

expert who delivered remarks at the 31st Critical Care Congress in San Diego in January.

“Genomic information will refine our approach to reflect individual patients with individual acute episodes,” said Dr. Buchman. Buchman is the Harry Edison professor of surgery and chief of the Burn, Trauma, and Surgical Critical Care section of the Department of Surgery at Washington University School of Medicine in St. Louis, MO.

“Personal genome profiles will identify patient risk for specific diseases, probable outcomes and the best therapy for that particular patient’s genes. Physicians will know which medications are most effective based on the patient’s personal profile of gene-coding for enzymes that metabolize medications,” Buchman said.

Common illnesses such as diabetes and heart disease do not necessarily follow patterns of single gene inheritance, Buchman said. However, these diseases run in families and hold some sort of heritable component. Researchers up till now have had minimal success determining how genetics and inheritance relate to such diseases.

“The genomic revolution allows us to look at patients and their cells as a whole,” Buchman said. He predicts bedside diagnostics will be perfected in the next five to seven years, after quality control issues are solved and the

research tools are simplified. He added that there is an ethical challenge to ensure genetic and genomic data are used wisely. “The issue is not whether there’s going to be genetic testing and individualized care, the issue is how we are going to manage the process,” Buchman said.

With more than 9,500 worldwide members, the Society of Critical Care Medicine is the leading professional organization dedicated to ensuring excellence and consistency in the practice of critical care medicine.

Black-White Infant Mortality Disparity Persists

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Black babies born in major urban enclaves in the United States die at more than twice the rate of white and Hispanic infants in their first year, the Centers for Disease Control and Prevention recently reported.

The disparity in infant mortality rates has been disturbingly persistent, in spite of and sometimes concealed by the rapidly declining rates at the national level, which fell by more than 90% in the 20th century. Today, nearly 14 out of every 1000 black babies born in major cities die before reaching age one. The median infant mortality rates for whites and Hispanics are 6.4 and 5.9, respectively.

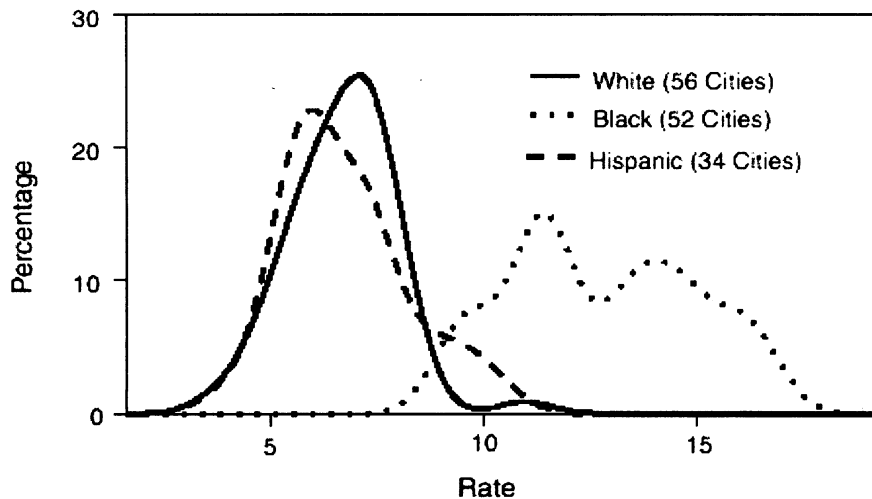
Focused on 60 cities with populations of greater than

250,000, the CDC study detailed gaping geographic inequities, which revealed significant differences across racial and ethnic lines. The results of the National Center for Health Statistics Perinatal Mortality Data for 1995-1998 echo numerous previous studies confirming that a combination of social, environmental, and biological factors contribute to the black-white infant mortality disparity.

“These types of studies tell us that we need to focus on not only traditional individual-level risk factors (i.e., maternal education and age), but also the communities in which mothers live and the environmental and economic stressors they encounter...” says NMA member Mario Sims, PhD, Associate Research Scientist at University of Wisconsin Medical School.

Sims’ own research, which is published in this June issue of *JNMA*, indicates that low birth weight (a biological factor) is highly associated with black infant mortality. Although the reason for this association is complex, it is compounded by the inadequacy of prenatal care for black mothers, and other high-risk behavior such as smoking. In addition, the social and environmental contributors to the health disparity include the “concentration of African Americans in high-poverty neighborhoods,” residential segregation, and paltry investments

FIGURE 1. Infant mortality rates,* by race/ethnicity — 60 largest U.S. cities†, 1995–1998



* Per 1,000 live births.

† Federal Information Processing Standards coded place of residence (city) as the unit of analysis.

Source: Centers for Disease Control and Prevention

in economic and health institutions serving black communities.

The CDC report and Sims concur that many of risk factors contributing to the disproportionately high black infant mortality rate can be abated, and that a multifaceted approach will be necessary. In addition to ongoing scientific research, Sims recommends enhanced education for patients, doctors and public policymakers.

“Medical schools need to introduce [cultural] competence into their curricula so that future physicians can receive proper

training for treating poor ethnic populations,” Sims stressed. “This also would facilitate a more trustworthy doctor-patient relationship in a potentially non-racially biased clinical atmosphere...Mothers must be educated by their physicians and support networks about the negative effects smoking and how [lack of] prenatal care visits have an effect on their health outcomes and the survival of their unborn infants.”

These changes, however, would not be sufficient without substantive structural transfor-

mations, as well. Residential segregation, institutional racism, systemic unemployment and underemployment, and low education and income—all factors that bear on higher mortality rates—must be addressed to remedy the disadvantage under which blacks enter the health care system.

Reference

1. Haynatzka V. et al. April 19, 2002. “Racial and Ethnic Disparities in Infant Mortality Rates—60 Largest U.S. Cities, 1995–1998.” *MMWR*. Vol. 51(15).