

Expert Urges Rejection of 'Race-Based' Medicine

BY JOYCE FRIEDEN
Senior Editor

BALTIMORE — Targeting medicines at particular racial categories “is a misguided approach, and what we should be pursuing is attribute-based medicine,” Sharona Hoffman said at the annual meeting of the American Society of Law, Medicine, and Ethics.

One example of a medicine targeted at racial categories is BiDil (fixed-dose isosorbide dinitrate and hydralazine), an anti-hypertensive drug that was approved specifically for use in blacks.

Some experts have concluded that a good response to BiDil has more to do with attributes and genes than it does with racial identity.

Patient attributes that might be considered relevant for assessing disease vulnerability or treatment responses include genetic variations or alleles that might be more common for people who are of one ancestral origin rather than others but could still cross population lines.

“Then there are other factors such as diet, exercise, stress level, and exposure to toxins” that play into treatment response, said Ms. Hoffman, a professor of law at Case Western Reserve University in Cleveland.

“The Human Genome Project showed us that race is not a biologically valid or genetically valid concept, and therefore the emergence of ‘race-based’ medicine is both perplexing and troubling,” she said at the meeting, which was cosponsored by the University of Maryland.

“Race doesn’t mean much of anything” from a genetic perspective because “99.9% of genes are identical for all humans,” and in the remaining 0.1%, 90%-95% of genetic variations are found at equal rates in every population.

Society also has difficulty defining race, with legal definitions of race varying from one state to another, Ms. Hoffman said. The race categories listed in the U.S. Census also change every decade. Almost 7 million people checked off more than one race in the 2000 census, she noted.

“If you ask people to self-identify, they may say they’re African American when they are really of mixed race. And visual

observation is even more misleading.”

In addition to these problems, using “race-based” medicine may exacerbate health disparities, because “it’s possible doctors may try to specialize in treating blacks or whites,” said Ms. Hoffman. That may violate federal or state antidiscrimination laws.

Instead of pursuing race-based protocols, Ms. Hoffman recommended designing attribute-based trial protocols, and having institutional review boards and

scientific review boards subject them to special scrutiny.

“Consider the genetic variations and the psychosocial, economic, cultural, environmental, and other factors, which you can measure or ask about—stress, diet, exercise, exposure to toxins, and cultural and religious barriers to treatment compliance,” she said. “Maybe people aren’t doing well because they are not following the protocol—because they either don’t understand it [due to] a language barrier,

or they have religious beliefs that prevent them from doing some of the things you need them to do.

“Don’t use skin color as a proxy. What questions do you need to ask? Do you need to do further genetic testing?” she said.

Also, be aware of the limits of self-identification or identification through visual observation. “It’s very hard to tell what ancestry people have if you don’t ask specific questions,” Ms. Hoffman said. ■

PEDIARIX may help ensure timely vaccination with fewer injections

- 5 serious childhood diseases—1 combination vaccine*⁴
- With just 1 dose at 2, 4, and 6 months of age (in infants born of HBsAg-negative mothers)

Important Safety information

In clinical studies, adverse events in infants receiving PEDIARIX included injection-site reactions (pain, redness, or swelling), fever, and fussiness. Administration of PEDIARIX was associated with higher rates of fever relative to separately administered vaccines (see Adverse Reactions section of the Brief Summary). PEDIARIX is contraindicated in infants with known hypersensitivity to any component of the vaccine including yeast, neomycin, and polymyxin B. As with any vaccine, vaccination with PEDIARIX may not protect 100% of susceptible individuals.



Please see brief summary for PEDIARIX on adjacent page.

References: 1. Centers for Disease Control and Prevention. Pertussis Surveillance Report—2004 (final data). Issued 8/12/05. 2. Centers for Disease Control and Prevention. *Epidemiology and Prevention of Vaccine-Preventable Diseases*. Reported Cases and Deaths from Vaccine Preventable Diseases, United States, 1950-2003. Available at <http://www.cdc.gov/nip/publications/pink/appendices/G/cases&deaths.pdf>. Accessed May 10, 2006. 3. Centers for Disease Control and Prevention. *Epidemiology and Prevention of Vaccine-Preventable Diseases*. Atkinson W, Hamborsky J, McIntyre L, Wolfe S, eds. 9th ed. Washington, DC: Public Health Foundation; 2006: 84. 4. PEDIARIX Prescribing Information.

*Does not require reconstitution.

PEDIARIX and Tip-Lok are registered trademarks of GlaxoSmithKline. The five-color star is a trademark of GlaxoSmithKline.

Manufactured by GlaxoSmithKline Biologicals, Rixensart, Belgium
Distributed by GlaxoSmithKline, Research Triangle Park, NC 27709



**Diphtheria and Tetanus Toxoids
and Acellular Pertussis Adsorbed,
Hepatitis B (Recombinant) and
Inactivated Poliovirus Vaccine Combined**



Can't Find Your Last Issue?



You have FREE access to
articles from this issue and
past issues of *Pediatric News*
at www.pediatricnews.com