Editorial

Psychiatric Epidemiology: It Is About Much More Than Prevalence

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This month's issue of *The Canadian Journal of Psychiatry* (*The CJP*) includes a series of studies that employ epidemiologic methods to assess the distribution and determinants of mental illnesses and mental health–related issues in the Canadian population.[1–4] This month's issue also contains a Perspective article by Dr John D McLennan,[5] focusing on etiologic attributions in fetal alcohol syndrome. Despite the cliché stating that "correlation does not equal causation," judgments about causation are central to epidemiologic reasoning. This is inevitable, as such judgments are often a precondition for translation of epidemiologic knowledge into clinical and public heath actions. As this group of studies demonstrates, epidemiology can provide insights into population health and can also provide a lens through which health status, health services, and health policy can be assessed. Indeed, the metaphor of a lens is very appropriate for epidemiologic studies. These studies use data collected from large samples, or even from entire populations, to bring into focus (using statistical procedures) effects that could otherwise not be discerned.

Rogers et al[1] describe characteristics associated with depressed mood in a Saskatoon sample of people at risk of human immunodeficiency virus and who reported trading sex for money at least once. An extremely high prevalence of depressed mood (84.6% according to the Center for Epidemiologic Studies Depression rating scale) was found in their sample. An association between symptom severity and self-efficacy for safe sexual practices is also reported. This suggests not only that this population is characterized by a high level of need but also that improved management of mental health issues in this population might facilitate the prevention of sexually transmitted disease.

Roy et al[2] present an analysis of data from the Quebec Health Survey of High School Students. These investigators examined a subset of 63 196 survey participants reporting the use of drugs in the past year (*n* = 17 565), finding a prevalence of nonmedical use of prescription medication of 5.4% within this subgroup. When one considers that only about one-third of the respondents reported any past-year drug use, this prevalence estimate is considerably lower than prior national estimates. Whether this difference is due to a lower prevalence in Quebec or to methodological differences is obviously a question needing an answer. In any case, their cross-sectional data generate or strengthen several etiologic hypotheses by showing associations between prescription drug misuse and psychiatric comorbidities, substance use problems, low self-esteem and -efficacy, and low parental supervision.

While ad hoc surveys are a core method in epidemiologic research, epidemiologists are increasingly adopting other approaches. Morkem et al[3] use data from a primary care electronic health records database to characterize temporal trends in antidepressant prescribing. Their data source is the growing Canadian Primary Care Sentinel Surveillance Network. The Morkem et al study addresses an important paradox that has previously

been reported, both in Canada and elsewhere. Concerns have often been raised over apparent undertreatment of depression, a concern based on survey results showing that many respondents with major depressive disorder often (or even usually) do not receive treatment. This is an example of a treatment gap in mental health. Conversely, some authors have expressed concerns about what they perceive to be an excessive frequency of use of these medications. Although under and overtreatment are not mutually exclusive, these perspectives remain somewhat contradictory. The analysis by Morkem et al shows that prevalence of use is increasing, although at a slower rate than in the past. However, this is not due to an increase in the new use (incidence of use) of these medications. The incidence of their use has been fairly stable. As prevalence is proportional to both incidence (new use) and duration of use, the results suggest that people are using antidepressants for longer periods of time. Conceivably, this may represent a more effective pattern of use of the medications. For example, it may point toward increased acceptance of long-term treatment in people with recurrent manifestations of the disorder, a change that would suggest better alignment of real-world treatment with recommendations of clinical practice guidelines. However, the Morkem et al study cannot, in itself, confirm this.

A study reported by Lesage et al[4] uses linkage of data from administrative and vital statistics sources to examine another gap, the mortality gap, between people with mental disorders and those without mental disorders in the general population. Rather than restricting their reporting to mortality rates or rate ratios, they use life expectancy, potentially making the results easier to understand. They replicate the well-known elevation in risk of mortality associated with mental disorders. Their estimate of the impact (which they report as years of life lost) is smaller than previous international estimates. This is likely due to their inclusion of treated patients from primary care rather than relying on an inpatient cohort as have most international studies. An important innovation of their approach is that the system of record linkage on which their analysis is based is suitable for ongoing and routine data collection, which can also be coupled with ongoing and routine analysis and reporting. This means that assessment of the mortality gap can be built into national and provincial surveillance systems, supporting evaluation of measures taken to address this problem. As the authors point out, a strategy to address the mortality gap will need to be very sophisticated, as there are many possible explanations, including stigmatization (which may manifest as discrimination or diagnostic overshadowing), physiological aspects of mental illnesses themselves or associated lifestyle characteristics.

While epidemiologic data often direct policy and service delivery changes, McLennan[5] urges a cautious and critical approach to interpretation of the epidemiologic literature about fetal alcohol syndrome. As is so often the case, epidemiologic studies have drawn attention to the public health significance of this condition, but there is an associated risk that uncritical interpretations of the epidemiologic data

may lead to counterproductive strategies in the formulation of policy priorities and service delivery. Examples include threats to validity that can result from excessively broad definitions, overlapping clinical syndromes, and the lack of attention to the issue of confounding when interpreting the epidemiologic data.

Epidemiologic data often inform preventive efforts, such as removing risk factor exposures (primary prevention) or facilitating earlier detection and intervention (secondary prevention). However, sometimes preventive activities are more effective when they target entire populations rather than specific groups at high risk. Mental health literacy is an example of a population-based approach. Increased literacy within society as a whole might address many of the problems highlighted by other studies in this issue. For example, it might lead to better mutual support, more effective help seeking, and possibly even diminished stigmatization. In this issue, a study by Kutcher et al[6] explores the implementation of an innovative school-based curriculum to improve literacy. The main innovation is that it is embedded into regular curriculum processes and that it addresses both student and teacher needs. The results are promising and support the need to decisively assess this type of intervention using randomized controlled trial investigations.

Psychiatric epidemiology in Canada dates back to the very beginning of this discipline.[7] Canada also has a reasonably strong track record of surveys and some promising opportunities for data gathering and linkage. Nevertheless, the gaps in knowledge are great and much work remains to be done. The set of papers in this month's *The CJP* provide substantive new estimates, and also illustrate the challenges and opportunities of contemporary psychiatric epidemiology.

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