Annotation

Analyzing Socioeconomic and Racial/Ethnic Patterns in Health and Health Care

Public health research is often a curious mixture of the precise and the ambiguous.[1] Investigators tend to be precise about defining the disease, health conditions, or medical procedures under study but are often ambiguous about defining the social factors that influence the distribution of these outcomes.[1–3] This ambiguity is particularly evident in current controversies about racial/ethnic and social class patterns in health, disease, and well-being.[4–8] Because the exchange between Leyland[9] and Zahniser[10,11] gets entangled in this issue, their views merit some dissection.

In brief, Zahniser et al.'s paper[10] documents secular trends in the use of cesarean sections and other obstetric operative procedures in the United States for the period 1980 to 1987. The relevant findings are as follows (references are to tables in Zahniser et al.):

1. White women were significantly more likely than Black and other minority women to undergo a forceps procedure (rate ratio [RR] = 1.6) (Table 1).

2. Women with private insurance were significantly more likely than women with no private insurance (self-pay or government payment, including Medicaid/Medicare) to undergo cesarean sections (RR = 1.2), forceps procedures (RR = 1.7), and vacuum procedures (RR = 1.8) (Table 1); these results were not altered by adjusting for race.

3. Within each insurance stratum, rates for each procedure were consistently somewhat higher among White women than among Black and other minority women (Table 2); the authors state that these differences were not statistically significant, but they provide no statistical data to evaluate either these comparisons or stratified analyses across all three procedures.

4. Within each racial/ethnic group, rates for each procedure were higher among women with private insurance than among women with no private insurance (Table 2); the text, however, provides no statistical data regarding within-race comparisons by insurance strata.

In their conclusion, Zahniser et al. emphasize the higher rates of procedures among women with private insurance and infer that racial differences in the likelihood of undergoing an obstetric procedure were chiefly attributable to racial differences in insurance status.

Commenting on these findings, Leyland[9] argues that class-based differences in rates of obstetric procedures may exist even when everyone has the same insurance coverage. Using data from Scotland—a country that has a national health care system and collects data on social class but not race/ethnicity—Leyland provides evidence that, overall, women in higher social classes are more likely than women in lower social classes to undergo forceps delivery. And, although women in both groups overall are equally likely to undergo cesarean sections, a class difference becomes apparent if length of gestation is taken into account: shorter gestation is more likely to be associated with cesarean sections among women of higher social class. Juxtaposing previous findings regarding socioeconomic differences in rates *within* racial groups with Zahniser et al.'s findings of no differences *between* ra-

Editor's Note. See related editorial by Abrams (p 1082) and letter by Leyland (p 1178) and response by Zahniser and Kendrick (p 1179) in this issue.

cial groups within insurance status, Leyland suggests that racial differences in rates of obstetric procedures may reflect racial differences in socioeconomic standing.

In reply, Zahniser states that Leyland wrongly sees a contradiction where none exists.[11] Instead, Zahniser considers two different statements about rates of cesarean sections to be simultaneously true: (1) within racial groups, rates vary by socioeconomic status (whether measured by insurance status, as in her study, or by income, as in other research); (2) within categories of socioeconomic status, rates do not vary by race. Zahniser also argues that Leyland inappropriately assumes that "race" is a proxy for "socioeconomic status." In Zahniser's view, different rates of obstetric procedures by race in the United States and by class in Scotland are not due to socioeconomic status per se, but rather to "differential care provided to persons of lower social class."

What is going on here? What do these claims and counterclaims mean? In all likelihood, both authors are right—and both are also wrong. The confusion results from treating three distinct terms as if they were interchangeable: "social class," "socioeconomic status," and "insurance status."[2,3] This can be seen by considering the various (and not mutually exclusive) pathways by which these different factors may influence the rates of obstetric procedures. These factors may affect (1) the distribution of conditions that require these procedures (which may be linked to living conditions, not medical practice); (2) who is insured and covered by what kind of medical insurance (women with more complete coverage may be more likely to undergo a covered procedure than are women with no coverage, with less complete coverage, or with coverage that reimburses a physician with a smaller amount for the specified procedure); (3) who obtains care at what type of health facility (e.g., an overwhelmed public city hospital versus a private, well-endowed suburban hospital); (4) who is most likely to litigate if complications result from not performing the procedure. Zahniser and Leyland thus are not discussing identical items when they refer to "insurance status" and "social class," and the conceptual distinction is further obscured by subsuming both under the generic term "socioeconomic status."

Also problematic is both authors' partial understanding of the reality of the color line in the United States. Both apparently assume that explaining racial/ethnic differences in health care and health status only requires taking into account socioeconomic factors. The implicit logic is that racial discrimination concentrates people of color into the ranks of the working poor and the unemployed and that class-based differences typically exist for most health-related conditions.[1,4–8] But questions of racial/ethnic differences cannot simply be reduced to a question of class.[4,12] Racial discrimination also means that even within the same economic level, Black and White women may have different health status and also may be treated differently by medical care providers.[4,7,12–15] The consistent patterns of racial/ethnic differences in procedure rates for women in the same insurance strata hinted at by Table 2 in Zahniser et al.'s study should not be ignored.

Ultimately, the question of why rates of obstetric procedures vary by insurance status, by social class, and by race/ethnicity can be resolved only by better and more complete data. Obtaining more biomedical data on conditions at time of birth is obviously necessary, but it is not sufficient. Studies will also need to determine how socioeconomic factors and racial discrimination affect the health status of women, which women have health insurance (and of what type), and how women are treated by—and respond to—their health care providers. Absent these data, explanations of the social patterning of rates of obstetrics procedures (and other health outcomes) will remain incomplete, if not elusive. □

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