opens wide the dilemma of choice and the opportunities facing the primary physician. Primary care physicians, by virtue of their role as advisors to patients, bear a special responsibility for the scientific and ethical issues involved in helping patients make choices that reflect their preferences. For the primary care physician, the burden rests not only on insuring that the treatment he or she prescribes is the one the patient actually wants: the rationalization of the referral processes of medicine depends on making certain that patients who want referral services are the ones actually referred. The medical literature has shown wide variation in the referral patterns of primary care physicians[2,3]; the reduction of unwanted, supplier-induced variations requires communication skills and an understanding of the dynamics of the physician-patient relationship.

Yet, of all topics, preference research and the psychology and ethics of clinical decision making are the most neglected. Their central importance to the mission of cognitive medicine suggests that primary care physicians should lead the fight for their priority on the nation's research agenda.

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Toward Reduction Of Neonatal Mortality

It is widely believed and probably true that unless the causes of infant death are understood, measures undertaken to reduce this mortality are not likely to succeed. Understanding infant mortality requires the integration of many different types of data ranging from demographic and vital statistic overviews best suited to answering the question *who* is dying to individual single-death medical record reviews best suited to answering the question *why* a specific infant died. In recent years, vital statistics and other types of data have been used to determine *where* fetuses and infants are dying. The where is characterized not only by geographic location, such as city, county, or state, but by the specific hospital or the level of the hospital in which the delivery occurred. As in the article by Rosenblatt and colleagues in this issue, attempts are made occasionally to divide the deaths into those that were preventable and those that were not.[1]

Because there are now hundreds of published studies dealing with neonatal mortality (death within the first 28 days of life), it is appropriate to consider what they tell us that might be useful. Perhaps the most important finding is that statistically deaths fall into two categories: the majority of deaths are related to preterm delivery, and a smaller but substantial minority are related to major congenital anomalies.[2] The vast majority of deaths in both categories are not preventable by specific medical interventions. In recent years, the greatest reduction in neonatal mortality has occurred in preterm infants, those that in previous years would have died from respiratory distress syndrome and related causes.[3] There also appear to be significant reductions in mortality associated with Rh disease, birth trauma, asphyxia, and infection. What remains clear and is most surprising is that there has been little or no improvement in the rate of preterm delivery, currently the underlying cause of 70 to 80 percent of neonatal deaths.[4] In fact, neonatal mortality is becoming so concentrated in the very premature infants that approximately 50 percent of neonatal deaths now occur in the 1 percent of all infants born weighing 500 to 1000 g.

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We also know that neonatal mortality is not evenly distributed among the entire population. The poor, those women at both ends of the reproductive age spectrum, and blacks and other minorities experience excess neonatal mortality, often double the rate for newborns of white middle-class women.[4] We know that access to good medical care improves neonatal outcomes, especially in minority newborns.[5] Nevertheless, because the high preterm delivery rate has not been responsive to medical intervention, better access to good medical care will not by itself eliminate the excess mortality in these groups. In fact, many authors have stressed that the tendency for babies to be premature and at great risk is predominantly related to the demographic and behavioral characteristics of the population, which are not easily ameliorated by medical care.[6] The preterm delivery rate therefore may be considered a population characteristic.

Whether for any population of births there is a higher or lower mortality rate depends primarily on the technology and skills available in the hospital of birth or the hospital to which the infant is transferred. Using various population characteristics, such as race, birth weight and gestational age, and the rate of multiple pregnancies, the mortality for a cohort of similar babies born in widely divergent types of hospitals or geographic locations can then be compared.[7] This standardization procedure can be used further to determine which hospitals or geographic areas have excess mortality. Nevertheless, while enabling us to know which hospitals or geographic areas have excess deaths based on the characteristics of the babies born there, this type of analysis still does not tell us why the deaths occurred. Only a detailed analysis of individual deaths can provide us with this information.

It would seem that before embarking on a study, whether for research or quality-assurance purposes, one should ensure that the data are of sufficient quality for the purpose for which they are collected. In the approach described in this issue by Rosenblatt, et al.,[1] many assumptions were made in selecting those categories of deaths that were possibly preventable compared with those that were not. None of those assumptions was verified. It is not clear, therefore, how these data would be used. For example, labeling certain vital statistics diagnostic categories as related to preventable death tells us little and can be misleading. The single diagnosis listed as the cause of death on many death certificates is often imprecise and too frequently wrong. Even when the diagnosis is accurate, birth certificates do not categorize births by preventability. For example, some asphyxial deaths are clearly not preventable, whereas others may be. The death certificate does not distinguish one from the other. The authors, in their discussion of limitations, recognize this problem and state, "Only an in-depth case-by-case review would provide sufficient data for one to be relatively confident in assigning a case to one category or another . . . ."[p 305]

It is not clear what use nonspecific data about potentially preventable deaths would provide to anyone trying to understand mortality in a hospital or in a specific geographic area. As stated earlier, who is dying and where the deaths are occurring can be learned from routine vital statistics reports. Whether there is excess mortality for the type of babies being born at some location can be learned from the standardization techniques described by Williams, et al.[7] Why deaths are occurring or whether they are preventable, however, simply cannot be discerned from vital statistics data and requires medical record review if the data are to be believable. Substituting an imprecise guess in the form of clusters for an accurate assessment based on chart review to determine whether the death was preventable is a step backward. Because something is easier to do does not make it more worthwhile. Instead, the adage, "If it is worth doing, it is worth doing well," seems to apply. If we want to know whether a death was preventable and to extrapolate from reviewed cases to make suggestions how other deaths might be prevented in the future, it seems worth the effort to review each neonatal death carefully. The American College of Obstetrics and Gynecology in conjunction with the Federal Bureau of Maternal and Child Health, through a local review process, are embarking on a program to do just that.[8]

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