal Care published by the American College of Obstetricians and Gynecologists and American Academy of Pediatricians in setting individual practice guidelines.

[2] Request the Board of Directors of the Virginia Birth-Related Neurological Injury Compensation Program to consider markedly reducing the premiums for the first several years for any health care provider who provides obstetrical care in rural Virginia.

[3] Request that the three medical schools develop memorandums of understanding between their Departments of Family Practice and Obstetrics/Gynecology in providing clinical rotations to assure adequate obstetrical experience for family practice physician residents.

[4] Request that the Virginia Academy of Family Physicians, in cooperation with the Virginia Department of Health and other appropriate local representatives, explore the development of a financial incentive package that would attract providers of obstetrical services to rural Virginia.

[5] Request that the Virginia Academy of Family Physicians, and the Virginia Section of the American College of Obstetricians and Gynecologists hold a meeting to discuss practice issues and develop solutions to problems related to collaborative practice. Subsequent to that meeting, the Virginia Academy of Family Physicians and the Virginia Section of the American College of Obstetricians and Gynecologists should convene a second meeting and include certified nurse midwives and nurse practitioners.

[6] Request the Regional Perinatal Coordinating Councils to increase participation of obstetricians, family practice physicians, certified nurse midwives and nurse practitioners on their councils.

APPENDIX D

MATERNAL AND CHILD HEALTH COUNCIL
PERINATAL AND EARLY CHILDHOOD SUBCOMMITTEE

SURVEY OF FAMILY PHYSICIANS

DATE: June 3, 1997

TO: Dr. _____

FROM: Harriette Mullins, RNC, MS

SUBJECT: Legislative Study: Access to Obstetrical Care in Under Served Areas

The Perinatal and Early Childhood Subcommittee of Virginia's Maternal and Child Health Council has been assigned responsibility for completing a report to the General Assembly regarding access to obstetrical care in rural or Under Served areas. A copy of the legislation requesting this study is attached.

The Subcommittee is particularly interested in the role that family physicians play in the provision of obstetrical care in Virginia. Many studies have looked at the barriers to this practice. The Subcommittee would like to look at this issue from a different perspective: what are the factors which support a family physician's decision to provide obstetrical care?

Please take a minute to help us focus on the positive by considering the following questions. You can fax your response to me at 540-985-9099 of call me at 540-985-9838 if you would like to discuss this issue in more detail. Due to the time constraints of this study, I would appreciate hearing from you no later than **June 10, 1997.** Thank you for your help.

Harriette Mullins, RNC, MS
Coordinator
Region II Perinatal Coordinating Council
102 Highland Ave., S.E. - Suite 435
Roanoke, VA 24013

SURVEY OF REGION II FAMILY PHYSICIANS
June 1997

1. Are you now offering obstetrical care? Yes 11 No 0

2. Do you plan to continue to do so? Yes 11 No 0

3. What factors (professional or personal) supported your decision to either start or continue to offer obstetrical care?

I enjoy it.
It is the most enjoyable part of the job I do and it allows for total family care with better family continuity.
Enjoy. Source of families to the practice. Support of group.
It is fun and rewarding. Keeps the practice "fresh."
I enjoy OB.
Is a good branch of medicine and is part of family medicine.
Professional satisfaction significantly heightened by providing maternity care. I am committed to promoting Family Physicians including OB care in practice - hence my role as an educator (faculty in FP residency training). As an employee of _____, I have no/little concern re: liability insurance cost, but this is something that impacts decisions re: OB care for many providers.
Exposure to FP doing OB: positive role models.
Personal satisfaction and gratification; is natural part of FP (become closer to patient and family). Keeps my practice going and increases number of peds patients. Actually probably decreases my malpractice liability. See study by Walt Larimer in Journal of AAFP which details advantages (personal, financial and liability) of FP doing OB. Also, studies show that counties that have FP doing OB have lower perinatal morbidity and mortality.
It keeps our practice younger. We enjoy it. It's profitable. Note: Loss of surgical back-ups would either force us to discontinue obstetrics or begin doing our own c-sections.

4. Issues identified during phone conversation with local family physician:
   a. <u>Training</u>
      - ◇ There is a greater interest in doing OB among family practice residents: medical schools doing a better job of increasing students interest in OB.
      - ◇ Barriers to training include not being able to supply needed experience (volume of deliveries). Currently sending some residents to North Carolina for OB experience.
      - ◇ Increased Medicaid reimbursement for OB has shifted population into private practice setting, away from schools/training programs.
   b. Hospital privileges have not been a problem in this area; however can be. OB's, NP's and FP's need to work together.

c. Lifestyle issues may be a deterrent to including OB in practice (e.g. night call, weekend coverage). Might be interest in some situations for family physician to provide prenatal care, in collaboration with an obstetrician who would deliver the baby.

d. The FP residency programs need to know where the needs exist so they can match new family physicians with those areas.

e. This physician serves as the Medical Director for the new Physician's Assistant (PA) program in Roanoke (College of health Sciences). Many of the P.A. students are from or interested in serving in rural/Under Served areas. How (if at all) are these providers factored into the equation?

APPENDIX E

MEDICALLY UNDERSERVED AND HEALTH PROFESSIONAL SHORTAGE AREAS IN VIRGINIA

State and Federal Medically Underserved Areas and Health Professional Shortage Area Designations for the State of Virginia by County and City.

VMUA - Virginia Medically Underserved Area (state designation)

The following criteria are used to designate a VMUA - (1) primary care physician to population ratio, (2) percent of population with income at or below 100% of the federal poverty level, (3) percent of population 65 years of age or older, (4) five-year average infant mortality rate, and (5) the most recent annual civilian unemployment rate. ***(Applicable Programs: Virginia Medical Scholarship and Nurse Practitioner/Nurse Midwife Scholarship Programs)***

HPSA - Health Professional Shortage Area (federal designation)

The federal HPSA criteria require three basic determinations for a geographic area request: (1) the geographic area involved must be rational for the delivery of health services, (2) a specified physician-to-population ratio representing shortage must be exceeded within the area (usually 1:3,500), and (3) resources in contiguous areas must be shown to be over utilized, excessively distant, or otherwise inaccessible. ***(Applicable Programs: National Health Service Corps and National Health Service Corps-Virginia Loan Repayment Programs, Rural Health Clinic Certification)***

MUA - Medically Underserved Area (federal designation)

The following criteria are used to designate a federal MUA - (1) primary care physician to population ratio, (2) percent of population with incomes below 100% of the federal poverty level, (3) percent of population 65 years of age or older, and (4) five-year average infant mortality rate. ***(Applicable Programs: Rural Health Clinic Certification, Federally Qualified Health Centers (FQHC) and FQHC Look-Alikes)***

P - Part of the County/City is Designated
F - Facility Designation
CT - Census Tract

Totals: **VMUAs - 43 whole counties/cities**
HPSAs - 35 whole, 17 part counties/cities, 1 facility (53 total)
MUAs - 68 whole, 26 part counties/cities (94 total)

COUNTY/CITY	VMUA	HPSA	MUA
Accomack	Yes	Yes	Yes
Albemarle	No	No	Yes (P) CTs 113.98, 114
Alexandria City	No	No	No
Alleghany	Yes	Yes	Yes (P) Boiling Spring District
Amelia	No	Yes	Yes
Amherst	No	No	Yes
Appomattox	No	Yes	Yes

COUNTY/CITY	VMUA	HPSA	MUA
Arlington	No	No	No
Augusta	No	No	No
Bath	Yes	No	Yes (P) Warm Springs and Williamsville Districts
Bedford City	No	No	No
Bedford County	No	Yes (P) Peaks District	No
Bland	Yes	Yes	Yes
Botetourt	No	Yes (P) CTs 401-402	Yes
Bristol City	Yes	No	Yes
Brunswick	Yes	Yes	Yes
Buchanan	Yes	Yes Population HPSA - Medically Indigent	Yes
Buckingham	No	Yes	Yes
Buena Vista City	No	No	No
Campbell	No	Yes (P) CTs 204.98, 205-209	No
Caroline	Yes	Yes	Yes
Carroll	No	Yes (P) Laurel Fork District	Yes
Charles City County	No	Yes Population HPSA - Low Income	Yes
Charlotte	Yes	Yes	Yes
Charlottesville	No	No	No
Chesapeake	No	Yes (P) CTs 201-204, 205.01, 205.02, 206-207	Yes
Chesterfield	No	No	Yes (P) CTs 1010.01, 1010.02
Clarke	No	No	Yes
Clifton Forge City	Yes	Yes	No
Colonial Heights City	No	No	No

COUNTY/CITY	VMUA	HPSA	MUA
Covington City	Yes	Yes	No
Craig	No	No	Yes
Culpepper	No	No	Yes (P) Cedar Mountain and Jefferson Districts
Cumberland	No	Yes	Yes
Danville City	Yes	Yes Population HPSA - Low Income	Yes
Dickenson	Yes	Yes	Yes
Dinwiddie	No	Yes (F) Federal Correctional Institution-Petersburg	Yes
Emporia City	Yes	No	No
Essex	Yes	No	Yes
Fairfax City	No	No	No
Fairfax County	No	No	No
Falls Church City	No	no	No
Fauquier	No	No	Yes (P) Lee and Marshall Districts
Floyd	No	No	Yes
Fluvanna	No	Yes	Yes
Franklin City	No	No	Yes
Franklin County	No	Yes	Yes
Frederick	No	No	No
Fredericksburg City	No	No	No
Galax City	No	No	No
Giles	No	No	Yes
Gloucester	No	No	Yes (P) Petworth District
Goochland	No	Yes (P) CTs 4002-4005	Yes
Grayson	No	Yes (P) Elk Creek and Wilson Creek Districts	Yes (P) Wilson Creek District
Greene	No	No	Yes

COUNTY/CITY	VMUA	HPSA	MUA
Greensville	Yes	No	Yes
Halifax (includes South Boston)	Yes	Yes	Yes
Hampton City	No	No	Yes (P) CTs 105, 106.01, 106.02, 109, 113,114, 117
Hanover	No	Yes (P) CTs 3201-3202	No
Harrisonburg City	No	No	No
Henrico	No	No	No
Henry	Yes	Yes Population HPSA - Low Income	No
Highland	Yes	Yes	Yes
Hopewell City	No	No	No
Isle of Wight	No	No	Yes
James City County	No	No	Yes (P) Low Income Population - CTs 801.98, 802.98, 803, 804
King & Queen	No	No	Yes
King George	No	Yes	Yes
King William	No	No	Yes
Lancaster	Yes	No	Yes (P) Mantua Division, White Chapel District
Lee	Yes	Yes Rose Hill & White Shoals Districts (Western Lee Co.) Population HPSA - Medically Indigent -- Jonesville, Rocky Station & Yokum Station Districts (Eastern Lee Co.)	Yes
Lexington City	No	No	No
Loudoun	No	No	Yes (P) CTs 6108-6110
Louisa	Yes	Yes (P) CTs 9501, 9505	Yes

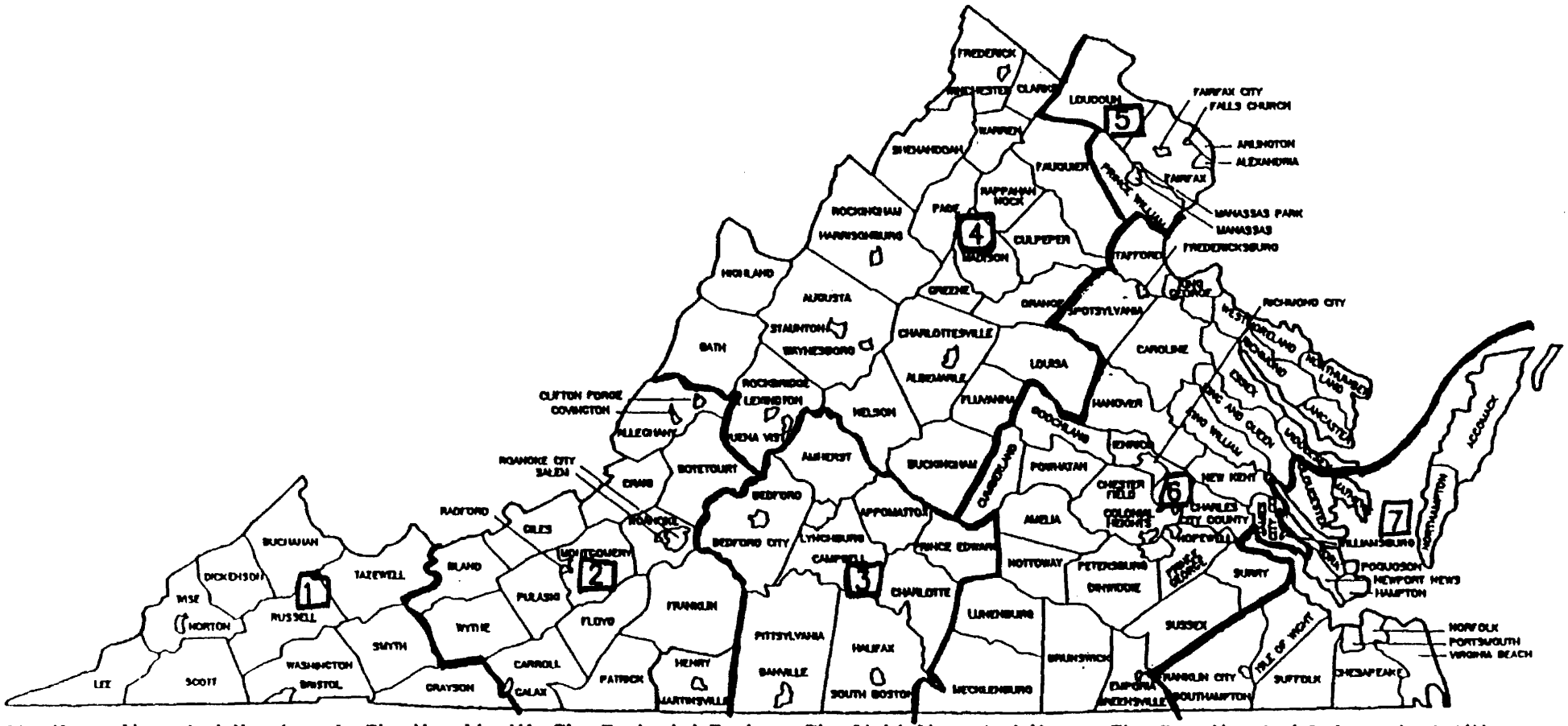
COUNTY/CITY	VMUA	HPSA	MUA
Lunenburg	Yes	Yes	Yes
Lynchburg City	No	No	Yes (P) CTs 5.98, 6
Madison	No	No	Yes
Manassas City	No	No	No
Manassas Park City	No	No	No
Martinsville City	Yes	Yes Population HPSA - Low Income	No
Mathews	No	No	Yes
Mecklenburg	Yes	Yes (P) Bluestone, Boydton, Buckhorn, Chase City and Clarksville Districts	Yes
Middlesex	No	No	Yes
Montgomery	No	No	No
Nelson	No	Yes	Yes
New Kent	No	Yes	Yes
Newport News City	No	No	Yes (P) CTs 301-306, 308, 309, 313, 314
Norfolk City	No	No	Yes (P) CTs 25, 26, 29, 35.01, 35.02, 36, 37, 40.01, 40.02, 41-44, 46-48, 52, 53
Northampton	Yes	Yes	Yes
Northumberland	Yes	Yes	Yes
Norton City	Yes	No	No
Nottoway	Yes	No	Yes
Orange	No	No	Yes
Page	Yes	Yes	Yes
Patrick	Yes	No	Yes
Petersburg City	No	No	Yes

COUNTY/CITY	VMUA	HPSA	MUA
Pittsylvania	Yes	Yes (P) CTs 101-107 Population HPSA - Low Income CTs 108.98, 109-111, 112.98, 113.98, 114	Yes
Poquoson City	No	No	No
Portsmouth City	No	Yes (P) CTs 2107, 2110-2111, 2113- 2114, 2117-2121	Yes (P) CTs 2102, 2102.99, 2104, 2106, 2107, 2109-2111, 2113, 2114, 2118-2121
Powhatan	No	No	Yes
Prince Edward	No	No	Yes
Prince George	No	No	No
Prince William	No	No	No
Pulaski	No	No	Yes (P) Draper District
Radford City	No	No	No
Rappahannock	No	No	Yes
Richmond City	No	Yes (P) CTs 201-212, 601-605, 607.98, 608.98	Yes (P) CTs 102, 104, 201, 202, 205, 207, 301-303, 305, 402, 503, 601, 603
Richmond County	Yes	Yes	Yes
Roanoke City	No	No	Yes (P) CTS 7, 11-13
Roanoke County	No	No	No
Rockbridge	No	Yes (P) Natural Bridge District	No
Rockingham	No	No	No
Russell	Yes	Yes	Yes
Salem	No	No	No
Scott	Yes	No	Yes
Shenandoah	No	No	No
Smyth	Yes	Yes (P) North Fork and Saltville Districts	Yes (P) Chilhowie, North Fork, Rye Valley, and Saltville Districts
Southampton	No	No	Yes

COUNTY/CITY	VMUA	HPSA	MUA
Spotsylvania	No	Yes (P) CT 204.01	Yes (P) Livingston District
Stafford	No	No	Yes
Staunton	No	No	No
Suffolk	No	No	Yes
Surry	Yes	Yes	Yes
Sussex	Yes	Yes	Yes
Tazewell	Yes	No	Yes
Virginia Beach City	No	No	Yes (P) CTs 442.01, 448.06, 466
Warren	No	No	No
Washington	Yes	Yes (P) Jefferson District	Yes
Waynesboro City	No	No	No
Westmoreland	Yes	Yes	Yes
Williamsburg City	No	No	Yes (P) Low Income Population - CTs 3701, 3702.98, 3703
Winchester City	No	No	No
Wise	Yes	No	Yes (P) Gladesville and Lipps Districts
Wythe	Yes	No	Yes (P) Speedwell District
York	No	No	Yes (P) CTs 505, 507, 508 - Designated based on a Low Income Population

For more information, contact the Virginia Department of Health, Center for Primary Care Resource Development, (804) 786-4891.

PERINATAL REGIONS AND THEIR COMPONENT COUNTIES AND INDEPENDENT CITIES COMMONWEALTH OF VIRGINIA



The Heavy Lines And Numbers In The Map Identify The Perinatal Regions, The Light Lines And Names The Counties And Independent Cities.

SOURCE: Virginia Department Of Health

APPENDIX G

DESIGNATION OF PERINATAL UNDER SERVED AREAS DUE TO MANPOWER AND RESOURCE INADEQUACIES

County/City	Number of Births 1995	Actual Full Time Equivalents of Perinatal Providers *	# of FTEs Needed to Provide Adequate Coverage for # of Births **	Minimum Travel Time One-Way to Prenatal Care in Minutes	Labor & Delivery Services	Travel Time in Minutes One-Way to Labor & Delivery
Region I						
Buchanan	293	0.35	1.47	60	NO	90
Dickenson	174	0	0.87	90	NO	90
Scott	197	0	0.99	45	NO	45
Region III						
Pittsylvania	583	2.5	2.90	45	NO	60
Charlotte	125	0	0.63	45	NO	60
Region IV						
Bath	42	0.05	0.21	45	NO	60
Highland	18	0.03	0.09	45	NO	60
Region VI						
Brunswick	178	0.1	0.89	45	NO	60
King & Queen	98	0.2	0.49	45	NO	60
Lunenburg	177	0.1	0.89	45	NO	60
Essex	98	0.2	0.49	45	NO	60
Surry	65	0.2	0.33	45	NO	60
Nottoway	177	0.2	0.49	45	NO	60
Sussex	118	0.2	0.59	45	NO	60
Region VII						
Matthews	84	0	0.42	45	NO	60

* Full Time Equivalent is defined as one provider working 40 hours/week; therefore, 0.5 FTE can represent 1 provider working 20 hours/week or 2 providers working 10 hours/week or multiple combinations.

** 200 deliveries a year was determined to be the maximum number of patients that any one provider could offer care

$$\frac{200}{1} \times \frac{\text{\# births}}{x} = \text{necessary \# of FTE to support the county/city}$$

APPENDIX H

EXPLANATION OF TERMS USED TO DESIGNATE PERINATAL UNDER SERVED AREAS DUE TO UNDERUTILIZATION OF CARE

For all determinates, except entry into prenatal care, a 5 year average provided from the Virginia Department of Health was used in order to provide sufficient data to reveal meaningful changes and decrease the fluctuations in statistics that can occur with small numbers. The most recent data available for entry into prenatal care in the first trimester were used (1995). All data are reported by place of residence, not where care was delivered or deliveries occurred.

County/City: Data are reported by the city and county in each perinatal region. On each page, the values for the entire Commonwealth are listed above each region for comparison.

Total Births: The average number of live births for 1991-1995.

Perinatal Mortality (PM) Average: Perinatal mortality reveals fetal and neonatal deaths influenced by prenatal conditions and circumstances surrounding delivery. Defined as deaths of fetuses and infants from the 28th week of gestational life throughout the 28th day after birth. This figure is the average perinatal mortality rate for 1991-1995.

Entry Into Care: The percentage of all pregnant women reported to receive prenatal care within the first trimester (first 12 weeks of pregnancy) for 1995.

Low Weight Birth (LWB): The average percentage of live births weighing less than or equal to 2500 grams (5 pounds 8 ounces) regardless of length of gestation for 1991 - 1995.

Congenital Anomalies (CA): The average percentage of live births with a reported abnormality present at birth for 1991-1995.

Variance: Variance from state average for the three outcome indicators of PM, LWB, and CA.

PM Average	+	LWB Average	+	CA Average	=	Variance
PM State Average		LWB State Average		CA State Average		

A combination score of 3 is equal to the state average for the combined average.
A combination score below 3 indicates these outcomes are better than the state average.
A combination score above 3 indicates the combined score is worse than the state average.
A score of 3.75 or greater indicates the locality exceeds the state average by at least 25%.

>50% = Percent of women not entering prenatal care in the first trimester exceeds the state average for entry into prenatal care by over 50% (<73.6%)
*A "yes" indicates the locality meets this criteria

0-50% = Percent of women not entering care in the first trimester exceeds the state average by 50% (73.7% - 82.4%).
*A "yes" indicates the locality meets this criteria

APPENDIX H

Designation of Perinatal Under Served Areas Due to Underutilization of Care

Percentages for Low Weight Births, Congenital Anomalies and Perinatal Mortality based on 5-year period 1991-1995

County	Total Births	Entry Into Care	*>50% worse than State Average for Entry into Care	Perinatal Mortality Average	Low Weight Birth	Congenital Anomalies	Birth Outcomes Index Variance	0-50%	Exceeds State Average by at least 25%
Region I									
VIRGINIA		82.4%	(<73.6%)	8.0	7.5%	1.5%	3	(73.7%-82.4%)	Variance >3.75
BUCHANAN	1634	76.1		6.1	8.0	1.2	2.61	yes	
TAZEWELL	2774	76.7		11.5	7.6	1.5	3.47	yes	
SCOTT	1178	78.2		5.1	7.5	1.1	2.37	yes	
BRISTOL	1029	80.3		7.8	8.3	1.9	3.38	yes	
DICKENSON	937	81.6		6.4	5.3	4.2	4.30	yes	yes
LEE	1326	82.2		6.8	6.6	3.2	3.85	yes	yes
NORTON	322	82.7		18.6	9.3	4.0	6.28		
WISE	2638	85.9		10.2	6.6	2.7	3.97		
RUSSELL	1609	87.4		9.3	8.2	2.4	3.89		
GRAYSON	874	88.2		3.4	7.1	2.2	2.83		
WASHINGTON	2557	89.7		4.7	6.7	2.3	3.05		
SMYTH	1902	90.3		6.3	8.1	3.1	3.96		

*Designation is a two-tiered system. If entry into care was <73.6%,they were immediately included. If entry into care wasn't <73.6% but was between 73.7%-82.4% and birth outcome variance indices were >3.75, then the county/city was designated under served due to underutilization of care.

APPENDIX H

Designation of Perinatal Under Served Areas Due to Underutilization of Care

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County	Total Births	Entry Into Care	*>50% worse than State Average for Entry into Care	Perinatal Mortality Average	Low Weight Birth	Congenital Anomalies	Birth Outcomes Index Variance	0-50%	Exceeds State Average by at least 25%
Region II									
VIRGINIA		82.4%	(<73.6%)	8.0	7.5%	1.5%	3	(73.7%-82.4%)	Variance >3.75
MARTINSVILLE	1031	68.5	yes	15.5	10.2	3.2	5.44		
GILES	921	71.5	yes	7.6	6.4	1.7	2.97		
HENRY	3226	76.8		9.9	9.3	3.0	4.52	yes	yes
BLAND	310	80.0		3.2	6.8	3.2	3.47	yes	
PATRICK	842	81.2		11.9	7.0	2.0	3.78	yes	yes
RADFORD	739	82.6		2.7	5.3	1.1	1.77		
COVINGTON	418	83.0		2.4	9.6	2.6	3.34		
GALAX	443	83.1		6.8	5.4	3.4	3.84		
FRANKLIN	2362	83.1		7.3	8.6	3.9	4.64		
CRAIG	259	83.3		0.0	5.4	3.1	2.79		
MONTGOMERY	4049	84.8		4.2	6.2	1.2	2.16		
PULASKI	1887	85.4		6.9	8.5	2.4	3.63		
CARROLL	1396	86.0		2.9	5.9	1.3	2.01		
FLOYD	671	86.0		13.4	6.0	2.5	4.17		
CLIFTON FORGE	239	88.0		8.4	7.5	0.8	2.62		
ROANOKE CITY	8208	88.3		4.5	9.2	9.0	7.86		
WYTHE	1524	88.9		6.6	7.0	4.3	4.62		
ALLEGHANY	774	90.8		12.9	8.3	3.7	5.23		
ROANOKE	3570	91.9		7.9	6.0	3.6	4.19		
SALEM	1358	93.1		6.6	7.4	3.8	4.33		
BOTETOURT	1326	93.4		5.3	6.3	4.2	4.33		

APPENDIX H

Designation of Perinatal Under Served Areas Due to Underutilization of Care

Percentages for Low Weight Births, Congenital Anomalies and Perinatal Mortality based on 5-year period 1991-1995

County	Total Births	Entry Into Care	*>50% worse than State Average for Entry into Care	Perinatal Mortality Average	Low Weight Birth	Congenital Anomalies	Birth Outcomes Index Variance	0-50%	Exceeds State Average by at least 25%
Region III									
VIRGINIA		82.4%	(<73.6%)	8.0	7.5%	1.5%	3	(73.7%-82.4%)	Variance >3.75
SOUTH BOSTON	483	62.9	yes	2.1	7.5	3.3	3.47		
HALIFAX	1905	66.8	yes	7.4	9.0	2.5	3.81		
CHARLOTTE	792	72.8	yes	13.9	10.0	2.7	4.85		
DANVILLE	3812	78.9		13.1	10.1	0.5	3.32	yes	
LYNCHBURG	4637	83.6		12.5	8.0	1.0	3.33		
BEDFORD CITY	379	85.1		7.4	7.1	4.5	4.89		
APPOMATTOX	810	85.4		11.1	6.5	1.4	3.17		
PRINCE EDWARD	1097	85.4		10.9	10.6	2.8	4.67		
PITTSYLVANIA	2698	85.8		15.6	9.3	1.1	3.95		
BEDFORD COUNTY	3099	87.6		7.4	6.6	2.8	3.72		
CAMPBELL	3030	87.9		8.6	6.0	1.0	2.51		
AMHERST	1775	87.9		7.9	6.2	1.0	2.49		

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Designation of Perinatal Under Served Areas Due to Underutilization of Care

Percentages for Low Weight Births, Congenital Anomalies and Perinatal Mortality based on 5-year period 1991-1995

County	Total Births	Entry Into Care	*>50% worse than State Average for Entry into Care	Perinatal Mortality Average	Low Weight Birth	Congenital Anomalies	Birth Outcomes Index Variance	0-50%	Exceeds State Average by at least 25%
Region IV									
VIRGINIA		82.4%	(<73.6%)	8.0	7.5%	1.5%	3	(73.7%-82.4%)	Variance >3.75
BUENA VISTA	432	77.3		6.9	5.6	2.1	3.01	yes	
BUCKINGHAM	787	78.0		8.9	9.8	1.5	3.44	yes	
CHARLOTTESVILLE	2752	79.0		6.2	7.6	1.4	2.74	yes	
LEXINGTON	383	79.2		2.6	7.3	2.3	2.88	yes	
ROCKBRIDGE	838	80.1		4.8	8.4	1.6	2.75	yes	
CULPEPER	2186	80.3		7.3	7.5	2.1	3.30	yes	
MADISON	728	81.0		5.5	5.2	2.2	2.86	yes	
NELSON	673	81.3		3.0	7.1	1.5	2.32	yes	
SHENANDOAH	1977	81.4		8.6	5.3	2.3	3.31	yes	
ORANGE	1398	81.7		6.4	6.2	1.4	2.59	yes	
LOUISA	1583	81.9		7.0	8.7	1.0	2.71	yes	
WINCHESTER	1686	82.1		10.1	6.6	2.8	4.02	yes	yes
STAUNTON	1336	82.2		9.0	6.9	2.7	3.85	yes	yes
WAYNESBORO	1311	82.8		6.9	7.2	1.2	2.63		
RAPPAHANNOCK	382	83.2		0.0	7.3	1.3	1.85		
HARRISONBURG	1850	84.2		11.9	6.3	2.3	3.89		
CLARKE	705	84.8		5.7	6.7	2.4	3.22		
FLUVANNA	961	84.9		4.2	6.9	1.9	2.69		
PAGE	1264	85.2		6.3	6.0	1.9	2.87		
GREENE	1003	85.4		3.0	6.8	1.9	2.55		
AUGUSTA	3343	86.7		4.5	6.2	2.5	3.03		
ROCKINGHAM	4090	86.8		7.3	6.4	2.6	3.50		
WARREN	2164	87.1		5.6	5.3	2.8	3.26		
FAUQUIER	3481	87.8		6.0	5.6	0.9	2.14		
FREDERICK	3513	88.0		7.4	6.6	3.2	3.97		
BATH	287	88.5		3.5	10.8	4.2	4.68		
ALBEMARLE	4252	90.1		4.0	5.8	1.6	2.38		
HIGHLAND	100	100.0		0.0	9.0	2.0	2.54		

APPENDIX H

Designation of Perinatal Under Served Areas Due to Underutilization of Care

Percentages for Low Weight Births, Congenital Anomalies and Perinatal Mortality based on 5-year period 1991-1995

County	Total Births	Entry Into Care	*>50% worse than State Average for Entry into Care	Perinatal Mortality Average	Low Weight Birth	Congenital Anomalies	Birth Outcomes Index Variance	0-50%	Exceeds State Average by at least 25%
Region V									
VIRGINIA		82.4%	(<73.6%)	8.0	7.5%	1.5%	3	(73.7%-82.4%)	Variance >3.75
ARLINGTON	12757	68.9	yes	6.7	6.0	0.7	2.09		
ALEXANDRIA	9001	70.1	yes	7.7	7.1	0.9	2.53		
PRINCE WILLIAM	21116	80.3		6.3	6.3	0.9	2.24	yes	
FAIRFAX	64233	81.4		2.8	5.5	0.6	1.46	yes	
FAIRFAX CITY	1450	82.7		5.5	4.3	0.4	1.53		
FALLS CHURCH	502	86.5		10.0	5.4	0.8	2.50		
LOUDOUN	9637	90.0		4.5	5.2	0.9	1.87		
MANASSAS	2977	90.7		7.1	4.6	0.6	1.92		
MANASSAS PARK	796	94.2		6.3	7.3	0.6	2.18		

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Percentages for Low Weight Births, Congenital Anomalies and Perinatal Mortality based on 5-year period 1991-1995

County	Total Births	Entry Into Care	*>50% worse than State Average for Entry into Care	Perinatal Mortality Average	Low Weight Birth	Congenital Anomalies	Birth Outcomes Index Variance	0-50%	Exceeds State Average by at least 25%
Region VI									
VIRGINIA		82.4%	(<73.6%)	8.0	7.5%	1.5%	3	(73.7%-82.4%)	Variance >3.75
BRUNSWICK	964	59.6	yes	13.5	12.4	2.7	5.16		
EMPORIA	447	65.1	yes	22.4	12.8	3.4	6.75		
GREENSVILLE	562	67.0	yes	5.3	9.4	3.6	4.31		
MECKLENBURG	1766	69.8	yes	9.6	8.9	3.6	4.79		
KING AND QUEEN	444	72.4	yes	9.0	9.7	1.8	3.63		
PETERSBURG	3200	72.6	yes	14.7	12.2	1.5	4.48		
RICHMOND COUNTY	397	73.0		7.6	10.3	3.8	4.86	yes	yes
LANCASTER	542	75.7		7.4	11.1	3.9	5.00	yes	yes
WILLIAMSBURG	671	75.7		10.4	11.0	2.5	4.47	yes	yes
WESTMORELAND	1084	76.7		11.0	8.7	1.7	3.65	yes	
SUSSEX	730	77.1		12.3	9.9	0.8	3.41	yes	
NORTHUMBERLAND	535	77.6		7.5	8.0	2.8	3.89	yes	yes
RICHMOND CITY	16336	78.2		13.6	12.7	1.3	4.24	yes	yes
LUNENBURG	614	78.5		14.7	10.7	3.4	5.56	yes	yes
NOTTOWAY	907	78.5		13.2	11.6	2.8	5.05	yes	yes
FREDERICKSBURG	2784	80.0		12.2	7.9	0.6	3.01	yes	
KING GEORGE	1127	80.2		5.3	5.8	0.6	1.85	yes	
HOPEWELL	1927	81.2		11.4	9.4	1.2	3.49	yes	
COLONIAL HEIGHTS	960	81.8		5.2	6.9	1.9	2.83	yes	
JAMES CITY CO	2382	82.7		2.5	5.7	2.6	2.82		
MIDDLESEX	418	82.8		2.4	4.1	2.6	2.61		
PRINCE GEORGE	1982	83.0		10.1	7.3	1.1	2.94		
SURRY	425	83.1		11.8	8.5	2.6	4.34		
CUMBERLAND	532	83.2		3.8	9.0	1.5	2.68		
DINWIDDIE	1358	83.4		8.1	7.7	0.7	2.48		
KING WILLIAM	829	84.7		8.4	9.3	0.4	2.54		
CAROLINE	1506	84.9		6.6	7.6	1.3	2.69		
STAFFORD	5251	85.3		6.9	5.4	0.7	2.08		
AMELIA	610	85.9		6.6	7.7	1.6	2.95		

APPENDIX H

Designation of Perinatal Under Served Areas Due to Underutilization of Care

Percentages for Low Weight Births, Congenital Anomalies and Perinatal Mortality based on 5-year period 1991-1995

County	Total Births	Entry Into Care	*>50% worse than State Average for Entry into Care	Perinatal Mortality Average	Low Weight Birth	Congenital Anomalies	Birth Outcomes Index Variance	0-50%	Exceeds State Average by at least 25%
CHARLES CITY	398	86.8		5.0	11.3	1.5	3.15		
NEW KENT	773	88.3		15.5	9.8	1.2	4.03		
SPOTSYLVANIA	4704	88.4		6.4	6.1	0.7	2.05		
ESSEX	580	88.8		15.5	8.6	1.7	4.25		
HENRICO	17092	91.4		8.0	7.9	0.7	2.53		
CHESTERFIELD	16458	93.2		5.0	6.1	1.1	2.15		
POWHATAN	1105	92.5		3.6	5.9	1.4	2.15		
GOOCHLAND	877	93.2		3.4	7.6	0.8	1.98		
HANOVER	4643	94.9		5.4	7.4	0.7	2.13		

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Designation of Perinatal Under Served Areas Due to Underutilization of Care

Percentages for Low Weight Births, Congenital Anomalies and Perinatal Mortality based on 5-year period 1991-1995

County	Total Births	Entry Into Care	*>50% worse than State Average for Entry into Care	Perinatal Mortality Average	Low Weight Birth	Congenital Anomalies	Birth Outcomes Index Variance	0-50%	Exceeds State Average by at least 25%
Region VII									
VIRGINIA		82.4%	(<73.6%)	8.0	7.5%	1.5%	3	(73.7%-82.4%)	Variance >3.75
ACCOMACK	2059	67.1	yes	6.8	8.7	2.4	3.61		
NORTHAMPTON	817	70.0	yes	11.0	9.1	2.8	4.47		
NORFOLK	24601	70.2	yes	12.6	10.5	1.3	3.82		
PORTSMOUTH	9524	72.2	yes	13.2	11.4	1.8	4.38		
FRANKLIN CITY	686	74.9		10.2	10.2	0.3	2.83	yes	
HAMPTON	11437	76.0		11.9	8.2	1.7	3.75	yes	yes
NEWPORT NEWS	17562	76.4		10.0	8.7	1.3	3.28	yes	
SOUTHAMPTON	945	77.5		9.5	8.0	0.6	2.69	yes	
GLOUCESTER	2101	82.2		9.0	7.7	1.1	2.92	yes	
SUFFOLK	4043	82.7		8.2	9.2	1.3	3.12		
VIRGINIA BEACH	360039	83.9		5.9	0.7	0.1	0.92		
MATHEWS	393	84.2		5.1	5.1	2.5	3.02		
ISLE OF WIGHT	1808	84.4		7.2	8.1	1.1	2.72		
CHESAPEAKE	13690	84.5		7.5	7.7	1.2	2.77		
YORK	2644	87.5		4.9	6.5	1.4	2.40		
POQUOSON	547	88.3		5.5	4.6	2.4	2.89		

APPENDIX I

Descriptions of Perinatal Regions

Perinatal Region I

Buchanan has one provider who only spends 14 hours a week providing prenatal services within the county. Scott and Dickenson Counties do not have any prenatal or delivery services within the county. Travel time and distance are significant factors for residents in these counties.

Using the criteria developed for this study, Lee and Dickenson Counties are identified as being under served due to underutilization of perinatal care.

In the fall of 1994, focus groups were conducted in the region and identified lack of realization of the importance of prenatal care, lack of information about available resources, lack of transportation, and denial of pregnancy as reasons for not seeking prenatal care. Other common issues were the womens' concerns over spending time away from children or work to attend a prenatal visit. There are no prepared childbirth classes in several areas of the region.

Poverty is pervasive throughout the region. Even in the agricultural areas the lowest poverty rate is 15.2 percent, while in Dickenson County more than 25 percent of the population live below the poverty level (U.S. Census, 1990). The income level in the region is consistently low. Many household incomes are less than half Virginia's poverty level. While the economic need is great, there are also cultural and community factors that create barriers to services.

The adult literacy rate is lower than the state. While Virginia's percent of adults over 25 who have graduated from high school is 75.2 percent, the rate is as low as 42.5 percent in Buchanan County (U.S. Census, 1990). Eight of the localities have a rate below 60 percent.

In 1996, the Regional Perinatal Coordinating Council reviewed the incidence of congenital anomalies in the region using birth registry data for 1989-1993. Four counties in the region: Lee, Wise, Dickenson, and Norton, consistently had high congenital anomalies rates. Their rates have exceeded the state rate by 2-5 times. Specifically in Lee, further analysis has revealed a high incidence of spina bifida with hydrocephalus and congenital hydrocephalus, patent ductus arteriosus, deformities of the feet and cleft palate. While these data are not conclusive, further investigation is necessary to determine if any of these abnormalities are preventable and what, if any, community action is necessary.

RPCC Region I Congenital Anomalies - Percent of Births							
	1988	1989	1990	1991	1992	1993	88-93 Avg.
Lee	2.1	3.3	3.1	1.7	5.6	4.7	3.4
Wise	2.6	3.2	3.8	2.9	3.5	2.2	3.1
Norton	5.2	3.4	2.6	4.4	9.2	2.6	4.4
Dickenson	1.9	4.3	4.9	4.7	3.9	5.8	4.2
Virginia	0.4	1.7	1.5	1.5	1.5	1.6	1.4

Perinatal Region II

Currently, Perinatal Region II has an adequate number of professionals and facilities to meet the need of the perinatal population. No counties are designated as under served due to manpower deficiencies.

There are approximately 7000 live births each year to the residents of the 14 counties and 7 cities comprising the region. The eleven hospitals which offer obstetrical care are relatively evenly distributed throughout the region, although women in five localities (Giles, Floyd, Bland, Botetourt, and Craig) must travel outside their county of residence for delivery. The travel time involved is generally less than one hour. Three of the counties without hospital-based obstetrical care (Bland, Giles, Craig) form most of Region II's border with West Virginia and for some residents, care is more accessible across the state line in Princeton or Bluefield. Residents along the North Carolina-Virginia line also have access to additional hospitals (and providers) in Winston-Salem, Eden, or Mount Airy.

Prenatal care is available, to some extent, in every locality. Services are provided by 54 obstetricians, 15 family physicians, two certified nurse midwives, and six nurse practitioners. Health departments in 13 localities offer prenatal clinics. In other areas, women receive clinical prenatal services through the private sector and support services (e.g.; WIC, Baby Care) through their local health departments.

In four of the communities without hospitals, physicians from neighboring counties have established satellite offices. Thus, women can receive prenatal care closer to home. For example, obstetricians from Montgomery County have office hours 3-4 days/week in Giles County. These relatively new services compliment the existing prenatal clinic offered through the Giles County Health Department.

In some localities, the number of perinatal clinicians has actually grown. For example, two additional family physicians have established practice in Patrick County, increasing the number of physicians offering perinatal care from one to three. The data used for this report were from 1991-95. In the intervening two and one half years, perinatal services have become more available in Patrick County, which will hopefully be reflected in increasingly better outcomes.

While the current situation is felt to be stable and adequate to meet the needs of residents, the size of the provider base in most localities is small and loss of a single clinician can be devastating. For example, there are currently three obstetricians in the Alleghany Highlands. Their catchment area includes Bath County and parts of West Virginia, as well as their own localities (Covington, Clifton Forge, Alleghany County). Several years ago, two of the 3 obstetricians left at the same time, resulting in a manpower crisis that ultimately closed the hospital's maternity unit for a period of time. The same scenario is possible in several other locations. Because the population is generally not large enough to warrant additional providers, the potential to become an under served area is very real in parts of Region II.

Giles, Henry, and Patrick Counties and the City of Martinsville are identified as under served due to underutilization. While the overall resource situation is good, there are some areas or population groups which may have difficulty accessing these services. Women who live in remote, sparsely populated areas or mountainous counties such as Patrick, Giles, or those without access to transportation may not be able to take advantage of available services. Some groups (e.g., teens, minorities, women who are involved with drugs) may be unwilling to access services because of perceived, or real barriers. In other situations, some women may travel long distances, by-passing available services to receive care from a specific provider or facility. This may be due to personal preference (e.g., delivery by a nurse midwife) or due to past experiences. For example, some women from the Martinsville/Henry County area go to Roanoke or North Carolina for care, even though services are available locally. This may be due, in part, to the limits on the availability of care which at one time existed in the communities.

Financial concerns can limit a woman's options for perinatal care. Managed care and hospital networks may affect how and where some women access care, although to a lesser extent than in other areas of Virginia. In addition to the local health departments, women without insurance can receive care through the Obstetric Clinic at Carilion Roanoke Community Hospital. Another hospital-based clinic is scheduled to open this summer at the Memorial Hospital of Martinsville and Henry County, specifically targeting women with limited financial resources. Hopefully, this will help to increase the number of women who are able to begin care early in pregnancy.

In summary, Region II is, at the present time, stable in regards to obstetrical facilities and personnel. This situation could change quickly and with little time for planning so this assessment is bound by those constraints.

Perinatal Region III

Pittsylvania and Charlotte Counties have been designated as under served due to manpower deficiencies. Most women with insurance travel to either Danville or Lynchburg for prenatal and delivery services. Most prenatal care provided to indigent and Medicaid patients in the region is provided by the area health department with the exception of the cities of South Boston and Bedford, Charlotte, Bedford and Prince Edward Counties. Tremendous population growth in Bedford City and county in the last five years has prompted them to increase the number of providers by two family physicians and one obstetrician. Lynchburg moved the high risk prenatal clinic from the local health department to Virginia Baptist Hospital to expand services to include the entire region. Private physicians are beginning to accept more pregnant women on Medicaid. The five person certified nurse midwives (CNM) group, provides services to private and Medicaid patients in Lynchburg City and surrounding counties. The CNMs also go to Gretna Health Department every Thursday to provide prenatal care and consultation for the nurse practitioner. In the last 2 years, the health department in Pittsylvania Health District has increased its utilization of nurse practitioners. Even though Farmville is currently adequately covered, it has had difficulty retaining obstetrical providers. Transportation is an issue for many women, particularly in Charlotte and Pittsylvania, because the drive time is 45-60 minutes for most women to obtain prenatal and delivery services. As in the other more rural areas of Virginia, adequate coverage may currently exist, but loss of one or more providers could precipitate an access problem.

Charlotte, Halifax Counties, and South Boston City are designated as under served due to underutilization of perinatal care. South Boston has resumed township status and currently is included in the Halifax data. Since the data analysis done for this study included the years 1991-1995, in which South Boston was listed as a separate city, the data presented are listed separately. Based upon a survey conducted by the Region III Perinatal Council, reasons for not seeking prenatal care are many and varied. There are lengthy travel times of more than one hour in some rural areas, such as Charlotte and Prince Edward counties, lack of public transportation such as buses or a low number of Medicaid cabs in rural areas, lack of affordable or available child care, nor a place at the provider site in which the children have space to play. There is a lack of knowledge about the importance of prenatal care, especially regarding low birth weight, smoking and late entry to care. There may be fear of the system, motivational needs, cultural needs and priority differences between providers and patients. Other issues are homeless pregnant teens, inpatient and outpatient substance abuse treatment programs, nutrition and psychosocial needs.

Perinatal Region IV

Bath and Highland counties are regarded as under served due to manpower deficiencies. Women in Bath and Highland Counties obtain their care through Columbia Alleghany Regional Hospital and to some extent, Rockbridge and Augusta County. The mountainous region can make access difficult in the winter months. Minimum travel distance is 40 miles. The number of births in Bath and particularly Highland county is too small to justify an obstetrician, even on a

part time basis. Women in this county without insurance can obtain prenatal care at the local health department, but drive two hours for delivery services at the referral center in Charlottesville. Travel time to prenatal care in Augusta County is 75 minutes over difficult terrain but 87 percent of women receive care in the first trimester and outcome parameters are better than the state averages. There are counties with little or no provider coverage within the county.

Staunton and Winchester have been designated as under served due to underutilization because the perinatal mortality rate average and the congenital anomaly percentage are worse than the state averages (See Appendix H). Indigent women obtain care from local health departments with referral to the University of Virginia for high-risk care. Some insured women who seek care from a private physician travel long distances by choice.

Perinatal Region V

The Northern Virginia area is heavily populated with an oversupply of perinatal providers. Alexandria and Arlington have been identified as under served due to underutilization of perinatal services by special populations. Based on the annual medical record review conducted by the Fairfax County Child Fatality Review Program, the team reported that one-third to one-half of Northern Virginia neonatal deaths are of infants whose mothers are foreign-born. This is much higher than the 15 percent of the population who are foreign-born and the slightly higher percentage of births to foreign-born women. A recent examination of Fairfax Hospital infants with spina bifida found that 14 of 15 born with that condition over a two-year period were children of foreign-born mothers. The number of foreign born residents in Northern Virginia increased in one decade from 5 percent to 14 percent of the population. Minority populations have increased dramatically in the past decade, so that 1 out of 4 persons in Northern Virginia today is a member of a racial/ethnic minority. Language, literacy and culture all affect health care expectations and the delivery of care. Almost 48,000 Northern Virginians speak English poorly or not at all. Most (27,000) live in Fairfax county, but another 15,400 live in Arlington and Alexandria. The major problems limiting access to services in Northern Virginia are language/cultural differences and the lack of Medicaid providers of care. Approximately 14 percent of households contain at least one member who has no health insurance coverage (Northern Virginia Planning District Commission, 1995).

Transportation is a major problem, particularly in Prince William and Loudoun counties, where there is no public transportation. Transportation to some facilities may exist but involves two to three transfers to reach any destination.

Perinatal Region VI

Using the criteria developed for this study, Brunswick, Emporia, Greensville, King and Queen, Lunenburg, Mecklenburg, Nottoway, Petersburg, Richmond, Westmoreland, Northumberland, Lancaster counties and Richmond City are the areas identified as under served

due to underutilization of perinatal services. The region is diverse and includes urban, suburban and rural settings. These counties and cities lie within four health districts with the exception of Richmond City.

Crater Health District, which includes the designated localities of Emporia, Greensville and Petersburg, is primarily rural with two small urban cities, Emporia and Petersburg. Unemployment is higher than the State average and income falls significantly below Virginia medians. Educational levels also fall below the State rates. In terms of race, the area is 51 percent white and 49 percent non-white with the exception of Petersburg, where 73 percent of the population is non-white. As one of the poorer areas of the State, it has higher than average rates of death and disease. In addition, it has significant maternal and infant needs, with extremely high teen pregnancy rates in the cities. All area OB/Gyn physicians accept Medicaid, but the only provider for the uninsured is the health department. Access to providers continues to be a problem and it is more than a transportation issue; entry into prenatal care in the first trimester ranges from 65 percent to 72 percent. Rates of low birthweight and infant mortality are significantly higher than the State levels. As with Richmond City, Petersburg also has a problem with substance abuse among its population.

Brunswick and Mecklenburg counties lie within the Southside Health district, and are bordered by the counties of Nottoway and Lunenburg in the Piedmont Health district. This area is predominantly rural and poor. High unemployment and low education are endemic and well above the State averages. Moreover, the low birthweight and infant mortality rates exceed the State rates. Entry into prenatal care ranges from a low of 59 percent in Brunswick to a high of 78 percent in Lunenburg and Nottoway counties. Access to care is a major problem due to a shortage of providers and transportation problems. The health departments in the Southside Health district are experiencing a decline in their client base, yet the increase is not being seen in the private sector. Other factors related to late entry into care include denial of pregnancy, lack of knowledge regarding need for care and availability of services in the community, especially among teens and younger women.

Three Rivers Health District contains the counties of Westmoreland, King and Queen, Richmond, Northumberland and Lancaster. The district is relatively isolated and sparsely populated, and all the counties are very rural and plagued by poverty, unemployment and low educational attainment. All these counties except one are both state and federally designated as medically under served. Prenatal care is delivered by the local health departments and a federally funded clinic. The only two private practice obstetricians are located in Kilmarnock and they travel to see patients in the health departments. The counties have significant maternal and infant health needs and their rates of low birth weight and infant mortality are well above the state level. Entry into prenatal care ranges from 72 percent to 77 percent, and access to care is hampered by the distance to care and the lack of transportation. Teen pregnancy remains a problem in these counties.

In Richmond City the problems of extreme poverty in certain geographic areas, unemployment and low educational status along with the increasing problem of substance abuse, contribute to the poor perinatal health status. The Richmond Infant Mortality Review Program, funded by the Healthy Start Initiative, and the Region VI RPCC, have studied infant deaths and their causes in the city for 2 years. The leading cause of infant mortality is extreme prematurity, and the low birthweight rate continues to increase. Despite the availability of advanced neonatal care, these infants are born too small to survive and the mortality rate has remained at 15.2 per 1,000 live births for the last four years. The women most affected are blacks in their mid twenties to thirties. The barriers to prenatal care are not physical access, they are related to both the sociocultural factors and a lack of a coordinated system of care with outreach support services for the poor. Perinatal substance abuse is prevalent among pregnant women in Richmond. In a 1993 study at the Medical College of Virginia Hospitals (MCVH), 19 percent of the women coming in for their first prenatal visit admitted to having used alcohol or illicit drugs or had a positive toxicology screen (MCVH, 1993). In 1996, about 8 percent of pregnant women who delivered at MCVH were diagnosed with substance abuse. In addition, the Richmond Infant Mortality Review Program case reviews identified the use of illicit drugs, such as cocaine, strongly associated with preterm labor. Treatment services are available on both an inpatient and outpatient basis in Richmond, but are not adequate to meet the demand. Private obstetricians in the community are not routinely performing interview screening for substance abuse during pregnancy, thus these women remain unidentified.

Common factors affecting the women and infants throughout the region are extreme poverty, lack of knowledge regarding good nutritional habits and the importance of prenatal care, the denial of pregnancy, and lack of social support, which all contribute to the problems of low birthweight and infant mortality.

Perinatal Region VII

Matthews county is designated as under served due to manpower deficiencies. It is an isolated county limited by water and distance from major service centers with no perinatal providers or delivery services in the county. All pregnant women must travel at least 45 minutes to obtain any health care services.

Accomack, Northampton, Hampton, Norfolk and Portsmouth have been identified as under served due to underutilization of perinatal services. Perinatal Region VII is a geographically and demographically diverse region that encompasses urban, suburban and rural settings. The region is segmented geographically by its waterways. Major sectors of the local economy include reliance on the military, the military support industry, the shipbuilding and shipping industry, and the health care industry. The Eastern Shore is unique in that its population rises substantially during the months from April to October with an influx of migrant agricultural workers. The migrant worker population brings not only a large number of uninsured pregnant women but also a large population that does not enter prenatal care early. This population also has language barriers that complicate prenatal care. Active duty military

personnel and their dependents constitute about 25 percent of the region's population. Activities such as the Fetal-Infant Mortality Review program have shown that the capacity to save small neonates through sophisticated medical interventions may have reached their limit. Other unexpected factors come into play, namely that the perinatal environment, the lifestyle choices, and the general social environment of perinatal women can have a larger impact on perinatal health, and therefore, on these types of indicators than previously thought. In other words, the issue of low birth weight is not primarily a medical problem, but is more of a social problem. In 1995, 80 percent of pregnant women received care in the first trimester. Although Hampton, Portsmouth and Norfolk address substance abuse through the Community Service Boards, programs such as Project Link (which is specific to meeting the needs of substance abusing women) are not available in these localities.

The Eastern Virginia region of the Commonwealth has the highest incidence of HIV positive women (1.8 women per 1000 tested), (Surveillance Quarterly, June, 1990). HIV infection in the population of childbearing women is of particular concern because of the possibility of perinatal transmission of the virus.

Perinatal substance abuse is also a major concern in this region. The Perinatal Urine Toxicology Study was a blinded prevalence study conducted at 15 hospitals in eastern Virginia in 1993. Women admitted to the labor and delivery units of these hospitals in February 1993 reported cigarette smoking (21 percent), alcohol use (20 percent) and use of illicit street drugs (6 percent). One hundred of the 1,056 women tested had positive urine toxicology screens. The most frequently identified drugs were the following: codeine (29.2 percent); cocaine (25.7 percent); short-acting barbiturates (20.4 percent); marijuana (13.3 percent); benzodiazepines (3.5 percent); long-acting barbiturates (2.7 percent); morphine (2.7 percent); ethanol (1.8 percent); and quinine (0.9 percent). The typical woman who tested positive in the study was in her mid-twenties, married with children, had some type of health insurance, and was equally likely to be white or black. These women began prenatal care in the second trimester of care. There were several limitations of this study, but interviews with clinicians reveals the acceptance of drug use as a major factor contributing to poor pregnancy outcomes in this region. In this study, as well as other studies in Virginia, drug use is associated with late or no prenatal care.

APPENDIX J

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APPENDIX K

COMMONWEALTH OF VIRGINIA DIVISION OF WOMEN'S AND INFANT'S HEALTH TELEPHONE SURVEY ON PERINATAL SERVICES IN UNDER SERVED AREAS

Focus: Access to perinatal services in under served areas of the Commonwealth of Virginia

Respondents Name: _____

Telephone Number: _____

Organization: _____

Position / Title _____

Interview Attempts:

	month and day	time
one:	_____	_____
two:	_____	_____
three:	_____	_____
four:	_____	_____

Interview Status:

Completed _____ date _____ time

Not Completed (why)

_____

_____

Copy when complete? _____**yes** _____**no**

Control Number_____

DIVISION OF WOMEN'S AND INFANT'S HEALTH SURVEY OF ACCESS TO PERINATAL SERVICES IN UNDER SERVED AREAS

The Virginia General Assembly has mandated a study to address the issue of providing perinatal services to under served areas of the Commonwealth. Your name was recommended by the Maternal-Child Health Council, Perinatal Early Childhood Subcommittee as a very knowledgeable person. There are no right or wrong answers. We are interested in your opinions. Your individual comments will not be attributed.

Under served areas are defined as either counties or cities that have more than 200 births per full time equivalent provider of prenatal care service and where a significant portion of the population must drive 45 minutes or more to access prenatal care.

OR

Counties or cities that have no labor and delivery services in the county/city where clients must drive greater than 1 hour for delivery services.

Perinatal providers include obstetricians, family practice physicians, nurse practitioners, and certified nurse midwifes.

THIS SURVEY SHOULD TAKE ABOUT THIRTY MINUTES OF YOUR TIME. IS THIS A GOOD TIME FOR YOU, OR COULD I MAKE A PHONE APPOINTMENT WITH YOU LATER IN THE WEEK OR DURING THE WEEKEND?

WE WILL, OF COURSE, LIST BY NAME AND ORGANIZATION ALL PARTICIPANTS IN THE INTERVIEW PROCESS IN OUR FINAL REPORT. HOWEVER, WE WILL MAINTAIN THE CONFIDENTIALITY OF YOUR COMMENTS IN THAT NONE OF THE ANSWERS YOU PROVIDE WILL BE ATTRIBUTED TO YOU SPECIFICALLY.

WOULD YOU LIKE US TO SEND YOU A COPY OF THE FINAL REPORT AFTER IT HAS BEEN PRESENTED TO THE 1998 GENERAL ASSEMBLY? (*CHECK APPROPRIATE BOX ON COVER SHEET*)

Yes _____ No_____

If yes, what address would you like us to send it to?

_____

_____

_____

FIRST, LET'S TALK ABOUT SOME STRATEGIES FOR RECRUITING OBSTETRICAL PROVIDERS TO PRACTICE IN UNDER SERVED AREAS OF THE COMMONWEALTH. I'D LIKE TO FIND OUT WHAT YOU THINK. DO YOU THINK IT'S A GOOD STRATEGY TO:

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Encourage family practice physicians and obstetricians who have left the practice of obstetrics to resume their practice of obstetrics.	5	4	3	2	1
Grant preferred medical and nursing school admissions to applicants from under served areas	5	4	3	2	1
Provide financial support for Virginia residents to attend both in state and out of state certified nurse midwife training	5	4	3	2	1
Establish other incentive programs encouraging enrollment in certified nurse midwife programs .	5	4	3	2	1
Fund scholarship programs for perinatal providers for practice in perinatal under served areas	5	4	3	2	1
Increase funding for the Virginia Physician Loan Repayment Program	5	4	3	2	1
Develop educational opportunities for perinatal providers in rural or under served areas via telecommunications	5	4	3	2	1

What additional effective strategies for recruiting perinatal providers to under served areas would you suggest?

What specific incentives are needed?

How should these incentives be implemented?

How should the incentives be funded?

NOW, LET'S TALK ABOUT DEVELOPING COLLABORATIVE TRAINING MODELS IN MEDICAL AND NURSING SCHOOLS. DO YOU THINK IT'S A GOOD STRATEGY TO:

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Increase size of obstetrical training programs in the Commonwealth	5	4	3	2	1
Increase opportunities for obstetrical and family practice residents to deliver babies	5	4	3	2	1
Educate physicians on the benefits of utilizing advanced practice nurses in perinatal practices	5	4	3	2	1
Encourage Managed Care Organizations to work with public institutions to increase opportunities for obstetrical training	5	4	3	2	1
Develop mechanisms by which private hospitals can work with public institutions to increase opportunities for obstetrical training	5	4	3	2	1
Develop collaborative training models incorporating obstetrics, family practice, and nursing education	5	4	3	2	1
Develop programs to ensure that family practice residents are adequately trained to meet the demands of rural obstetrical practice	5	4	3	2	1

What other suggestions for developing an effective collaborative training model that would provide pennatal services to under served areas would you suggest?

What specific strategies can be used to develop these models?

How can these collaborative models be implemented?

How can these collaborative models be funded?

NOW LET'S TALK ABOUT REMOVING BARRIERS TO PERINATAL PRACTICE IN UNDER SERVED AREAS--SOME OF THE BARRIERS TO PRACTICE INCLUDE RESTRICTIVE HOSPITAL PRIVELIDGES, LIMITED PRESCRIPTIVE AUTHORITY FOR CERTIFIED NURSE PRACTITIONERS AND UNEQUAL REIMBURSEMENT FOR SERVICES.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Allow for broader participation by nurse practitioners, including certified nurse midwives, in the delivery of prenatal services	5	4	3	2	1
Allow for broader participation by nurse practitioners, including certified nurse midwives in the delivery of inpatient obstetrical services	5	4	3	2	1
Allow for broader participation by family physicians in the delivery of prenatal services	5	4	3	2	1
Allow for broader participation by family physicians in the delivery of inpatient obstetrical services	5	4	3	2	1
Minimize potential malpractice liability in physician/nurse practitioner collaboration	5	4	3	2	1
Remove the difficulty obtaining hospital privileges sometimes faced by certified nurse midwives and nurse practitioners	5	4	3	2	1
Increase limited prescriptive authority for nurse practitioners	5	4	3	2	1
Provide partial payment for medical liability insurance premiums for all perinatal providers in under served communities	5	4	3	2	1
Increase assumption by the Commonwealth for the financial risk of medical liability judgement for all perinatal providers	5	4	3	2	1

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Enhance the financial incentive package to attract providers to under served areas	5	4	3	2	1

What do you think are the major barriers to perinatal practice in under served areas?

What strategies can be implemented to remove these barriers?

How should these strategies be funded?

NOW I'D LIKE TO HAVE SOME OF YOUR THOUGHTS ON INCENTIVE PROGRAMS FOR COLLABORATION IN PROVIDING PERINATAL SERVICES.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Provide third party reimbursements to nurse practitioners and certified nurse midwives in under served areas	5	4	3	2	1
Increase providers participation in the Birth Injury Fund(also known as Virginia Birth Related Neurological Act) by obstetricians, certified nurse midwives, and family physicians	5	4	3	2	1
Encourage private insurance and/or managed care organizations to offer affordable plans (that include maternity coverage) to small business employers	5	4	3	2	1
Create a balanced fee structure between prenatal, labor and delivery charges	5	4	3	2	1

What specific incentives should be provided to encourage collaborative practice in providing perinatal services in under served areas?

How can these incentives be implemented?

What type of funding should be provided to encourage collaborative practice in under served areas?

What barriers currently exist?

How can these barriers be eliminated?

NOW LET'S DISCUSS SOME IDEAS FOR IMPROVING ACCESS FOR WOMEN NEEDING PERINATAL CARE. DO YOU THINK IT WOULD BE A GOOD IDEA TO:

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Increase availability of transportation for women to perinatal care providers	5	4	3	2	1
Expand medicaid eligibility to at least 185% of the poverty level for perinatal planning services (currently 133%)	5	4	3	2	1
Provide funding and manpower for joint public and private programs that provide perinatal care regardless of patient's payment source	5	4	3	2	1

What are the top three major barriers faced by women in under served areas seeking access to perinatal care?

1. _____

_____

2. _____

_____

3. _____

_____

What three specific strategies can be implemented to remove these barriers?

1. _____

_____

2. _____

_____

3. _____

_____

What type of funding is needed to remove barriers to women seeking access to perinatal care in under served areas?

_____

_____

APPENDIX L

PUBLIC COMMENTS

Private Obstetrician:
Strongly feels the problems with access to perinatal care is not the lack of providers and/or services but lies in the personal lifestyle of the women.

Health District Director:
Reported a history of working with the Division of Risk Management at the Virginia Department of Health on the malpractice issue. Earlier a plan was developed for the state to cover malpractice premiums of indigent pregnancies/deliveries, but when it came time to implement the plan, the physicians were not interested in participating. "I do believe that the concept of allowing a reduced charge for participation in the Neurologically Impaired Infant Program might be attractive to family practitioners who wished to do obstetrics, but I am skeptical that there is a significant number who would actually do this."

Physician, former employee of the Virginia Department of Health:
Concerned that the potential recipients of prenatal care were not considered key informants. Questioned the increased funding of medical and nursing scholarships as a strategy to increase manpower because, "No data have been provided to show how effective this has been....." Raises the issue that the term "underserved" seems to be equated to "rural." Identifies lack of finances, transportation and client education on the importance of prenatal care as barriers to women participating in prenatal care. Suggests that better linkages between doctor's offices, hospitals and local health departments are needed. Also suggests, "Possibly staff from the three medical schools, ...could serve as locums in rural and inner city areas allowing these burdened physicians time off for vacations and additional training at the medical schools."

Consumer of midwifery services:
Certified Professional Midwives (CPM) are qualified maternal care providers who have received their credentials from the North American Registry of Midwives (NARM). The CPM process validates the knowledge, skills, and experience of entry-level and experienced midwives through a comprehensive, competency-based application process, a written exam, and a skills assessment by a NARM certified Qualified Examiner. Reports an obvious solution to increase the availability of and access to perinatal care is through the use of a decentralized network of traditional midwives and small, free-standing birth centers. CPMs and other traditional midwives excel at providing continuity of care for their clients and integrating extensive pregnancy, nutrition, and basic health care education into regular prenatal visits. CPMs and other traditional midwives are educated and trained to provide the Midwifery Model of Care, which is based on the fact that birth is a normal life event, not an illness or injury, and to recognize risk factors and refer women, as necessary, to appropriate medical care providers. Requests the workgroup consider the benefits of CPM and traditional midwifery care for underserved Virginians.