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Editorials

Race, Health, and Health Services

Three papers in this issue deal with the persistent and vexing problem of race and inequalities in health and health services.¹⁻³ An innovative analysis of Medicare data for 32 frequently used procedures and tests provides some disconcerting findings.¹ Whites were more likely than Blacks to receive 23 services; Blacks were more likely than Whites to receive 7 services. Whites had a particular advantage when it came to higher technology or newer services. The differences could not be explained by differences in prevalence of clinical conditions or fully accounted for by financial barriers.

The authors suggest organizational factors (lack of continuity of care, less technologically sophisticated physicians and facilities), location, travel time, and expense as possible barriers to equal care for Blacks. The role of patient preferences and health beliefs is raised. More troublesome and perhaps less amenable to corrective intervention is that "the effect of patient race on physician and institutional decision making may be another important cause of our findings."^{1(p953)} The tests and procedures studied are not likely subject to self-referral.

The study of access to health care among adolescents² included sufficient numbers of Hispanics to enable reporting on three groups. Information reported by adult family members showed that Hispanic and Black adolescents had less insurance coverage (including Medicaid) and made fewer visits to doctors than did Whites, despite having worse health status. Minorities were more likely to lack a usual source of care, as well as continuity between sources. Racial differences persisted after adjustments were made for health insurance, family income, need, and other factors. The authors raise for future study the possibility that racial dif-

ferences between adolescents in physician contact rates reflect the beliefs and utilization patterns of adult family members. Another possibility proposed is "discrimination in either institutional access or physician behavior."^{2(p964)} If these two barriers do exist, it would be difficult to lower them directly, but the authors call attention to the possibility of going around them by expanding school-based health care.

From Seattle, which has an outstanding emergency medical services system, comes a report that sudden out-of-hospital cardiac arrest occurred significantly more often in Blacks than in Whites.³ Initial resuscitation and survival to hospital discharge were poorer for Blacks. The differences in outcomes were not fully explained by features of the collapse. The authors suggest that less bystander-initiated cardiopulmonary resuscitation, generally poorer levels of health, and differences in underlying cardiac disorders may explain the poorer outcomes in Blacks.

Provision of emergency medical service usually enjoys wide community support. Elected officials and the public will vote for dedicated taxes to provide such services and they may not ask for a cost-benefit analysis. But in many respects the need for this service is created by health service failures. These are failures in both primary and secondary prevention. We fail to prevent the initiation of the underlying cardiac disease. We fail to detect the disease process early and intervene to halt its progression. Finally, the disease progresses to the point at which it is too late to prevent death except with heroic

Editor's Note. See related articles by Escarce et al. (p 948), Cowie et al. (p 955), and Lieu et al. (p 960).

efforts that are successful 10% to 16% of the time.

Case series are always problematic. Although Cowie et al. report annual incidence rates and take the trouble to adjust the rate of the younger Black population to the age structure of the White population, these are not true population-based rates. We do not know in what fraction of cardiac arrest cases emergency personnel are not summoned. It is not inconceivable that the twofold excess reported among blacks (3.4 vs 1.6 per 1000) is in fact even higher. Once summoned, the Seattle emergency services system responded and performed equally for Black and White victims.

Although the numbers are small, it is worth noting that when cardiac arrest developed under surveillance of emergency medical personnel—thus eliminating questions of inequalities in elapsed time from the index event to arrival of personnel and time to initiation of resuscitation—resuscitation rates and rates of survival without disability tended to be higher for Blacks. One is reminded of the situation at the other end of the age spectrum—the higher mortality of Black infants compared with White infants.⁴ (Infant mortality rates have been declining for both races but the relative discrepancy has been increasing.) The disadvantage for Blacks is largely the result of the adverse experience of low-birthweight infants. At each birthweight category below 2500 g Black infants actually do better than White infants, but there are proportionately more of them. If one allows that this Seattle case series gives a reasonable approximation of the true community incidence, a most striking finding is the age difference between Black and White victims: 61.9 years vs 68.2 years. Younger age is a predictor of favorable resuscitation outcome, but in this high-mortality disease state, the excess occurrence of events among Blacks assures an unfavorable overall experience.

Cowie et al. note the need for a better understanding of the disease process that leads to cardiac arrest, and they speculate on how disease-specific factors and underlying socioeconomic and health status factors might affect cardiac arrest by race. But while we wait for such information to be developed, they suggest a practical low-tech intervention: increasing the “uptake” of cardiopulmonary resuscitation within the black population.

In its bearing on race, health, and health services, experience with mammography and breast cancer is less spectacular but more instructive than that with

the very late intervention by emergency medical services in out-of-hospital cardiac arrest. Although breast cancer incidence rates are 20% higher in White women than in Black women, the 5-year survival rate of Blacks is 17% lower than that of Whites. The breast cancer mortality rate in 1989 was 27.5 for White women and 30.4 for Blacks.⁵

Since 1983 The National Cancer Institute has supported a major socioepidemiologic study of possible behavioral, biologic, social, treatment, and health system factors that may influence Black-White differences in stage at diagnosis and survival rates with cancer in four organ sites, including the breast.⁶ Although we must await the final results of this and other studies, agreement is general that early diagnosis and treatment are beneficial and that screening mammography can make an important contribution to early diagnosis. Mammography should in theory be available to all women. Despite some geographic maldistribution, there are more than enough mammography units in the United States to screen all of the age-eligible women.⁷ But is the procedure accessible to all?

The Cancer Control Supplement to the 1987 National Health Interview Survey (NHIS) revealed disappointingly low use of screening mammography overall. Blacks and Hispanics were less likely than non-Hispanic Whites to undergo mammography. Low income and education and increasing age were also related to low use. Significant proportions of the minority groups reported never having heard of the test.⁸

In numerous studies, the reasons women have given for not having had a mammogram are that their doctor did not tell them they should and they did not know they needed one.⁸⁻¹⁰ Because most women see a physician each year, both answers suggest physicians' failure to promote access either by providing information or by mitigating fear and misunderstanding. Some physicians and a few women mentioned cost as a factor, and perhaps others were embarrassed to cite this reason. But by 1992, 42 states and the District of Columbia had passed legislation requiring that mammography be included in health insurance. Since January 1991, Medicare has provided payment for screening mammography, and it is a potentially available service of Medicaid in 44 states. These actions should have reduced the financial barrier and large amounts of public discussion and media coverage should have reduced the proportion of women who have not heard

of mammography. But in the absence of aggressive efforts to encourage utilization directed toward individual women and their physicians, what changes can be expected?

Unpublished data from the 1990 NHIS indicate an overall twofold increase in mammography use since 1987 and nearly equal use by White, Black, and Hispanic women. (These rates are still far short of optimal levels.) Major differences by income and education remain (L. G. Kessler, ScD, and N. Breen, PhD, written communication, April 1, 1993). The results of the 1992 (first 6 months only) Cancer Control Supplement of the NHIS are eagerly awaited. They will almost certainly confirm a further increase in overall use of screening mammography. But most important will be the detail for race, income, and age groups. It is not unlikely that the differences between groups will persist. Women in the medical care mainstream—those who have an ongoing relationship with a health care professional, who are native English speakers, who have no significant cultural taboos or skepticism about medical care, and who are able to deal with copayments or other marginal costs—will have gotten the message and obtained the service. Women who are disadvantaged in these and other characteristics will be reported to have “failed” to obtain mammography. They will probably be referred to as “hard to reach.” Would “underserved” be more accurate?

In the first quarter of 1992, NCI conducted a national survey of mammography facilities. Although they were not specifically asked whether they would accept self-referred women, 62% of the facilities reported no self-referred screening mammograms. Of mammograms done by all facilities, 7.9% were self-referred. Evening hours were available at 36% of facilities and 33% had weekend service (M. Brown, PhD, written communication, March 31, 1993).

Regardless of any health care reforms that take place in the next 4 years—even if the United States winds up with some form of universal insurance—“compliance” with recommended screening mammography by the underserved will need to be improved, as will quality assurance and appropriate follow-up, and the task will fall to health care professionals—particularly to those in public health agencies. This is not the place to review the Health Belief Model¹¹ and other paradigms of health knowledge and behavior. Suffice it to say that we need to improve our understanding of how to ob-

tain the compliant behavior that we as the experts believe is best for vulnerable individuals and the community.

What are the barriers to compliance, and, despite the obvious problem of inadequate resources, how can we lower them and get the job done? How can we make our priorities and the priorities of those in need of services the same? I am reminded of the description—possibly apocryphal—of one approach taken by the New York City tuberculosis control program in the 1950s to identify the few remaining cases of active disease in certain neighborhoods. The trick was to block the sidewalk with a mobile x-ray van and thus make it easier to go through the van and be tested than to walk around it into the street and the hazards of traffic. A woman with undetected (and untreated) early breast cancer may not be the direct hazard to her family and friends that a person with undetected tuberculosis is, but the eventual costs to the community for health care and years of productive life lost are considerable, in addition to the devastating direct consequences for the individual. Perhaps we should move our mobile mammography units up onto the sidewalk.

In a 1968 paper¹² my coauthor and I pointed out that the poor received a disproportionately low share of health services and that the direct cost barrier was not sufficient to explain the underuse. We predicted that Medicare and Medicaid would not erase the discrepancies.

The failure to inform adequately potential clients of the existence and availability of services is a significant barrier. The organization, administration and conduct of services can be important deterrents to use. The professional health worker must be trained to be able to provide effectively his services in comprehensive programs for the poor and uneducated.^{12(p545)}

In 1993, we can substitute “racial and ethnic minorities” for “the poor”—many of the barriers remain in place.

On the basis of a 1986 survey, Blendon et al. noted that despite progress in the previous 2 decades, there was still “a long way to go in achieving equitable access to health care” for all.¹³ We have not yet arrived there. □

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Note. The views expressed here are the author's and do not necessarily reflect the policy of the National Cancer Institute.

References

1. Escarce JJ, Epstein KR, Colby DC, Schwartz JS. Racial differences in the elderly's use of medical procedures and diagnostic tests. *Am J Public Health*. 1993;83:948-954.
2. Lieu TA, Newacheck PW, McManus MA. Race, ethnicity, and access to ambulatory care among US adolescents. *Am J Public Health*. 1993;83:960-965.
3. Cowie MR, Fahrenbruch CE, Cobb LE,

- Hallstrom AP. Out-of-hospital cardiac arrest: racial differences in outcome in Seattle. *Am J Public Health*. 1993;83:955-959.
4. *Health, United States, 1990*. Hyattsville, Md: National Center for Health Statistics; 1991:68. DHHS publication PHS 91-1232.
5. Miller BA, Ries LAG, Hankey BF, Kosary CL, Edwards BK, eds. *Cancer Statistics Review: 1973-1989*. Bethesda, Md: National Cancer Institute; 1992. DHHS publication NIH 92-2789.
6. Howard J, Hankey BF, Greenberg RS, et al. A collaborative study of differences in the survival rates of black patients and white patients with cancer. *Cancer*. 1992; 69:2349-2360.
7. Brown ML, Kessler LG, Reuter FG. Is the supply of mammography machines outstripping need and demand? An economic analysis. *Ann Int Med*. 1990;113: 547-552.
8. Caplan LS, Wells BL, Haynes S. Breast cancer screening among older racial/ethnic minorities and whites: barriers to early detection. *J Gerontol*. 1992;47:101-110.
9. The NCI Breast Cancer Screening Consortium. Screening mammography: a missed clinical opportunity? Results of the NCI Breast Cancer Screening Consortium and National Health Interview Survey studies. *JAMA*. 1990;264:54-58.
10. Dawson DA, Thompson GB. Breast cancer risk factors and screening: United States, 1987. *Vital Health Stat [10]*. 1989; 172.
11. Rosenstock IM. Historical origins of the Health Belief Model. *Health Educ Monogr*. 1974;2:328-385.
12. Bergner L, Yerby AS. Low income and barriers to use of health services. *N Engl J Med*. 1968;278:541-546.
13. Blendon RJ, Aiken LH, Freeman HE, Corey CR. Access to medical care for black and white Americans: a matter of continuing concern. *JAMA*. 1989;261: 278-281.

Needed: Universal Monitoring of All Serious Diseases of Global Importance

In this issue Ruwaard et al. predict an ever increasing burden of diabetes in the Netherlands¹ and Andresen et al. demonstrate the notorious underreporting of diabetes on death certificates.² Both articles show that existing monitoring systems for morbidity and mortality of diabetes mellitus are inadequate. Dr. Ruwaard concludes, “It is therefore highly recommended that registries for diabetes mellitus and other chronic diseases be started and/or improved.” The recent Shanghai Declaration of the World Health Organization (WHO) Non-Communicable Disease Collaborating Centers makes the same recommendation and pleads for local, national, and international monitoring of non-communicable diseases.³ We argue here that accurate, cost-effective systems for

universal monitoring of all serious diseases affecting mankind are critically needed.

The next millennium will shortly be here. Ruwaard's projections of diabetes in the 21st century are very sobering¹ and in line with those presented by others,² particularly for developing nations.⁴ National projections for diabetes and other non-communicable diseases demonstrate that with the aging of populations the burdens of noncommunicable diseases are rapidly increasing.⁵ We need to develop national programs for the prevention and control of noncommunicable diseases now.

The fundamental element of national prevention and control programs is disease monitoring. Yet frequently this is not considered. Primary prevention is defined in *A Dictionary of Epidemiology*⁶ as “re-

ducing the incidence of disease,” and disease control as “ongoing operations or programs aimed at reducing incidence and/or prevalence.” Thus, intrinsic to both prevention and control programs is the ability to determine the frequency of disease. It is critical, then, to establish cost-effective, flexible, and accurate disease monitoring systems. Without such systems, it will be impossible to determine where best to allocate health care resources and whether prevention and control programs work.

We can learn how to improve global health in the future by examining suc-

Editor's Note. See related articles by Ruwaard et al. (p 989) and Andresen (p 1021) in this issue.