

## Scientific reporting of ethnicity, age, sex and race

The other day we were sent a survey inquiring about the makeup of our editorial team. In completing the demographic portion, we realized that the editorial “we” at *CMAJ* is an Indo-Scottish-German-(and several other)-Canadian, with partial adherence to at least 5 different religious traditions, possessing 12 x and 6 y chromosomes, with a cumulative age of 302 years and total weight of 1009 pounds, and displaying a wide range of melanocyte density. While we value the complexity of this sociobiologic equation, we rarely seek to further specify its terms.

Researching and reporting on demographic variables is another matter. Take, for example, a report on a possible association between exposure to a toxic mould and a cluster of 8 cases of pulmonary hemosiderosis (see page 1469).<sup>1</sup> When this alarming outbreak was first reported the epidemiological net was cast wide, to capture as many variables as possible. Among these were the following: all 8 infants were black, 7 were male, 1 had been born prematurely, none were breastfed, and all lived within a 6-mile radius of the reporting hospital in Cleveland.<sup>2</sup>

Most of the features reported — sex, gestational age, breast milk intake and location — have a clear meaning and are potentially relevant. But what does the descriptor “black” mean? Does it refer to skin colour, or to race? Whatever race is, does it mark a genetic susceptibility to pulmonary hemorrhage? This is unlikely: only 0.012% of the variation between humans in total genetic material can be attributed to “race.”<sup>3</sup> Perhaps “black” indicates ethnicity. But what aspect of this slippery concept was documented? Dietary preferences? Religious practices? Migration patterns? Or is “black” simply a proxy indicator for socioeconomic status?

We can only speculate on the meaning of this variable, since the authors did not provide their reasons for including it or specify how it was defined. Although

in reporting these cases the US Centers for Disease Control and Prevention did not follow its own guidelines,<sup>4</sup> it is not the only organization that has published studies with unelaborated references to race and ethnicity.<sup>5</sup>

Because these vagaries of definition continue to appear in the scientific literature, the Vancouver Group (International Committee of Medical Journal Editors) has strengthened its statement on ethnicity.<sup>6</sup>

Because the relevance of such variables as age, sex, and ethnicity to the object of research is not always clear, authors should explicitly justify them when they are included in a study report. The guiding principle should be clarity about how and why a study was done in a particular way. For example, authors should explain why only subjects of certain ages were included or why women were excluded. Authors should avoid terms such as “race”, which lacks precise biological meaning, and use alternative descriptors such as “ethnicity” or “ethnic group” instead. Authors should specify carefully what the descriptors mean and tell exactly how the data were collected (for example, what terms were used in survey forms, whether the data were self-reported or assigned by others, etc.).

In all medical reporting, race and ethnicity must be carefully defined, and the use of race, ethnicity, sex and age as variables must be justified on the basis of good science. — *CMAJ*

### References

1. Weir E. Indoor moulds and human health. *CMAJ* 2000;162(10):1469.
2. Acute pulmonary hemorrhage/hemosiderosis among infants – Cleveland, January 1993–November 1994. *MMWR* 1994;43:881-3.
3. Witzig R. The medicalization of race: scientific legitimization of a flawed social construct. *Ann Intern Med* 1996;125:675-9.
4. Use of race and ethnicity in public health surveillance. Summary of CDC/ATSDR workshop. *MMWR* 1993-42 (no. RR-10).
5. Anderson M, Moscou S. Race and ethnicity in research on infant mortality. *Fam Med* 1998;30(3):224-7.
6. International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. [See under “Methods.”] Available: [www.cma.ca/publications/mwc/uniform.htm](http://www.cma.ca/publications/mwc/uniform.htm)