Who Ever Heard of Family Physicians Performing Cesarean Sections?

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This month's issue of *The Journal of Family Practice* includes an article by Norris et al that explores one important aspect of rural perinatal care: the comfort level of family physicians in performing cesarean sections.[1] The ability of some rural family physicians to perform cesarean sections affects critical aspects of the system in which they practice, including access to perinatal care, perinatal morbidity and mortality, the survival of the rural hospital, and the economic viability of the community. Central questions for health care systems in which family physicians provide cesarean section services include the quantity and scope of training needed, the expected outcomes of the surgical care provided, and the effect that "managed care" will have on the role of family physicians. The available evidence points to several conclusions: First, family physicians are critically important to the availability of rural perinatal care and to improved perinatal outcomes. Second, perinatal care can be critically important to the survival of rural hospitals and to the economy of the communities in which they are located. Third, the quantity and scope of training needed to perform cesarean section is attainable by some family physicians. Fourth, when rural family physicians perform cesarean section services, patients can expect excellent outcomes. Fifth, the effect that managed care will have on the role of family physicians in perinatal care is uncertain and will most likely vary by location. Sixth, important educational, practice, and political challenges remain for the future of perinatal care in family medicine.

Family physicians are critically important to the availability of rural perinatal care and to improved perinatal outcomes.

Although the last two decades saw a decrease in the number and percentage of family physicians providing perinatal care, there is evidence that this trend has stabilized and is beginning to reverse. The prevalence of provision of perinatal care by family physicians has always been highest in rural areas, reaching about 60% in the West North Central and Mountain regions.[2,3] In those areas, about one third of the family physicians who provide perinatal care also perform cesarean sections.[2,3] Although family physicians deliver about one fifth of the babies born in the United States, in the smallest communities family physicians are usually the sole providers of perinatal care, including cesarean section.

When perinatal care is not accessible, a variety of negative social, economic, and medical consequences result. These include long travel times for care, late start of care, inadequate care, late recognition of medical problems, increased prematurity rates, higher perinatal morbidity, and increased cost of care. The classic study by Nesbitt et al[4] of this phenomenon in Washington State demonstrated a direct relationship between increased "outflow" of pregnant patients from rural areas and adverse pregnancy outcomes, including complicated births, premature births, infants' prolonged hospital stay, and increased hospital costs. Larimore and Davis[5] demonstrated an inverse relationship between infant mortality and availability of physicians in rural communities in Florida. The existence of modern perinatal care does patients no good unless they can access that care in a timely and meaningful way.[6]

Simply locating a physician in a particular site does not, however, guarantee improved access. The physician must possess the knowledge, skill, and motivation to provide needed services. This is dramatically demonstrated in Florida, where 94% of rural counties have family physicians in practice but only 16% provide perinatal care. Obstetricians do not seem to offer much help since they are located in only 37% of rural counties and deliver babies in only 4%.[5] In Colorado, a state in which 54 of 63 counties are designated health professional shortage areas, medically underserved, or both, 92% of counties have family or general practice physicians but only 36% have obstetricians, mostly

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located in the largest population centers.[7]

As the specialists most likely to be located in rural communities, family physicians have the greatest opportunity to improve access to perinatal care. They must also have the skills, confidence, and support system to provide that care. For new residency graduates, acquisition of skills and confidence leading to the provision of perinatal services in practice are related to the volume of experience in training and exposure to family practice role models.[8,9] Confidence can also come from the knowledge that accepted standards of care for dealing with uncommon urgent and emergent conditions exist and have been mastered, such as those learned in the Advanced Life Support in Obstetrics program.[10] The support system must include hospital facilities and personnel sufficient to care both for normal conditions and for a reasonable range of maternal and neonatal complications, as well as the ability to facilitate transfer of patients with complications that are beyond the scope of local care capacity. Although some models of perinatal service exist that do not have nearby cesarean section capability, these are very rare in the United States, where the general expectation is that any hospital that provides perinatal care should be able to provide cesarean section services within a reasonable response time (traditionally 30 minutes). In rural areas, cesarean section services are usually provided by family physicians and sometimes by general surgeons. Although general surgeons have the technical skill to perform cesarean sections, they are not routinely trained to do so and frequently prefer not to because of practice scope and liability concerns. The resulting practical reality is that a small hospital that cannot provide cesarean section service is highly unlikely to be able to provide perinatal care; in other words, the preservation of access to rural perinatal services often depends not only on family physicians who can provide care for "normal" births, but also on the ability of some family physicians to perform operative delivery including cesarean section.

Perinatal care can be critically important to the survival of rural hospitals and to the economy of the communities in which they are located.

Childbirth care and the care of newborn babies can constitute a major portion of the care delivered at rural hospitals. Many rural areas are by their nature agricultural and therefore have relatively young populations with high birth rates. It is not uncommon for perinatal care in such hospitals to constitute 50% or more of their billings. Furthermore, because women and children frequently make the family's first contacts with the health care system, perinatal care serves to introduce the rest of the family to the local hospital, forming a bond that guides the choices made by male family members and older relatives when they are in need of medical care. The patient volume added by perinatal care serves to support the maintenance of virtually all other services in the hospital, contributing to stability and viability. In turn, the hospital is an important economic component of the community. In many small towns, the hospital is one of the largest employers and an important asset as judged by potential new businesses, elderly retirees, and young families alike. The mayors of small towns in which a total of 130 hospitals had closed were surveyed, and they listed children and pregnant women among the patient populations most harmed by the loss of hospital services; others were the elderly, those of low income, the disabled, and persons of racial and ethnic minorities.[11] In the same study, economic damage to the community was identified as local job losses, increased health care costs, and loss of tax and retail revenue, retirees, new industries, professionals, and businesses. A "multiplier effect" of keeping health care services within an interrelated system has been described. In one example, a rural family practice clinic generated over $9 in billings at the sponsoring hospital for every $1 in clinic charges.[12] These are dollars that would otherwise leave the community for health care alone. When patients have to leave town for doctor visits or hospital care, even more dollars accompany them for transportation, food, shopping, and entertainment.

The quantity and scope of training needed to perform cesarean section is attainable by some family physicians.

Cesarean section is a procedure that has traditionally been and still continues to be performed by some family physicians. There are about 2800 family physicians across the United States performing cesarean sections. In urban areas, an average of 1.2% of family physicians perform cesarean sections; the range is from 0% to 3.8%. In rural areas, an average of 12.5% (range 0% to 29%) of family physicians perform cesarean sections.[2,3] Training in cesarean section

skills may occur during or after formal residency training. A joint core curriculum statement by the American College of Obstetricians and Gynecologists and the American Academy of Family Physicians (ACOG-AAFP) affirms that operative delivery is within the scope of family medicine and should be available during the course of a 3-year residency.[13] Among family practice residency faculty, 4% perform cesarean sections and 55% of family practice residencies provide some training in cesarean section.[8] Nationally, approximately 20 family practice obstetrics fellowships exist (many of which specifically seek to train family physicians to independently perform cesaream sections).[14] The perinatal care annual course sponsored by the AAFP for the last 4 years has included limited workshops on cognitive and procedural aspects of cesarean section. In addition, the AAFP Commission on Quality and Scope of Practice is currently working on a position paper on cesarean section.

No unanimity exists about what volume or scope of training and experience is required for family physicians to competently perform cesarean sections. The subject has not been studied in a prospective fashion in either the family medicine or obstetrics literature to define the learning curve for this procedure. Recent statistics indicate that obstetrics and gynecology residents perform a mean number of about 215 cesarean sections during their 4 years of residency (Results of survey of ob/gyn residencies. Personal communication, 1995) but are commonly judged to be competent to perform the procedure independently or with minimal supervision long before completing that number of cases. The only published study documenting the training experience of family physicians who perform cesarean sections found that the average number of cesarean sections completed in training was 46, with a range of about 25 to 100.[15] These physicians produced outcomes comparable to or exceeding national standards. Ongoing experience for these family physicians ranged from 5 to 22 cesarean sections per year.

Despite the need to train those family physicians who are destined for rural or underserved practice, or those who can serve as role models in our cesarean section training programs, several obstacles exist. Teaching programs face shrinking training opportunities as a result of competition from private practices and managed care programs for publicly funded patients.

Also, in tertiary care centers political barriers may exist because of adminstrators and subspecialists who do not appreciate the realities of training needs for rural practice. Even after a family physician obtains training to perform cesarean sections, difficulty may be encountered in obtaining hospital privileges if local politics are unfavorable. In several locations across the country, family physicians who have been denied cesarean section privileges have successfully received these privileges after law suits or the threat of law suits.

When rural family physicians perform cesarean section services, patients can expect excellent outcomes.

In the United States, the medical profession, legal profession, and health care consumers expect a national standard of care. Regardless of geography, facilities available, or specialty of provider, the best outcome possible is expected, given the patient's presenting condition. Nevertheless, childbirth entails unpredictable risks, cesarean section is a major abdominal operation with known complications, and rural practice is accompanied by a variety of inherent difficulties not present in urban areas; these include travel distances, limited facilities and support staff, and conflicting physician time and energy obligations. A wealth of literature documents the excellent outcomes routinely attained by family physicians providing perinatal care in general and vaginal delivery in particular.[16] What about cesarean section? Three retrospective studies have examined this question. Richards and Richards[17] compared the outcomes of cesarean sections performed in rural vs urban Colorado and by obstetricians vs family physicians, finding "little difference" in outcomes. Deutchman et al [15] used national outcome criteria from the medical literature to compare with the outcomes of cesarean sections performed by 12 residency-trained family physicians at two rural hospitals in Washington State and Oregon over a 10- to 15-year period. Variables analyzed included patient demographics and risk factors, the incidence of surgical complications, infant outcomes, length of stay, operating time, and overall cesarean section rates.[15] The family physicians in this study met or surpassed all measured standards for which thresholds were available in the literature. A larger, multisite study, which is still in process, is demonstrating the same findings on a national basis.[18]

The effect that managed care will have on the role of family physicians in perinatal care is uncertain and will most likely vary by location.

Managed care administrators vary in their understanding of the value of family physicians in the provision of perinatal care. In some markets, family physicians may be excluded either completely or from certain aspects of perinatal care unless they actively pursue contracts that include this care. In other markets where administrators recognize that care by family physicians commonly results in lower cesarean section rates and increased success in vaginal birth after cesarean section, family physicians who provide perinatal care will find that they are more sought after and more highly paid than family physicians who do not have these skills. This may be particularly true in some urban areas where family physicians with increased skills, including cesarean section, can function more autonomously and preserve a less interventive style of care.[19]

Important educational, practice, and political challenges remain for the future of perinatal care in family medicine.

The graduate medical education system is under stress. Direct government funding is shrinking and widely expected to completely disappear. At the same time, widespread hospital merger activity has resulted in for-profit organizations finding themselves to be the proud owners of training programs that they may not be able to justify to shareholders on a short-term cash-flow basis. Training programs are also now increasingly in competition with physicians in private practice and with large managed care organizations for blocks of publicly funded patients who were traditionally the exclusive clientele of the training programs because they had nowhere else to obtain their care. Many training programs, particularly in the subspecialties, are downsizing in response to analyses showing that the system has overproduced physicians.

In this complex environment, the graduate medical education system of each location would do well to look at the health professional needs of the population it serves and voluntarily redistribute its precious monetary and patient volume resources to produce the types of professionals that can best meet those needs. If this is not done volunarily, it will probably be done eventually by the government legislatively or by third-party payers in the form of refusal to employ the "mis-produced" physicians. In terms of rural perinatal care, this process would include several steps.

First is the recruitment of students and residents interested in rural/underserved family practice. Second is the identification of the skills that will enable them to function in the target environment including perinatal care, and for some, advanced skills such as cesarean section. Third is the allocation of sufficient training experience for them to gain the skill and confidence needed. This allocation may be at the expense of other family practice trainees who do not plan to provide advanced skills, or even in place of subspecialty training slots that have been determined to be unnecessary based on existing numbers of subspecialists and the needs of the population being served. Fourth is to provide ongoing support for practice management and practice coverage, particularly for relatively isolated practices. Fifth is a recognition that as a physician's practice progresses, the need for adding or modifying skills is bound to arise and conditions and practice sites are likely to change. The graduate medical education system should be flexible enough to allow physicians to return for customized experiences when needed. Such returning physicians can also teach faculty and residents, and their practices can serve as alternative training sites. As the graduate medical education system becomes more closely involved with managed care organizations, the administrators and shareholders of these organizations must be convinced of the value of medical education. This will require a longer term view than that often practiced in the current environment.

Our daily practice will be best served if we choose collaboration rather than competition with other health professionals with whom we may share a philosophical approach, such as midwives, and with whom we may need to work for patient care and for training, such as obstetricians. The results of this collaboration could be that each group benefits from the best of the other's strengths.

On the political front, the specialty of family medicine must continue to "tell our story" to the public, to third-party payers, to legislators, and to our colleagues, so that the value of comprehensive primary care, including perinatal care and advanced skills for some, continues to be recognized. An important part

of this story is the documentation of outcomes of care for quality assurance, to justify continuation of managed care contracts, and to support the credentialing of family physicians to perform those procedures for which they are appropriately trained and experienced.

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