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Best Practices in Research Methods

So, What Do We Mean by "Rural," "Remote," and "Northern"?

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At the stroke of midnight on December 31, 2000, the residents of the homes dotted along the western shores of Kukagami Lake suddenly became "urban." Minutes before, they and their neighbours in the unincorporated township of Rathbun had been "rural." Kukagami Lodge, advertising "northern" and "remote" wilderness experiences for its guests, is now located in one of the 27 largest urban centres in Canada — that is, it is now located within a census metropolitan area. Rathbun Township has been amalgamated into the new City of Greater Sudbury in northern Ontario.

So, what do we mean by the terms "rural," "remote," and "northern"? Thankfully, the guest editor for this issue of the *CJNR* has not asked me to answer these questions. Rather, she has invited me to provide some personal reflections on the methodological issues surrounding the defining of these terms in the context of rural health research in Canada.

Over 20 years ago Bosak and Perlman (1982) reviewed 178 articles on rural mental health and sociology, and found that 43% of them did not even include a definition of rural. In discussions on physician practice locations, recruitment, and retention published in the *Journal of Rural Health* between 1993 and 1995, there are wide variations in how rural is defined (Ricketts & Johnson-Webb, 1997). Reviews (Pitblado & Pong, 1999; Williams & Cutchin, 2002) of more recent literature suggest, perhaps overly pessimistically, that there are almost as many definitions of rural as there are researchers (Pong & Pitblado, 2001).

There does, however, seem to be general acceptance of the notion that the approaches to defining rural fall into two categories: technical and social (du Plessis, Beshiri, Bollman, & Clemenson, 2001; Ryan-Nicholls & Racher, 2004). These categories are used below to reflect on some of the difficulties that surround defining rural. As a footnote, the technical approaches are often referred to as "geographical." While I have also used this terminology in the past, I have substituted the word tech-

nical here because social approaches to defining rural may also be geographical.

Technical Approaches

The location of a hospital, the road that one has to travel to get from one's home to the hospital, and the health region that encompasses that hospital and that road are examples of the "cartographic primitives" of points, lines, and areas. In texts and on maps, these are the devices used most often to construct our definitions of rurality in Canada. Points may be identified by longitude and latitude, lines expressed in terms of distances between points, and areas characterized by their boundaries.

Distances are often used to define rurality, but are not consistent between different groups of health-care providers, or even within the same group. For example, the current president of the Society of Rural Physicians of Canada, expressing distances as travel times, suggests that remote is relatively easy to define: "a place 3 or 4 hours from the next largest community or higher level of care" (Soles, 2004). Other physician colleagues differ on the labels and on the defining limits, which might be "80–400 km," "one to four hours transport in good weather," or "greater than 80 km from a regional centre of more than 50,000 people" (Rourke, 1997). In the context of nurses working for the First Nations and Inuit Health Branch of Health Canada, distances (e.g., 90 kilometres to a physician or other health-care service) are also invoked in the designations of rural (non-isolated) and remote (isolated) communities, with added parameters distinguishing communities that do or do not have scheduled air-transportation services (Kulig et al., 2003).

Detailed explanations of how points (postal codes), lines (commuting activity), and areas (census divisions, census subdivisions, or enumeration areas) can be used to produce measures of the degrees of rurality in Canada can be found in the *Rural and Small Town Canada Analysis Bulletin,* an online publication of Statistics Canada. There, du Plessis et al. (2001) examine the construction of six alternative definitions of rural, including the now less useful approach of referring to individuals as rural if "0" is found as the second character in their postal code. Several of these definitions have been used recently in examining health human resource issues (Canadian Institute for Health Information, 2002) as well as health status (Mitura & Bollman, 2003). But these definitions depend on the drawing of boundaries that have little to do with health and that are established for convenience in reporting national or provincial statistics or for administrative purposes. They produce anomalies, illustrated in the opening paragraph of this paper, that do not correspond with our intuitive sense of what is rural, remote, or northern. As well, the rapidity

in recent years of administrative boundary changes — to census geographical units and health regions — severely hampers our efforts to undertake longitudinal analyses of the health characteristics of rural Canadians.

Similar to rural and remote, defining "north" poses challenges to health researchers. For example, in their discussion of the characteristics of northern nursing practice, Vukic and Keddy (2002) use the 50th parallel to demarcate north-south but give no indication of why that particular line of latitude was chosen. At least two research funding agencies that I am familiar with would have pushed that demarcation line to the 60th parallel, equating north with our three territories. Canada's north has been delineated using 16 climatic, biotic, and socio-economic indicators (McNiven & Puderer, 2000). I suspect that little use will ever be made of this approach because it does not correspond with everyday language or perceptions. For example, some or most residents of the communities located in the vicinity of the Ontario-Minnesota border in northwestern Ontario might not consider themselves as "south," but they would be so classified under the McNiven and Puderer scheme. Fundamentally, north is defined with little or no rationale in the rural health literature of Canada.

Social Approaches

"You know that you are rural if there is no Starbucks or Second Cup…you know that you are remote if there is no Tim Hortons."

The "coffee index of rurality" (Pitblado, 2002) and other indices using similar themes (Soles, 2004) generate a few smiles during conference presentations. But there is a serious side, as these indices are used with the intention of highlighting the fact that points, lines, and areas are merely locators or containers where lives are lived, where place may or may not be considered a determinant of health, where the nature of health-care practice and the nature of community may or may not be inseparable. Beyond the technical, there are the social approaches to defining rural, remote, and northern. At least in theory!

Canadian authors, directly or indirectly basing their work on British author Halfacree's (1993) proposition of defining rural on the basis of social representation, have set out premises for redefining rural with a focus on sustainability (Troughton, 1999) or the characterization of new rural regions (Douglas, 1999), or have provided a framework for investigating the health of rural Canada (Ryan-Nicholls & Racher, 2004). Williams and Cutchin (2002) argue that to improve care provision for rural societies, as well as research and teaching about them, we should be searching for definitions of rural using Halfacree's holistic and place-spe-

cific concepts. But no author has actually proposed a specific definition of rural or remote using this approach. It may be overstating the case, but the methodological issue here appears to be that there is no methodology, per se, to critique.

Definitions and Debates

Given the lack of consensus on both technical and social definitions of rural, remote, and northern, where do we go now? Do we give up or keep on trying? Some definitions are clearly needed. For example, as I write these notes, the physicians of Ontario are beginning to vote on a new Ontario Medical Association/government agreement. Many rural physicians will vote for ratification because, among other things, the agreement provides a first-ever rurality gradient incentive that they feel will help recruit and retain physicians in rural parts of that province (Society of Rural Physicians of Canada, 2004). Anyone who uses a secondary database with measures of the health status of Canadians or counts of health-care providers will need to look for some indicator of rural, remote, or northern if they are at all interested in rural health or rural-urban comparisons. Ashton and Bruce (1994) outline the needs for a definition of rural in Atlantic Canada that would allow for the comparability of research findings, the effective delivery of government services, and the capability of providing measures that recognize the complexities and subtle variations between metropolitan and rural communities and among rural communities themselves.

Given these needs, I reject the notion that definitions of rural are irrelevant (Hoggart, 1990) or that seeking such definitions may be a "fool's errand" (Mills, 1998). Nevertheless, and within the specific context of rural health research in Canada, we have not fully examined the advantages and disadvantages of the various technical definitions that have been offered. And we have barely begun to explore the definitions of rural under the rubric of social representation.

With few exceptions, discussions of these definitions for use in Canada are found in in-house publications (the "grey" literature), which are often difficult to locate, or sprinkled throughout a wide variety of national and, particularly, international journals. At a number of business meetings of the newly formed Canadian Rural Health Research Society (Kulig, Minore, & Stewart, 2004), there has been some interest expressed in creating a new publication. Perhaps it is time for a Canadian journal of rural health where, among other things, definitions of "rural" can be developed and fully debated.

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