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Russell Wilkins, Philippe Finès, (Statistics Canada); Eric Guimond, Sacha Senécal (Indian and Northern Affairs Canada). Mortality in urban and rural areas with a high proportion of aboriginal residents in Canada: methods for use with administrative data lacking explicit aboriginal identifiers. Paper proposed for presentation at the 2006 Annual Meeting of the Population Association of America (PAA 2006), Los Angeles, March 30-April 2, 2006.

Extended abstract

Canada has a wealth of population-based administrative data on health, but a dearth of information explicitly concerning race, ethnicity or socioeconomic status (SES). However, databases such as for vital statistics, disease registries, hospital morbidity, pharmaceutical care, and physician utilisation all contain residential postal codes, which can be exploited to shed light on questions concerning race, ethnicity and SES. While small area-based methods have been widely used with respect to neighbourhood socioeconomic characteristics, this paper shows that such methods can also be used for routine surveillance of health data for areas with a relatively high proportion of aboriginal residents.

Using this method, Canadian 6-character alpha-numeric postal codes are first converted to census dissemination area codes (equivalent to US block groups), and then health outcomes for dissemination areas with a high proportion of aboriginal residents are compared to otherwise similar dissemination areas with a low proportion of aboriginal residents. In all cases, self-identification rather than legal status is used as the basis for the aboriginal area classification. The methods described take account of the far higher degree of misclassification of dissemination areas in regions served by rural as opposed to urban postal codes. Population estimates rather than census counts are used for Indian reserves which refused to participate in the Canadian census (about 40,000 persons living on 30 reserves in 2001).

Overall, about 3.3% of Canada's population self-identifies as aboriginal. In addition to about 610,000 North American Indians (First Nations, including both registered Indians and persons lacking official status who self-identify as North American Indian), Canada's aboriginal population also includes about 45,000 Inuit and 290,000 Métis (mixed aboriginal and non-aboriginal who self-identify as Métis) peoples. Because they are highly concentrated in isolated northern settlements, Canada's Inuit population is efficiently and effectively identified using area-based methods. In rural and northern areas, First Nations communities are also fairly well-identified using such methods, but First Nations people living in urban areas are much less highly concentrated, as are Métis people in both urban and rural areas.

Thus, the interpretation of the results, which of necessity are for the entire population of *areas* with a relatively high proportion of aboriginal residents, varies by the average proportion aboriginal within the areas circumscribed for each group, and whether urban or rural areas are examined, even though the same cut-off threshold (minimum proportion aboriginal) may have been used in each case. Preliminary results for mortality by major

causes of death, and for important birth outcomes, will be presented and compared for each category.

Alternate methods for producing health data for the aboriginal peoples of Canada will be mentioned and commented on, including record linkage (to the status Indian database maintained by the Department of Indian and Northern Affairs Canada, or to the census 20% sample), and use of explicit aboriginal identifiers available on some health databases in certain provinces (for example, aboriginal status reported by next of kin on birth and death records in British Columbia, or maternal aboriginal language reported for births in Quebec).

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