LETTERS TO THE EDITOR

THE AUTHORS REPLY

We thank Dr. Smith (1) for his comments on our paper (2), and we acknowledge his prior use of time-to-event analysis of perinatal outcomes. We have in fact cited his work previously in a more relevant context (3). The use of the time-to-event approach dates to Yudkin et al. (4) (at least implicitly) and has been used by several others as well in a variety of contexts. Our statement was directed at the numerous adherents of the conventional approach (e.g., Hartley et al. (5), Scher et al. (6), and Cheung (7)).

Dr. Smith (1) makes an important point regarding intrapartum stillbirth. We disagree, however, that the only relevant denominator for such deaths is all births at a given gestational age. All living fetuses at that gestational age are at risk of the onset of labor and hence of shoulder dystocia and intrapartum stillbirth. Furthermore, in line with our earlier argument, we believe that the etiologic overlap among all stillbirths (antepartum and intrapartum) and neonatal deaths is substantial, making fetuses at risk the appropriate denominator in this context and, by extension, the survival analytic approach an appropriate analysis (2). In fact, there is a strong case for using fetuses-at-risk as the denominator for serious neonatal morbidity as well (8, 9), since it is generally accepted that many adverse neonatal outcomes may also have a prenatal etiology.

We have previously attempted to address the issue of the crossover and gestational age (10, 11). In our work, we demonstrated that the crossover pattern persisted for gestational-age-specific neonatal mortality as well as birthweight-specific mortality, and that in fact the difference between mortality in infants of mothers who smoke and those who do not cannot be explained by differences in gestational age. We believe that time-to-event analyses (fetuses at risk or fetuses and infants at risk) provide one elegant solution that is more coherent.

We remain pleased that the debate over the appropriate analytic strategies for perinatal and infant outcomes continues.

REFERENCES


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