REPORT OF THE
DEPARTMENT OF HEALTH ON

ESTABLISHMENT OF PROFESSIONAL GUIDELINES FOR OBSTETRICAL CARE

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

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Department of Health
P O BOX 2448
RICHMOND, VA 23218

RANDOLPH L. GORDON, M.D., M.P.H.
COMMISSIONER

TDD 1-800-828-1120

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TO: The Honorable George Allen

and

The General Assembly of Virginia

The report contained herein is pursuant to House Joint Resolution 110, agreed to by the 1996 General Assembly.

This report constitutes the response of the Commissioner of Health from the task force representing 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, the Virginia Council of Nurse Practitioners and the State Department of Health to establish professional guidelines for obstetrical care.

Respectfully Submitted,

Randolph L. Gordon, M.D., M.P.H.
Commissioner

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EXECUTIVE SUMMARY

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.

A task force was formed and convened June 12, 1996 and July 31, 1996. In initiating its work relative to HJR 110, the task force examined the issues which prompted the request for this study and concluded that access to obstetrical care in rural areas of Virginia is the critical issue to be addressed. 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.

Perinatal issues examined by the task force included the following: standards of obstetrical care and neonatal care, provider availability and distribution, collaboration among providers including nurse midwifery practice issues and birthing centers. A mail survey of all family practice physicians including senior family practice residents was conducted by the Virginia Academy of Family Physicians in August, 1996 to assess the level of provider participation and interest in providing perinatal services in rural Virginia. Survey findings are provided in Appendix D.

The task force identified availability of providers as a major issue regarding access to obstetrical care in rural Virginia. The vast majority of obstetricians are located in urban areas because rural areas do not provide a sufficient population base necessary to support an obstetrical practice. Research shows that other professionals in rural areas such as family practice physicians, nurse midwives and nurse practitioners could safely and conveniently provide obstetrical services. Family physicians are more widely distributed across rural areas than obstetricians. While family physicians in rural areas outnumber obstetricians, very few family physicians practice obstetrics. Research has demonstrated that certified nurse midwives are capable of providing high quality, cost-effective care within their scope of practice. However, at least one third of the nurse midwives licensed in Virginia are not actively practicing. Those who are practicing, like obstetricians, are strongly concentrated in urban areas. Nurse practitioners are also concentrated in the urban areas, even though nurse practitioners provide a substantial portion of prenatal services in rural health departments and clinics.

The provision of risk-appropriate care for all pregnant women is dependent upon clear communication and cooperation among the professionals and organizations involved in providing perinatal services. The recruitment of an adequate number of professionals to rural areas could alleviate some of the maldistribution problem. The ability of providers to assess prenatal patients for any risk factors that require consultation or referral is basic to providing risk appropriate care. Open communication among providers is critical for referrals to be timely and appropriate.

The development of formal arrangements among providers of obstetrical services is complicated and dependent upon many variables at the local level. One variable is the introduction of managed care systems into communities. So far, the impact on the perinatal health care system is unknown. Standards of obstetric care are being determined by factors not only generated by the providers and their knowledge but by payers of care. For example, level of care may be determined by the source of payment not the standard of care or judgment by the provider. Many of these changes highlight the need for more communication among all the providers of perinatal services. The task force felt that efforts to increase communication among the professionals through collaborative educational experiences and professional groups would improve the quality of obstetric care.

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 improve the quality of obstetric care. The recruitment of all types of providers into these rural areas is important. Recommendations of the task force follow.

- 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.

- 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.

- 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.

- 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.

- 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.

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

INTRODUCTION

Overview and Purpose

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.

The resolution requires two reports; a progress report on the work of the task force to be submitted to the Governor and the General Assembly by October 1, 1996 and then a final report with recommendations to the Governor and the 1997 General Assembly. A copy of the resolution is included as Appendix A.

The following study objectives were defined by the task force.

- Develop professional guidelines for prenatal care, detection of high-risk cases and appropriate referral/consultation for pregnant women in rural Virginia.

- Assess the referral and consultative arrangements among family practice physicians, obstetricians, certified nurse midwives and nurse practitioners in providing prenatal and intrapartum care.

- Identify ways in which a collaborative system of consultation/referral arrangements among family practice physicians, obstetricians, certified nurse midwives and nurse practitioners can be developed in rural areas of Virginia.

Research shows that the provision of quality obstetrical care is associated with positive pregnancy outcomes. Two of the most common indicators used to assess maternal and child health outcomes are infant mortality and low birth weight. Statistics indicate that even though Virginia's infant mortality is improving, the percentage of low birth weight infants has remained stable. Also, there are significant differences in these rates depending on race, age, education, and geographic region. Rural areas in Eastern Virginia, Southside Virginia, and parts of Southwest Virginia tend to have high infant mortality rates compared to the rest of the state. This is not to say the problem does not occur elsewhere but the focus of this study is obstetrical care in rural Virginia.

weight infants has remained stable. [5] Also, there are significant differences in these rates depending on race, age, education, and geographic region. Rural areas in Eastern Virginia, Southside Virginia, and parts of Southwest Virginia tend to have higher infant mortality rates compared to the state rate. [6] This is not to say the problem does not occur elsewhere but the focus of this study is obstetrical care in rural Virginia. The National Rural Health Association reported that pregnant women in rural areas of Virginia are at most risk for receiving inadequate prenatal care than other sections of the country. [6] Virginia's local health departments and Regional Perinatal Coordinating Councils report that many women living in rural areas lack adequate access to prenatal care, and that lack of transportation is a component of that problem.[7,8] Distance from obstetrical care is associated with delay in entering prenatal care and continuing that care throughout pregnancy. [6]

Senate Joint Resolution 331, passed by the 1995 General Assembly, directed the Joint Commission on Health Care to study access to obstetrical care for the women of rural Virginia. That study reported that the limited access to prenatal care was due to lack of obstetricians and other providers of prenatal services. [9] According to that study, the vast majority of obstetricians are located in urban areas. As of 1993 at least 40 localities did not have a resident obstetrician. [9] A major reason given by obstetricians for not practicing in rural areas is the insufficient population base available to support an obstetrical practice.[10] Therefore, obstetrical care in rural areas is frequently provided by other professionals such as family practice physicians, nurse midwives and nurse practitioners.

Family physicians are more widely distributed across urban and rural areas than obstetricians. In 1994, data from the State Board of Medicine Database and Medical College of Virginia, Virginia Commonwealth University (MCV-VCU) survey indicated that there was a total of 4,650 primary care physicians in Virginia, which includes physicians licensed in Family Practice, General Internal Medicine, Pediatrics and General Practice. [11] Of those physicians 1,500 practice in rural areas. [11] While family physicians in rural areas outnumber obstetricians, very few family physicians practice obstetrics. As reported in SJR 331 Obstetrical Care in Rural Areas, only about 10 percent of Virginia family physicians practice obstetrics, and only about 6 percent assist in deliveries. [9] That same study identified one of the reasons for family practice physicians not providing obstetric care was difficulty obtaining consultative help from obstetricians.

Lack of backup and consultation as reported by the family physicians is directly related to the lack of obstetricians as well as the practice climate in the rural areas. Availability of providers and the collaboration of those providers in rural areas affects access to care for pregnant women. Approaches involving risk management strategies such as reduced liability premiums, increase Medicaid reimbursement, physician recruitment and development of backup mechanisms, and expansion of the use of advanced practice nurses such as certified nurse midwives are being used across the country to increase access to prenatal care in rural areas. [6,12,13] If the present trend continues, access to prenatal care will become even more limited unless the number of obstetricians and/or family physicians increase. [6,11,14,15]

Research has demonstrated that certified nurse midwives are capable of providing high quality, cost-effective care within their scope of practice. According to a study by Virginia Health Planning Board and the Department of Health Professions, Virginia had 76 licensed nurse midwives in 1992. [16] However, at least one third of these nurse midwives were not actively practicing. Those who were practicing were strongly concentrated in urban areas. Based upon the 1996 licensing data, there are 121 certified nurse midwives in Virginia. [17] This licensing data includes residence but does not indicate how many CNM's are providing direct care or where. Nurse practitioners are also concentrated in the urban areas, even though nurse practitioners provide a substantial portion of obstetrical services in rural health departments.

METHODOLOGY

In order to respond to the resolution, a task force was formed and convened June 12, 1996 and July 31, 1996. A list of task force members is included as Appendix B. The task force members considered previous legislative studies concerning obstetrical care, reviewed pertinent literature on the provision of obstetrical care and conducted a survey. There is a summary of the legislative studies that were reviewed regarding access to obstetric care in Appendix C. The following perinatal issues were identified as needing examination by the task force: standards of obstetrical and neonatal care, provider availability and distribution, collaboration among all providers including nurse midwifery practice issues and birthing centers.

A mail survey of all family practice physicians, including family practice residents in training, was conducted in August 1996 by the Virginia Academy of Family Physicians. The survey was designed to assess the level of provider participation in perinatal services in rural Virginia. For those providers who do not participate in obstetrical care, the survey assessed their willingness and interest in providing prenatal and/or delivery services and factors discouraging their participation. A copy of the survey with responses is contained in Appendix D.

HJR 110 specifically requested the establishment of professional guidelines for obstetrical care, but the task force determined that the development of professional guidelines was not necessary, since guidelines already exist. The group identified acceptable published standards and protocols which should be used as a basis for appropriate prenatal care and appropriate referral. A review of those guidelines is included in the next section. Risk factors that suggest the need for further evaluation, consultation or referral are included in these published guidelines and were identified by the task force members. Those risk factors and recommendations for consultation are listed in Appendix E and Appendix F.

FINDINGS

This section provides analysis of the pertinent issues, examined by the task force, including professional guidelines and standards, availability of providers, collaboration among providers including the role of birth centers.

Professional Guidelines and Standards

Initially, prenatal care was developed to identify early symptoms of preeclampsia so treatment could be initiated. Today, prenatal care has been expanded to include a comprehensive assessment for a variety of maternal risk factors and indicators of abnormal fetal development. Historically, this identification and treatment of problems approach to prenatal care has been associated with improved perinatal morbidity. [2,18] Even though infant mortality has significantly decreased in the last 20 years, the number of low birth weight births has remained unchanged statewide and in some local areas of Virginia actually increased.[5] This has resulted in concern on the part of prenatal care providers that the quality or content of prenatal care as it exists today is not positively impacting pregnancy outcome. [19] Historically, the focus of prenatal care has not been on health promotion and prevention. Challenged by this knowledge, medical and nursing professional groups involved in the delivery of perinatal services have published standards and guidelines including health promotion and prevention strategies. These standards guide providers of obstetrical care in risk assessment and health promotion throughout the childbearing period. These professional organizations as represented on this task force are committed to providing the appropriate level of care to all women according to need.

The American College of Obstetricians and Gynecologists (ACOG) in collaboration with the American Academy of Pediatrics (AAP) jointly published in 1983, its first edition, Guidelines for Perinatal Care which has been the basis for subsequent editions. [20] Guidelines for Perinatal Care are based upon the recommendations of the March of Dimes' Committee on Perinatal Health and are contained within its publication, Toward Improving the Outcomes of Pregnancy. [21] Included in this document is a three-tiered system of care outlining level of care based upon patient risks and complexity of needs. [21] Guidelines for Perinatal Care utilizes the terms "primary physician" or "community provider" allowing for those other than the obstetrician to be providing prenatal services. Both of these documents reflect the idea that family physicians, general practitioners, certified nurse midwives and nurse practitioners are appropriate providers of obstetrical care. These joint ACOG/AAP guidelines have become a cornerstone of obstetrical practice in the nation. The guidelines are intended for use by all providers of care to pregnant women and their newborns in both community and hospital settings. The most current scientific information, professional opinions and clinical practices are presented.

AWHONN, the Association of Women's Health, Obstetric, and Neonatal Nurses, formerly NAACOG, the Nurses' Association of the American College of Obstetricians and Gynecologists has published NAACOG Standards for the Nursing Care of Women and

Newborns. [22] Two other publications, Didactic Content and Clinical Skills Verification for Professional Nurse Providers of Perinatal Home Care and The Obstetric-Gynecologic/Women's Health Nurse Practitioner, also provide guidelines for professionals who are involved in obstetrical care. [23,24] All of these documents focus on the nursing care of women and their newborns and complements the medical guidelines as outlined in Guidelines for Perinatal Care.

Even though complications can occur without risk factors being present, the goal of care is to identify risk factors early and intervene appropriately when possible. Risk factors are also influenced by both medical and social circumstances including lifestyle behaviors. The task force endorsed the partial list of risk factors as determined by maternal history and physical examination as listed in Guidelines for Perinatal Care. These factors are listed in Appendix E. Recommendations on what constitutes referral to another level of care is included in the Toward Improving the Outcome of Pregnancy. Risk factors with the recommended consultation/referral pattern from Toward Improving the Outcome of Pregnancy is included in Appendix F. Any provider of obstetrical care should be familiar with those guidelines and should know how to assess for the listed risk factors and refer accordingly. Guidelines for Perinatal Care also includes information on types and timing of diagnostic procedures, laboratory studies and fetal surveillance tests necessary to monitor a pregnancy safely.

The task force reviewed the 1988 State Perinatal Services Advisory Board Plan which was updated from the Statewide Perinatal Services Plan of 1983 and identified the deficiencies and gaps in health services for Virginia' s mothers and newborns. Recommendations contained within the plan for improving the perinatal health care system included "Guidelines for the Delivery of Prenatal Care in Ambulatory Settings" and "Guidelines Concerning Maternal Transfer." [25] Since that time the Perinatal Advisory Board was dissolved and the Maternal and Child Health Council was created to improve the health of Virginia's mothers and children. Those guidelines, in large part, were based on the Guidelines for Perinatal Care. There have not been other statewide recommendations since that time.

The task force also reviewed a document developed by The Northern Virginia Regional Perinatal Coordinating Council (NVRPCC). [26] In 1992, the Regional Perinatal Coordinating Councils (RPCC) were established by the Virginia Department of Health to create a collaborative network among providers of perinatal services to ensure risk appropriate care to all perinatal clients in Virginia. The NVRPCC convened a subcommittee in 1994 to develop regional obstetrical guidelines. After a year of deliberation the group published guidelines in the fall of 1995. This RPCC represents an urban area rich with obstetrical providers and therefore, infrequent deliveries are attended by family physicians. The subcommittee represented obstetricians, perinatalogists, certified nurse midwives, nurse practitioners and clinical nurse specialists but no family physicians. Other RPCC's have convened similar subcommittees but those providers have been unable to reach a regional consensus on practice issues.

There is an interest in designating levels of care for inpatient obstetrical patients as has been recently mandated by Code relative to neonatal services. The implementation of these

neonatal regulations into hospital licensure is in process, and therefore, the designation of neonatal levels of care has not been completed. There are some guidelines for obstetrical services published by the March of Dimes, contained within the publication Toward Improving the Outcomes of Pregnancy as well as in the Guidelines for Perinatal Care. Even though the development of comparable guidelines for obstetrical care is desired, it would be reasonable to await the neonatal level designations to be completed before pursuing the development of hospital obstetrical guidelines for determining levels of care.

Availability of Providers

Inadequate numbers of providers will interfere with appropriate referral and adherence to accepted guidelines. In SJR 331 which studied obstetrical care in rural areas, four of the five recommendations concerned practice issues for providers of care. Refer to Appendix F for a summary of that study. There have been efforts to recruit physicians and advanced practice nurses into rural areas. The following programs were examined by the task force and will be reviewed briefly.

The Virginia Medical Scholarship Program, administered by VDH, provides medical scholarships for students who intend to enter primary care including family practice, internal medicine, pediatrics or obstetrics/gynecology. Students agree to practice for one year in a medically underserved area of Virginia in return for each year of scholarship. The Virginia General Assembly appropriates funding each biennium for a determined number of $10,000 scholarships equally divided among the Virginia medical schools, with four scholarships set aside for East Tennessee State University. In addition, twenty-five thousand dollars are allocated yearly by the Commonwealth for five scholarships for nurse practitioners and nurse midwives who agree to practice in a medically underserved area upon graduation.[27] Scholarship incentive programs have had variable success in attracting providers to rural areas. Interested nurses from rural areas who would be interested in pursing an advanced education report that the Virginia scholarship is not an adequate incentive. [16] The task force believes that a loan forgiveness program with a minimum of a three-year commitment is preferable and would be more successful in obtaining providers. National data supports this observation. [6] A person is more likely to stay once they have invested more than a couple of years in that community. The federal scholarships are available but are high-risk because of the substantial penalties assessed if the person defaults on the terms. Many possible candidates are not willing to take the risk of utilizing federal scholarship programs because of the financial risk.

The Healthy Communities Loan Fund is available to persons interested in expanding or developing a new practice. The goal of the fund is to increase the number of primary care providers in one of Virginia's Health Professional Shortage Areas. Physicians, hospitals, certified nurse midwives, nurse practitioners, physician assistants or anyone willing to make an investment in bringing primary care providers into health professional shortage areas can apply for these loans. The funds can be used to expand a practice, renovate existing facilities, buy

equipment or finance elements of a recruiting package such as loan forgiveness, income guarantee, or loan consolidation with a low interest rate to entice a new provider to the area. Amounts range from $50,000 to $250,000 with a prime interest rate but no bank fees, no points and no penalties for early repayment. [27]

A major reason given in the past by physicians to eliminate obstetrical services has been reported to be the cost of liability insurance and fear of litigation. [2,10] Even with several programs and initiatives started across the U.S. in the past decade, malpractice issues continue to influence the participation of providers in obstetric care. [6,29] In California in 1994, obstetricians were involved in the highest number of cases as compared to any other speciality far ahead of general and family practitioners. [30] The recent survey conducted for this study by the Academy of Family Physicians reported that of the family physicians who are not providing obstetrical services, 78% report malpractice insurance as one of the reasons not to provide obstetrical services. Refer to Appendix D for survey results.

North Carolina has also experienced the same problems with decrease access of obstetrical care in rural areas. The Rural Obstetrical Incentive Program (ROCI) was established in 1989 to offset the malpractice insurance costs of rural providers in attempts to lure obstetricians, family physicians and nurse midwives into providing obstetrical service. This program provides a state subsidy to physicians and certified nurse midwives who agree to provide obstetrical care to rural women according to the terms of a maternity care coverage plan of that locality and are awarded by local health department. These plans are based upon the needs of that locality and are awarded by local health departments to those participating physicians and/or certified nurse midwives who can best meet the needs of that population. The fund makes available up to $7500 to physicians and up to $4000 to certified nurse midwives to subsidize the extra insurance costs incurred for delivering babies whichever is less. Since the program began, the numbers of physicians participating has increased from 52 in 1989 to 195 in 1996. Now there are 17 participating certified nurse midwives compared to none when the program started. At the present time, 23 percent of all births in North Carolina are attended by obstetrical providers participating in the ROCI program. The program continues to expand in spite of budgetary constraints at the state level because it is politically popular. Today the program distributes more than $1,200,000 compared to a beginning budget of $240,000. Evaluation of participants' satisfaction and outcome measures such as impact on infant mortality, low birth weight, or adequacy of prenatal care has not been done. [31,32]

In response to obstetricians ceasing to provide obstetrical services due to rising cost of malpractice insurance, the Commonwealth of Virginia, established in 1987, a Birth-Related Neurological Injury Compensation Fund (the Injured Infant Act) which provides reimbursement for expenses for babies with serious birth-related neurological injuries not covered by other insurance programs. Participating providers who are obstetricians, family physicians and hospitals pay into the fund yearly. The fee structure starts with an initial $5,000 for the first year in the program with descending payment amounts each subsequent year. [33] Family practice physicians report the additional $5,000 malpractice premium expense cannot be justified in a

rural practice with a small obstetric caseload. [9] According to the study survey, 84% of the respondents felt that having obstetrical malpractice insurance funded would be an inducement to continue providing obstetrical care. Refer to Appendix D for survey results. Of those who are not providing obstetrical services, 78% reported that increased liability risks and malpractice insurance costs helped the decision to not provide obstetrical care. In that same study, 60% of the respondents felt that having the Neurological Injured-Infant fees markedly reduced would be an inducement to continue providing obstetrical services. Refer to Appendix D for survey results. The task force believes a limited but significant waiver of this fee is an incentive for family practice physicians to provide obstetrical services.

The establishment of a nurse midwifery school in Virginia has been proposed to increase the number of nurse midwives and thus, increase obstetrical services available to pregnant women, particularly in rural areas. The Virginia Commonwealth University School of Nursing conducted a feasibility study and concluded that it would be operationally feasible to develop a nurse midwifery training program, but significant collaboration among providers and resources would be required. [9] Extensive curriculum development and recruitment of a nurse midwifery faculty with appropriate practice sites are necessary at an estimated cost of $126,000 in year one to $358,000 in year three. [9] The teaching hospitals are experiencing a decline in patient population; therefore, the medical school is also having difficulty providing adequate delivery room opportunities for its present physician training class. With the market changes being created by the introduction of managed care and pressures on medical and nursing schools to streamline the curriculum, the development of a nurse midwifery school is not considered cost effective at this time. Virginia is located near two well established nurse midwifery programs: The Frontier School of Midwifery and Family Nursing in Kentucky and Georgetown University in Washington, D.C. The Kentucky program is a community-based nurse midwifery program consisting of self-directed modules which students complete in approximately two years. Clinical sites are arranged by the student in her home community. The Georgetown University program is the traditional classroom setting with clinical sites provided by hospitals and birth centers throughout the Northern Virginia, District of Columbia and Maryland areas. Therefore, those persons desiring nurse midwifery training have programs available to them but they would have to provide the financing.

The Virginia Department of Health is developing a five-year plan that will discuss these issues related to the availability of primary care providers in medically underserved areas of Virginia. Further discussion by this task force will be deferred to the Virginia Department of Health Five-year Plan.

Collaboration among Providers

The provision of risk-appropriate care for all pregnant women during the prenatal and intrapartum period is dependent upon clear communication and cooperation among the professionals and organizations involved in providing perinatal services. The ability of providers to adequately assess prenatal patients for any risk factors and seek consultation or referral is basic

to providing risk appropriate care. In Toward Improving the Outcome of Pregnancy, definitions of basic prenatal care versus speciality and subspeciality are given. Family physicians, general practitioners, obstetricians, certified nurse midwives, nurse practitioners, and advanced practice nurses are all appropriate professionals to provide basic prenatal care. [21] Obstetricians and family physicians with experience, training and demonstrated competence are appropriate professionals to provide speciality prenatal care. Providers of speciality prenatal care should be able to provide basic prenatal care plus fetal diagnostic testing such as ultrasound and management of medical and obstetric complications. Subspeciality care includes advanced fetal diagnoses, fetal therapy, medical, surgical and genetic consultation, and management of severe maternal complications. Only maternal-fetal medicine specialists and geneticists with experience, training and demonstrated competence should provide subspeciality care. Open communication among providers is critical for referrals to be timely and appropriate. Toward Improving the Outcome of Pregnancy stressed the need for this ability of providers to screen clients and refer appropriately as needed. [21] The task force felt that efforts to increase communication among the professionals and the representative professional groups would encourage timely and appropriate referral and ultimately improve the quality of obstetric care in Virginia.

The development of formal arrangements among providers of obstetrical patients is complicated and dependent upon the individual provider's past experiences, education and geography. With the introduction of managed care systems into communities, the impact of such changes on the perinatal health care delivery system is unknown. Standards of obstetric care are being determined by factors not only generated by the providers and their knowledge but also by the cost of providing care. Practice sites which are not profitable in one setting may be forced to relocate and/or close. This occurrence may not necessarily reflect need. Level of care may be determined by the source of payment not the standard of care or decision by the provider. Many of these changes highlight the need for more communication between the hospitals and ambulatory care settings. The RPCC's have been a forum for communication among both public and private providers and health care organizations. Of the more than 800 voluntary members of these councils, six are family practice physicians. There are obstetricians, certified nurse midwives and nurse practitioners on all the seven regional councils but representation varies across the state. The task force believes that the RPCC's could better be used as leaders to increase communication among providers and their health care organizations.

Collaboration among the obstetricians, family physicians, certified nurse midwives, and nurse practitioners has not been optimum nationally or in Virginia. Family physicians reported in SJR 331 lack of obstetrical backup to be a reason for not wanting to provide obstetrical care. [9] In contrast, the survey for this study, 81 percent of the family physicians providing obstetrical services reported obstetric specialist backup was readily available. Refer to Appendix D for survey results. This may indicate that backup issues exist in certain areas but are not occurring throughout the state. Competition for clients by professionals and managed care companies has also strained relationships among all health care professionals.

One model of care which has been used in other countries but in a limited way in American has been formal arrangements between community physicians and the urban obstetricians in the provision of prenatal and intrapartum care. In England, Australia, and Scotland, Share-Care is considered a safe and cost-effective method to deliver obstetric care. The local provider, either a family physician or midwife, provides care to the low-risk woman in the locality she lives. Thorough risk screening is done on the initial visit and subsequent visits and consultation or referral is done based upon identification of risk factors or complications as they arise. Reports from the other countries are that this method allows women to stay near families without compromising perinatal mortality or morbidity and in fact, can improve outcomes. [34,35,36,37,38,39] In most of these studies women seek out prenatal care earlier and utilize care more consistently. Similar programs have been in place in states such as Florida. [40] Virginia has similar arrangements particularly for indigent clients who traditionally seek care at local health departments. Those areas of the state not close to the state-supported hospitals for delivery services have arrangements between the local health departments and local private physicians to provide prenatal and/or delivery services to indigent clients. Private obstetricians, certified nurse midwives and family physicians participate in these arrangements in various localities in Virginia.

Communities where the family practice physicians and obstetricians were in residency training programs with strong collaborative arrangements between family practice and obstetric departments usually have a more welcoming environment for family practice physicians providing obstetric care. [41] As reported by a 1992 legislative study, The Potential for Expansion of the Practice of Nurse Midwives, a reason given why few nurse midwives practice in Virginia is physicians' lack of familiarity with and exposure to the competence and cost-effectiveness of collaborative practice. [16] There is need to increase collaborative education in order to support this understanding and respect among the professionals. [37,42]

It is reported by some that one way to solve the current problem of providing basic prenatal care is to support the role of the certified nurse midwife. [43] In Virginia, certified nurse-midwives reported that they had difficulty in finding a collaborating physician. The physicians reported they do not want affiliation with certified nurse-midwives because of their fear of litigation and malpractice costs. [16] Certified nurse-midwives believed their rejections by physicians to be based on concerns about malpractice and lack of interest in certified nurse midwife services. [16] One telephone survey in Arizona reported 24% of certified nurse midwives had been refused medical backup. [44] Several other documents and legislative studies have addressed the role of certified nurse midwives in providing prenatal care in Virginia and recommendations from these studies have included strategies to reduce the barriers to nurse midwifery practice in order to increase access to obstetrical care. Appendix C includes a summary of recent legislative studies regarding the provision of obstetrical care in Virginia. The impact of policy changes such as prescriptive authority for nurse practitioners including CNM's has not been studied and therefore, is not known. From the experiences in other countries and states, combining the skills of the certified nurse midwife with the family physician with surgical backup is an effective means of meeting needs of underserved rural populations. [45]

Birth Centers

There has been interest by some physicians and nurse midwives in the establishment of birth centers in Virginia. The birth center, a freestanding health care facility where prenatal and birthing services are provided for low-risk patients, can be a way to increase access to obstetrical care to rural areas. [42,46] The philosophy of the birth center is based on a family-centered approach for normal, uncomplicated birth. Most centers in the nation are operated by certified nurse midwives and offer a practice site because nurse midwives have frequently been prohibited from practice in hospitals. The establishment of birth centers is not without controversy. According to Guidelines for Perinatal Care deliveries occurring in places other than hospitals are problematic, even though exception is taken for special circumstances such as geographically isolated areas. A major study conducted in the late 1980's of 11,814 women admitted for labor and delivery concluded that birth centers are safe alternatives for women experiencing normal, uncomplicated deliveries. [47,48,49,50] Presently in Virginia, free standing birthing centers are not regulated by the licensure process. There are presently two centers operating, one in Alexandria and the other in Charlottesville, with certified nurse midwives providing the services. There is a task force convened by the Virginia Department of Health, Office of Health Facilities Regulation pursuing the development of regulations governing outpatient maternity hospitals which would include the birth centers. Birth centers may provide another care option but so far, are housed in urban areas. Because of this current characteristic, the emergence of birth centers will not immediately increase access to obstetrical care to rural clients but may be a worthwhile solution in the future.

CONCLUSIONS AND RECOMMENDATIONS

Lack of affordable malpractice insurance and fear of litigation have been widely reported to have decreased the numbers of obstetrical providers particularly obstetricians. The unavailability of obstetricians in rural areas has heightened an already limited access for pregnant women to obstetrical care. 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 other important factors limiting access to care. With increased communication and collaboration among all providers of obstetrical services, there will be increased adherence to established guidelines and ultimately improve the quality of obstetrical care. Recommendations of the task force follow.

- 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 Pediatrics in setting individual practice guidelines.

- 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.

- 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.

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

- 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.

- Request the Virginia Department of Health to include in their electronic Homepage information identifying specific rural areas where opportunities for practice by obstetricians, family physicians, certified nurse midwives and nurse practitioners exist.

- 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.

- Request the Virginia Department of Health to reconvene the task force as designated by this resolution within one year of this report.

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GENERAL ASSEMBLY OF VIRGINIA -- 1996 SESSION

APPENDIX A

HOUSE JOINT RESOLUTION NO. 110

Requesting the Commissioner of Health to appoint a task force for the purpose of establishing professional guidelines for obstetrical care.

Agreed to by the House of Delegates, March 4, 1996
Agreed to by the Senate, February 29, 1996

WHEREAS, measures such as infant mortality rates and low birth-weight rates indicate that Virginia needs to improve its maternal and child health care system; and

WHEREAS, quality obstetrical care is an essential element of an effective maternal and child health care system; and

WHEREAS, many rural areas are experiencing a shortage of obstetricians; and

WHEREAS, family physicians who provide obstetrical care are a vital resource for rural Virginia; and

WHEREAS, rural family physicians and certified nurse midwives who practice obstetrics must be supported by appropriate referral and consultative arrangements with obstetricians; and

WHEREAS, obstetricians must be assured that referring family physicians and certified nurse midwives are able to provide state-of-the-art prenatal care, detect high-risk pregnancies, and make appropriate referrals and requests for consultation; and

WHEREAS, family physicians, nurse practitioners, certified nurse midwives, pediatricians, and obstetricians must have a clear and mutually supportive relationship if Virginia is to make progress in assuring adequate access to obstetrical care in rural areas; and

WHEREAS, the State Department of Health conducts maternal and child health programs for the Commonwealth; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Commissioner of Health be requested to appoint a task force for the purpose of establishing professional guidelines for obstetrical care. In appointing the task force, the Commissioner shall 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 of the American College of Pediatrics, nurse practitioners, and the State Department of Health. 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.

The State Department of Health shall provide staff support for the study.

The Commissioner of Health shall submit a progress report on the work of the task force to the Governor and the General Assembly by October 1, 1996, and the task force shall complete its work in time to enable the Commissioner to submit his findings and recommendations to the Governor and the 1997 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

OBSTETRICAL GUIDELINES TASK FORCE FOR HJR 110

G. Douglas Larsen, MD, District Director
Central Shenandoah Health District

Roger Hofford, MD, President
Virginia Academy of Family Practice Physicians

Willette LeHew, MD, Chairman
Virginia Section ACOG
Virginia Obstetrical and Gynecological Society

Jessica Jordan, RNC, CNM
Virginia Chapter of the American College of Nurse Midwives

Barry V. Kirkpatrick, MD
Virginia Chapter, American Academy of Pediatrics

Kristi Kirks, R.N.C., F.N.P.
Virginia Council of Nurse Practitioners of the Virginia's Nurses' Association

Judy Lewis, RNC, Ph D, OGNP, Chair (alternate)
Department of Maternal-Child Nursing
Virginia Commonwealth University

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 obstetrician/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. (2) Enlarging the pool of physicians willing to provide obstetrical services. (3) Attract physicians willing to provide obstetrical services to underserved areas. (4) Remove barriers to participation in programs serving the financially needy obstetrical patient. (Increase reimbursement, reduce paperwork and provide financial assistance with malpractice premiums). (5) Encouraging a systems approach to the delivery of obstetrical care in underserved areas.

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. Selected recommendations include: (1) Empower the Boards of Medicine, Nursing, and Pharmacy to pursue the changes necessary to allow for broader participation by nurse practitioners, including nurse midwives in the delivery of obstetrical care services. (2) Provide greater access to quality prenatal care regardless of the patient's payment source. (3) Focus existing resources and efforts to increase the availability of transportation for women to obstetrical care providers. (4) Pay part of the medical liability insurance premiums for medical providers of obstetrical care for medically underserved communities. (5) Endorse efforts to enhance utilization of the Birth-Related Neurological Injury Compensation Act. (6) Support funding needed to provide the manpower necessary to implement initiatives such as case management for high-risk women.

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 summarizes results obtained from nurse practitioners and physicians surveys. Some of the relevant findings from the physician survey: (1) Most physicians had some experience working with nurse practitioners. (2) Physicians reported that the most important disincentives for practicing in collaboration with nurse practitioners were potential malpractice liability and the time required for supervision. (3)

Most physicians were opposed to extending eligibility for direct third party reimbursement to nurse practitioners. (4) Most physicians were supportive of extending prescriptive authority to nurse practitioners with certain limitations. (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. Some of the relevant findings from the nurse practitioners survey: (1) Hospitals provide the main practice setting for close to one-half of the nurse practitioners; only 23% indicated that their practice areas were rural. (2) One-half of the practicing nurse practitioners noted that they currently had hospital privileges. (3) Fully one-half of the nurse practitioners noted that extending prescriptive authority would greatly enhance their ability to care for patients. (4) The majority of nurse practitioners indicated that it would be personally important to have direct reimbursement. (5) Very few nurse practitioners indicated that they had ever been named in a lawsuit.

1990 **Virginia Health Planning Board. Alternative Providers in Medically Underserved Areas** This study focuses on the utilization of primary care nurse practitioners and certified nurse midwives to improve access to primary care services. Selected recommendations: (1) Increase the level of Medicaid reimbursement to primary care physicians. (2) Remove barriers to third party reimbursement for midlevel provider services. (3) Increase use of telecommunications technology in baccalaureate level degree and nurse practitioner educational opportunities to rural areas. (4) Expand clinical experiences in medically underserved areas for midlevel educational programs. (5) Establish a scholarship program for the education of midlevel providers. (6) Increase funding for the Virginia Physician Loan Repayment Program. (7) 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. (8) Authorize limited prescriptive authority to nurse practitioners throughout the Commonwealth.

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.

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**

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 underserved. (4) Establish a scholarship program for nurse-midwifery students based upon the student's agreement to practice in medically underserved 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-midwives to provide perinatal services in medically underserved areas or for medically underserved 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.

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. (2) Maternity health services, including family planning, should be included in primary health care for women. (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. (5) There should be increase utilization of mid-level health care providers, specifically nurse practitioners and certified nurse-midwives. (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 Obstetrician/Gynecologist in Legislative Definitions of Primary Care Provider.** Legislative action for the purpose of categorizing obstetricians and gynecologists as primary care physicians was not recommended.

1995 **Joint Commission on Health Care. Obstetrical Care in Rural Areas.** In response to SJR 331 Directing the Joint Commission on Health Care to study access to obstetrical care for the women of rural Virginia. Following options recommended: (1) Consider requesting the Secretary of Health and Human Resources to study the costs and benefits of available options for expanding Virginia Medicaid coverage for pregnant women and infants. (2) Consider requesting the Secretary of Health and Human Resources, in cooperation with the 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 and consumers. (3) The Virginia Academy of Family Practice and the Virginia OB/GYN 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) Consider state funding to establish a nurse midwifery program at VCU-MCV.

APPENDIX D

VAFP Active Member Survey

(Please Return by August 22, 1996, to VAFP Office in the enclosed prepaid envelope)

1. Have you ever provided obstetrics in your practice?

   YES - 189 out of 577 = 33% NO - 388 out of 577 = 67% (If NO, go to ques.6 & 7)

7

2. Do you provide prenatal care and/or do deliveries now in your practice?

   YES - 66 out 189 = 35% NO - 123 out 189 = 65% (If No, go to ques. 6 & 7)

3. Which do you provide?

   A. Prenatal Care - YES - 66 out of 66 = 100%
   B. Vaginal Delivery - YES - 52 out of 66 = 79%
   C. C-Section Delivery - YES - 7 out of 66 = 11%
   D. Postpartum Care - YES - 59 out of 66 = 89%

   Do you plan to continue providing prenatal care and/or deliveries for the unforeseeable future?

   YES - 62 out of 66 = 94% NO - 4 out of 66 = 6% (If No, go to ques. 6 & 7)

5. Which of the following, if available, together or separately, would be an inducement to continue providing obstetrical care? (Please circle all that apply)

   A. 100% obstetrical malpractice insurance funded
      YES - 52 out of 62 = 84%

   B. 50% obstetrical malpractice insurance funded
      YES - 29 out of 62 = 47%

   C. Neurological Injured Infant fees markedly reduced for four to seven years
      YES - 37 out of 62 = 60%

   D. OB/GYN specialist backup readily available
      YES - 50 out of 62 = 81%

   E. Medical school loans retired
      YES - 25 out of 62 = 40%

6. If you practice in a rural area, and if you have adequate training, experience and support, would you be willing to provide prenatal care in your office?

YES - 188 out of 577 = 33% NO - 389 out of 577 = 67%

Please Note: Question #6 may not be completely accurate. Many have answered that do not live in a rural area.

7. Please answer this question if you answered "NO" to questions 1, 2, or 4.

Please circle all of the responses below which helped you make the decision to NOT provide obstetrical care or to stop providing obstetrical care.

A. Did not enjoy obstetrics
YES - 110 out of 415 = 27%

B. Unfriendly residency training environment
YES - 78 out of 415 = 19%

C. No faculty role models
YES - 55 out of 415 = 13%

D. Malpractice insurance costs
YES - 325 out of 415 = 78%

E. Increase liability risks
YES - 325 out of 415 = 78%

F. Difficulty in obtaining obstetrical backup
YES - 166 out of 415 = 40%

G. Neurological Injured Infant fees too high
YES - 117 out of 415 = 28%

H. On-call schedule
YES - 273 out of 415 = 66%

I. Lifestyle issues
YES - 296 out of 415 = 71%

J. Too much to know or to keep up with
YES - 98 out of 415 = 24%

K. Inability to get additional training or experience
YES - 39 out of 415 = 9%

L. Difficulty in finding a practice that provided obstetrical care
YES - 31 out of 415 = 7%

M. Difficulty in finding a hospital that was supportive of family physicians providing obstetrics
YES - 122 out 415 = 29%

VAFP Resident Survey on Obstetrics

(Please return to VAFP by August 22, 1996, in the enclosed postpaid envelope)

1. Before you started your family practice residency training, were you interested in providing obstetrical (prenatal care and/or deliveries) after completing your residency training?

   YES - 43 out of 69 = 62% NO - 26 out of 69 = 38%

2. What residency year are you in now?

   First - 6 out of 69 = 9% Second - 29 out of 69 = 42% Third - 35 out of 69 = 51%

3. Are you planning on or still interested in providing obstetrical care after residency graduation?

   YES - 21 out of 69 = 30% NO - 48 out of 69 = 70% (If YES, return survey)
   (If NO, go to Ques. #4

4. Please answer the next three questions if you answered "NO" to question #3.

   Please circle all of the reasons below which helped you make a decision to **NOT** provide obstetrical care after residency.

   A. Do not enjoy obstetrics YES - 13 out of 48 = 27%
   B. Poor teaching experience YES - 22 out of 48 = 46%
   C. Unfriendly teaching environment YES - 25 out of 48 = 52%
   D. No faculty role models YES - 19 out of 48 = 40%
   E. Malpractice insurance costs YES - 26 out of 48 = 54%
   F. Liability risks YES - 26 out of 48 = 54%
   G. Difficulty getting OB/GYN speciality backup when in practice YES - 20 out of 48 = 42%
   H. Difficulty in finding practice that provides obstetrical care YES - 3 out of 48 = 6%
   I. Difficulty in obtaining hospital obstetrical privileges YES - 15 out of 48 = 31%
   J. Virginia Neurological Injured Infant fee is too high YES - 5 out of 48 = 10%
   K. Lifestyle issues YES - 34 out of 48 = 71%
   L. Call schedule YES - 27 out of 48 = 56%
   M. Difficulty obtaining additional obstetrical training in residency YES - 16 out of 48 = 33%
   N. Difficulty obtaining additional training after residency graduation YES - 4 out of 48 = 8%

5. Which of the following, if available, together or separately, would be an inducement for you to provide obstetrical care? (Circle all that apply)

A. 100% obstetrical malpractice insurance funded YES - 27 out of 48 = 56%

B. 50% obstetrical malpractice insurance funded YES - 10 out of 48 = 21%

C. Neurological Injured Infant fees markedly reduced for four to seven years YES - 12 out 48 = 25%

D. OB/GYN specialist backup readily available YES - 25 out of 48 = 52%

E. Medical school loans forgiveness YES - 19 out of 48 = 40%

F. Better obstetrical teachers YES - 18 out of 48 = 38%

G. More exposure to obstetrics in residency YES - 22 out of 48 = 46%

H. Better reimbursement YES - 8 out of 48 = 17%

I. Better family practice faculty role models YES - 17 out of 48 = 35%

J. Ability to find a practice that provides obstetrics YES - 7 out of 48 = 15%

K. Ability to find a hospital that is supportive of family physicians providing obstetrical care YES - 27 out of 48 = 56%

6. If you had adequate training, experience and support, would you be willing to provide prenatal care in your practice after graduation?

YES - 33 out of 48 = 69% NO - 15 out of 48 = 31%

APPENDIX E

OBSTETRIC RISK FACTORS

Medical Conditions

- Cardiovascular, renal, collagen, pulmonary, infectious, hepatic, and sexually transmitted diseases
- Metabolic or endocrine disorders
- Chronic urinary tract infections
- Maternal viral, bacterial, or protozoal infections
- Diabetes mellitus
- Severe anemia
- Isoimmune thrombocytopenia
- Convulsive/neurologic disorders
- Substance abuse (e.g., alcohol, tobacco, illicit drugs, prescribed medications such as barbiturates, sedatives
- Nutritional disorders, hyperemesis, anorexia

Obstetric/Genetic Problems

- Poor obstetric history
- Maternal age under 16 or over 35 years
- Previous congenital anomalies
- Multiple gestation
- Isoimmunization
- Intrauterine growth retardation
- Third-trimester bleeding
- Pregnancy-induced hypertension
- Uterine structural anomalies (e.g., septum, abnormality caused by in utero exposure to diethylstilbestrol)
- Abnormal amniotic fluid volume (hydramnios, oligohydramnios)
- Fetal cardiac arrhythmias
- Prematurity
- Breech or transverse lie (intrapartum)
- Rupture of membranes for a period of time longer than 24 hours
- Chorioamnionitis

Taken from American College of Obstetricians and Gynecologists and American Academy of Pediatrics. Guidelines for Perinatal Care, Third Edition, 1992

APPENDIX F

Early Pregnancy Risk Identification

Medical History / Conditions	Recommended Consultation*
asthma	
symptomatic on medication	■
severe (multiple hospitalizations)	Δ
cardiac disease	
cyanotic, prior MI, prosthetic valve, AHA Class ≥ II	Δ
other	■
diabetes mellitus	
Class A-C	■
Class ≥ D	Δ
drug/alcohol use	■
epilepsy (on medication)	■
family history of genetic problems (Down Syndrome, Tay Sachs)	Δ
hemoglobinopathy (SS, SC, S-thai)	Δ
hypertension	
chronic, with renal or heart disease	Δ
chronic, on medication or diastolic ≥ 90	■
prior pulmonary embolus/deep vein thrombosis	■
psychiatric disease	■
pulmonary disease	
severe obstructive or restrictive	Δ
moderate	■
renal disease	
chronic, creatinine ≥ 3 with/without hypertension	Δ
chronic, other	■
requirement for prolonged anticoagulation	Δ
severe systemic disease (examples: SLE, hyperthyroidism)	Δ
Obstetrical History / Conditions	
age > 35 at delivery	■
cesarean delivery, prior classical or vertical	■
incompetent cervix	■
prior fetal structural or chromosomal abnormality	Δ
prior neonatal death	■
prior stillbirth	■
prior preterm delivery or preterm PROM	■
prior low birthweight (<2500 gm)	■
second trimester pregnancy loss	■
uterine leiomyomata or malformation	■
Initial Laboratory	
HIV	
symptomatic or low CD4 count	Δ
other	■
Rh/other blood group isoimmunizations (excl. ABO, Lewis)	Δ
Initial Examination	
condylomata (extensive, covering vulva/vaginal opening)	■

* **At the time of consultation, continued patient care should be determined to be by collaboration with the referring care provider or by transfer of care**

Taken from the March of Dimes Toward Improving the Outcome of Pregnancy - The 90s and Beyond

Ongoing Pregnancy Risk Identification

Medical Conditions	Recommended Consultation*
drug/alcohol use	■
proteinuria (≥ 2 + by cath sample unexplained by UTI	■
pyelonephritis	■
severe systemic disease which adversely affects pregnancy	Δ
Obstetrical History / Conditions	
blood pressure elevation (diastolic ≥ 90), no proteinuria	■
fetal growth retardation suspected	■
fetal abnomality suspected by ultrasound	
anencephaly	■
other	Δ
fetal demise	■
gestational age 41 weeks (to be seen by 42 weeks)	■
gestational diabetes mellitis	■
herpes, active lesions 36 weeks	■
hydramnios by ultrasound	
severe, < 34 weeks	Δ
severe, 34 weeks	■
hyperemesis, persisting beyond 1st trimester	■
multiple gestation	■
oligohydramnios by ultrasound	
< 34 weeks	Δ
≥ 34 weeks	■
preterm labor, threatened, < 37 weeks	■
premature ROM	
< 34 weeks	Δ
≥ 34 weeks	■
vaginal bleeding > 14 weeks	■
Examination / Laboratory Findings	
abnormal MSAFP (low or high)	Δ
abnormal PAP smear	■
anemia (HCT < 28% unresponsive to iron therapy)	■
condylomata (extensive, covering labia/vagina)	■
HIV	
symptomatic or low CD4 count	Δ
other	■
Rh/other blood group isoimmunizations (excl. ABO, Lewis)	■

*** At the time of consultation, continued patient care should be determined to be by collaboration with the referring care provider or by transfer of care**

Key

■ = Specialty

Δ = Subspecialty