Low-Intervention Maternity Care

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In this issue of the Journal, Acheson and colleagues describe pregnancy outcomes for women cared for in a family practice that offers childbirth in a local hospital, the patient's home, or birth rooms located within the practice office suite.[1] The practice follows "a philosophy of avoiding unnecessary medical interventions and of fostering maximum involvement of patients in decisions about their care." It offers the least expensive physician-attended childbirth care available in its area. Many women come to this family physician group specifically because it offers nonhospital births; many families who come for maternity care continue in the practice.

Out-of-hospital childbirth has a long history, starting when hospital care was not widely available and offered little that could not be accomplished in the home. As obstetrics advanced, hospitals could offer more: life-saving procedures such as cesarean sections and blood transfusions, as well the option of anesthesia. As a result, childbirth gradually shifted into hospitals. Nevertheless, vestigial forms of the tradition were continued in some religious communities and in many rural areas; general practitioners often delivered babies in their offices, while "granny" midwives delivered poor women's babies in their homes. Nurse-midwives caring for the poor in certain rural areas and a few large cities also continued home birth services long after hospital births had become the norm, and started the first free-standing birth center, in New Mexico, in 1944. Although none of this activity attracted much complaint, the angry but articulate natural childbirth movement of the 1970s resulted in strong physician opposition to the idea of middle-class women choosing to birth at home. Thus nonhospital childbirth acquired overtones of a larger issue—the pros and cons of the increasingly technological style of this country's standard obstetric care.

Since hospital care is necessary to save the health and lives of some mothers and babies during childbirth, it has been assumed that hospitals are the safest place for every birth. Proponents of nonhospital alternatives counter this assumption by pointing to their ability to identify high-risk women and refer them away from an out-of-hospital delivery; they cite the close attention they give to women during labor, which allows them to detect intrapartum complications at an early, not yet serious, stage, and well-greased plans that facilitate rapid transfers of mothers and babies who need immediate hospital care. Skeptics, however, point out that prenatal risk assessment is imprecise. Although many complications can be predicted, a few seem to occur almost at random; screening can be used to identify a population of low-risk women, but even low-risk women have some degree of risk. In addition, some physicians believe that labor complications often arise without warning and very fast. It is easy to understand how this perception could arise. Few obstetricians stay with their patients throughout labor. Instead, most labors are managed primarily by nurses who follow orders and keep in touch with the physician by telephone. This nursing care is rarely one-to-one, and with telemetric electronic monitoring, there may be limited physical contact. Under these circumstances early signs and symptoms may remain unrecognized until everyone is faced with an apparently sudden emergency.

It should also be understood that hospital care itself imposes certain risks, ie, iatrogenic complications resulting from analgesia and anesthesia, artificial rupture of the amnion, oxytocin induction and augmentation of labor, continuous electronic fetal monitoring, and episiotomy, all of which have become common components of routine obstetric care, as well as nosocomial infections and morbidity and mortality from what is surely an excessive rate of delivery by cesarean section (ie, 25%). Thus a low-risk woman faces certain (but different) risks whether she chooses a hospital or a nonhospital birth. Nevertheless, while poor outcomes that result from the risks associated with a nonhospital birth site are easily recognized, it is often not possible to know which of the problems experienced by women cared for in hospitals arose as a result of the hospital care.

There have been a number of published reports on the outcomes of specific nonhospital childbirth practices. Like the study by Acheson et al, however, most of these

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studies have been retrospective and small relative to the number of subjects needed to detect an increase in poor outcomes among low-risk pregnant women. Even an accumulation of such studies cannot resolve the safety question. Practices that experience poor outcomes rarely publish their results; therefore, the literature of small retrospective studies (on almost any topic) is skewed toward success.

In 1982 an Institute of Medicine committee concluded that there is insufficient information to determine the relative safety of any birth setting, including hospitals.[2] Recent publication of results from a prospective study of nearly 12,000 women who experienced intrapartum care in 84 free-standing birth centers throughout the United States should help to meet the need for better data.[3] Although 16% of the women (or their newborns) were transferred to hospitals, only 2% had emergency transfers; there were few cesarean sections, and the rates of poor outcomes were similar to those reported in large studies of low-risk hospital births. Although the results were reassuring, a guest editorial that accompanied the article recommended withholding judgment until a randomized study can be conducted. Since such a study is probably not possible, the authors of the editorial suggested that, to be on the safe side, birth centers should be located in hospitals.[4]

In 1988, Douglas Smucker[5] documented a sharp decline in obstetric practice by family physicians in Ohio; he attributed this decline primarily to concerns related to professional liability. In an accompanying editorial, Roger Rosenblatt[6] noted similar declines in California, Arizona, and Washington. While not ignoring the impact of malpractice liability, he identified the increasingly technological style of American obstetrics as a root cause of the problem. He suggested that to decrease the costs and make obstetric practice more rewarding, family physicians might turn away from a form of maternity care that emulates obstetricians and move toward the low-intervention care practiced by nurse-midwives.

The article by Acheson et al provides an opportunity to examine such a practice. Offering a choice of childbirth settings provided several advantages. First, it made the practice attractive to many families. During their first prenatal visit, 31% of the women requested a home or office-suite birth; only 4% specifically wanted to give birth in a hospital. The main reasons for requesting a nonhospital birth were financial considerations, fear of iatrogenesis, and membership in certain religious groups. The choice of settings also made it possible to change the venue without undue financial penalty or the necessity of transferring the patient to a different care provider. This flexibility is important because, to be safe, out-of-hospital birth practices need to minimize disincentives to refer or transfer patients who become high-risk. Despite these seemingly ideal circumstances, the practice made exceptions to screening criteria, including one instance in which failure to transfer may have contributed to a poor infant outcome. The authors attribute inconsistent screening practices to concerns regarding financial hardship for patients and elements within the physician-patient relationship; long-term patients of the practice were less likely to be transferred. In addition, there was individual variation in thresholds for acting on potential risks, a result in part of prior experience.

This paper also makes an important contribution to the literature on prenatal risk assessment for selection of women who are appropriate for a nonhospital birth. Although the practice did not use a formal scoring system, they used their retrospective data to determine which of three published risk-scoring systems would have been most accurate in predicting which women would develop complications. Although the score developed by Goodwin was best,[7] their own clinical judgment would have been almost as accurate as the Goodwin system for predicting the best birth setting for their nulliparous patients. Parity (nulliparous vs parous) and findings from clinical pelvimetry were the two most important factors. Because of the importance of previous pregnancy history, virtually all maternal risk assessment scoring systems are more accurate when applied to parous than to nulliparous women. In addition, because most women have good outcomes, scoring systems predict normalcy better than they predict complications. A set of five variables predicted 68% of the nulliparous women who would require hospital care and predicted 71% of nulliparous women who could have had successful nonhospital births. More important, while the five variables predicted only 24% of parous women who would need a hospital delivery, they predicted 91% of parous women who could have delivered at home or in the office birth suite.

Failure to progress was the most common reason for intrapartum transfers. Of women who planned nonhospital births, 27% ultimately delivered their babies in a hospital; however, most of these plans were changed before labor began. Only 8% of the women were transferred to hospitals during the intrapartum period, a lower rate than was found in the National Birth Center Study.[3] In both studies, most of the transfers were for failure to progress and thus were not emergencies. Such transfers should be seen not as failures but rather as an expected and appropriate part of out-of-hospital care. In this case, the office birth suite was located next door to the hospital. In most instances the transfer between sites, while disappointing and inconvenient, is not a source of additional risk. Overall outcomes of the practice were good; the perinatal mortality rate (1.2/1000 births) was similar to that found in the National Birth Center Study and is within the range reported by large studies of low-risk hospital births.[3]

The practice reported by Acheson et al was distinguished by *two* features: a choice of birth settings and a philosophy that discourages intervention in normal birth. Out-of-hospital birth offers cost savings and other advantages. There is a need and demand for it. Nevertheless, many women and care providers (nurse-midwives as well as physicians) will feel safer in a hospital regardless of what any study shows. Thus the other special attribute of this practice—its philosophy of minimal intervention in birth—may be of widest interest. Critics of the birth center study suggested locating birth centers within hospitals.[4] Free-standing birth centers have special advantages, and there is a need for them. In addition, however, there is an immense need for low-intervention care for women undergoing normal births in hospitals. Hospital birth rooms with homey decorations cannot meet that need unless the physical changes are accompanied by a philosophy backed up by policies and, if necessary, training that leads to an individualized but highly supportive, prevention-oriented, low-intervention form of care. In such care, procedures (eg, perineal shaves, intravenous infusions, enemas, continuous electronic fetal monitoring, episiotomies, and vaginal examinations) are used only when needed; women are not usually tethered to equipment by tubes and cords, but are able to be out of bed, walk, bathe, and socialize during labor, and choose their own most comfortable position for giving birth. The philosophy and style of care are more important than the site. There is no reason why the maternity service of community hospitals in particular could not be organized to operate as in-hospital normal childbirth centers.

The diminishment of family physician participation in obstetrics is a disturbing trend. In my own state (Oregon) as well as in others, women in some communities are now totally without access to local maternity care. Rosenblatt[6] has suggested that a less technical style of care would be more personally, professionally, and financially rewarding. Low-intervention care of low-risk women is less costly, and I believe that it is safer. I also believe that it is less stressful and more enjoyable for the physician as well as the patient. This model of care might be more feasible for many family physicians. The editorial by Rosenblatt refers to several articles that have reported good outcomes from maternity services operated primarily by nurse-midwives and general or family physicians[8–11]; he and others have suggested closer ties between family physicians and nurse-midwives.[12,13] In addition to the high cost of malpractice insurance, being constantly on call for deliveries is a source of stress and fatigue. Collaboration with nurse-midwives could make continuing (or starting) to provide obstetric care more feasible for family physicians and would allow nurse-midwives to be more truly involved in family-centered maternity care.

Philosophical congruence between nurse-midwives and family physicians is an additional positive factor. Both disciplines view the client and the client's family from an integrated biomedical and psychosocial perspective. Both use a preventive approach to health care, focus on patients' responsibility for maintaining their own health, and foster patient self-determination.[13] In 1985 the American College of Nurse-Midwives Foundation conducted a national study of factors that hinder or enhance the success of nurse-midwifery practices. Respondents considered suitable collaboration with one or more physicians and basic philosophical agreement among members of the practice to be the most critical factors.[14] Family physicians and nurse-midwives have much in common and can work together in ways that make work (and life) more pleasant and less stressful. In addition, it is in the interest of both professions to protect family-centered maternity care and the normalcy of birth.[13]

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