Editorial

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Understanding the role of ethnicity in chronic disease: a challenge for the new millennium

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Population projections suggest that the ethnic diversity that characterizes North American society will become even more pronounced in the new millennium. People of so-called Caucasian descent will become a diminishing majority, while the proportions of people of Asian, Hispanic and African descent will increase. In this issue (page 132), Dr. Tey Sheth and colleagues'[1] comparison of disease-specific mortality rates between European, south Asian and Chinese Canadians compels us to reflect on the meaning and implications of research on ethnicity and health, especially given these projected population shifts.

Research comparing health attributes between racial or ethnic groups has a long history. Notably higher rates of morbidity, mortality or both have been observed with respect to coronary artery disease among blacks in the United States,[2] stroke among African-Caribbeans in the United Kingdom,[3] diabetes and coronary artery disease among south Asians in the United Kingdom,[3-6] diabetes, stroke and hypertensive disease among Hispanic people in New York City,[7] and cardiovascular disease among American Indians in North and South Dakota.[8]

Sheth and colleagues' analysis of 1.2 million deaths in Canada from 1979 to 1993 adds Canadian data to this large and growing literature. One of their main findings is that Canadians of European descent had relatively high rates of ischemic heart disease and of lung, colorectal, breast and prostate cancer. Canadians of south Asian origin had a disproportionately high burden of diabetes, low cancer mortality rates, and rates of ischemic heart disease that were similar to those of Canadians of European descent. Canadians of Chinese origin had strikingly low mortality rates for ischemic heart disease, and cancer mortality rates were intermediate between those for European and south Asian Canadians. There was little difference between groups in rates of death from stroke.

The study also compares secular trends in these diseases by ethnicity. Mortality rates for both ischemic heart disease and stroke declined significantly and in fact appeared to be converging in the 3 ethnic groups. Cancer mortality rates remained constant or declined among south Asian and Chinese Canadians, but increased among those of European descent.

What can we learn from this study? First, in Canada as in other countries, there are striking differences in disease-specific mortality rates between groups defined on the basis of ethnicity. Second, the widespread decline and convergence in mortality rates for ischemic heart disease and stroke suggests that disparities between ethnic groups are narrowing and, because the changes are relatively rapid, that lifestyle and environment may be contributing factors. An important inference is that ethnic groups can adopt or maintain healthy lifestyles when they have access to appropriate health promotion and disease prevention programs, and therefore health care practitioners must be wary of labelling ethnic groups as "hard to reach" or "resistant to change."[9] Third, and contrary to Sheth and colleagues' interpretation, these data do seem to provide evidence for a "healthy migrant" effect. With the exception that Canadians of south Asian origin had higher rates of death from diabetes (which may reflect a genetic predisposition to insulin resistance and its consequences), Canadians of European descent fared worse than other groups in most disease categories.

Although Sheth and colleagues' data make an important descriptive contribution, their study leaves us wondering what mechanisms actually underlie ethnic variability in disease. Explanations usually focus on differences between groups in the prevalence of individual factors such as genetics, family history and lifestyle, but there are at least 2 important gaps in our understanding of this relation.

First, we need to better understand what "ethnicity" actually is and how to measure it. Ethnicity transcends racial designation or genotypic groupings and represents instead the aggregate of cultural practices, lifestyle patterns, social influences, religious pursuits and racial characteristics that shape the distinctive identity of a community.[10] Within a single ethnic designation there could be as much or more variability in disease and in the determinants of disease than between ethnic groups. Asian and Pacific Islanders, for example, comprise 30 to 50 ethnic subgroups with tremendous diversity in language, culture and health status.[9] As researchers and practitioners we must be acutely aware that categorizing such groups under a single label can mask the rich diversity that we should be striving to describe and understand. Ethnic labels may provide guidance in targeting interventions or research efforts, but they do little to help

us understand underlying causal mechanisms. Moreover, as Bhopal and Donaldson caution, labels such as white, Caucasian, black, European and minority have little scientific, biologic or anthropologic merit.[11] Such terminology often carries social meanings that are best avoided, as well as the assumption that one population represents the standard or norm. Careful descriptions of the ancestry, geographic origin, birthplace, language, religion and migration history of populations studied are needed to make the basis for classification into ethnic groups clear.[11]

The second major problem is that many studies investigating the relation between ethnicity and disease do not take potentially confounding factors into account. It is well established that ethnic minority groups tend to be disproportionately poor, making socioeconomic status a probable confounder of the relation. Therefore, research that does not take socioeconomic status into consideration can lead to incorrect conclusions, such that a susceptibility attributed to ethnicity may really relate to poverty. Further, socioeconomic status is difficult to measure comprehensively because it comprises many factors; these include, among others, educational attainment, income, employment, access to goods, services and labour markets, access to healthy foods, safe and inexpensive places to exercise, smoke-free environments, and educational, economic, political and cultural discrimination. Therefore, even when socioeconomic status is taken into account, confounding can still be a problem if measurement of socioeconomic status is incomplete.

These gaps suggest that before data on ethnicity and health can be translated into culturally sensitive, appropriate and effective health care practices, numerous conceptual, methodologic and analytic challenges need to be confronted. Nevertheless, because subgroups known to have higher disease risks warrant priority consideration for public health research, practice and policy, Sheth and colleagues' research underscores the importance of ethnicity as a key variable in research and health care planning and urges us to give the issue of ethnicity and health more prominence on the Canadian public health agenda. They highlight the fact that there is a pressing need to synthesize what is currently known and to develop directions for future research.[9,11] Our agenda will need to include, among other items, documentation of the disease burden among Canadians from other ethnic groups, including aboriginal Canadians and those of Arabic, African-Caribbean, South American and Hispanic descent. Careful inquiry into the relative importance of genetic, lifestyle and environmental factors in explaining ethnic differences in rates of disease is, without doubt, also a top priority.

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