

ANTIDEPRESSANT MEDICATION USE AMONG FIRST NATIONS PEOPLES RESIDING WITHIN BRITISH COLUMBIA

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Abstract: Very little is known about antidepressant medication use among First Nations people in Canada. This information would be useful to begin estimating the prevalence of conditions treated with this class of medications and planning appropriate programs.

Antidepressant medication claims for First Nations people residing within British Columbia were extracted from the Non-Insured Health Benefits pharmacy database. During 2001, 9.8% (95% CI = 9.81, 9.79) of the population filled a prescription for antidepressant pharmacotherapy, claimant mean age was 40.3 years and the female: male ratio was approximately 3:1. The most common medications were Paxil, Apo-Amitriptyline, Effexor, and Celexa. Use of this medication class is common and more research is needed in this area of study.

Antidepressant medication is indicated in the treatment of a number of conditions, including depression, insomnia, chronic pain, generalized anxiety disorder, and panic disorder (Bajwa, Warfield, & Wootton, 2003; Chokroverty, 2003; Ciechanowski & Katon, 2003; Paulsen, 2003) but its rate of use is an understudied area. Examining use of drugs within this medication class can be helpful in estimating the magnitude of conditions treated with antidepressant medication.

The Aboriginal people of Canada are comprised of several groups, including First Nations (FN), Metis (mix of French and Indian ancestry), non-status Indians, and the Inuit people. First Nations people suffer from chronic diseases at a higher rate than the rest of Canadians (British Columbia Provincial Health Officer, 2002) but little is known about the prevalence of chronic diseases treated with antidepressant medication. First Nations people, who are assigned an Indian Status number, are entitled to special rights,

including subsidy of antidepressant medication under the Non-Insured Health Benefits (NIHB) program of the First Nations and Inuit Health Branch. These rights originated with treaties signed between the Canadian federal government and FN people. Only FN and Inuit peoples are entitled to these "rights."

In the 1870s, the government of Canada and the Indians of the Canadian Prairies sought treaties to define their relationship and establish rights to land and other resources. Such agreements extinguished Native rights to land and provided compensation to Natives and a new means of livelihood. In order to formulate the treaties, a legal and political definition for "Indian" was needed. This established who was entitled to reserve lands and to the other compensations provided for in the agreements. The Native definition of Indian was based primarily on lifestyle rather than bloodline. For most Natives, simply living a traditional Aboriginal lifestyle made one an Indian, eligible for treaty terms.

The purpose of this study is to describe the prevalence of antidepressant medication use amongst FN people residing within British Columbia during 2001.

Methodology

The NIHB pharmacy database is a provincial database that captures all prescription medication claims for only FN people residing within British Columbia and does not capture non-FN population pharmacy claims. First Nations people do not have drug coverage through provincial or other pharmacy plans in British Columbia. The NIHB pharmacy database, therefore, provides the best data on drug usage among Status Indians residing in British Columbia. Through the NIHB program, medications prescribed by physicians are subsidized fully by the Federal government, and in this way the NIHB database captures all prescriptions filled for Status Indians and is considered to be accurate. The NIHB database collects claimant information on gender and age, as well as number of prescriptions and specific drug claims. Other demographic information, including indication for prescription is not available within the database.

Claims for each antidepressant medication were extracted and then compiled to estimate total antidepressant medication use. See Table 1 for antidepressant medication claims extracted. In addition, claimant gender and age information was extracted. Data was analyzed using Intercooled STATA 7.0 (Texas Statacorp) software. The 1-year period prevalence for antidepressant medication use during 2001 was calculated with the numerator representing the total number of unique antidepressant medication claims and denominator representing the 2001 FN population figures. The 2001 FN population figures are based on the FN total births and deaths during 2001 and the 2000 population figure (First Nations and Northern Statistics Section,

Table 1
Antidepressant Medications Extracted from the Non-Insured Health
Benefits Pharmacy Claims Administrative Database

Phenelzine Sulfate
 Tranylcypromine Sulfate
 Moclobemide
 Amitriptyline Hydrochloride
 Amoxapine
 Desipramine Hydrochloride
 Doxepine Hydrochloride
 Imipramine hydrochloride
 Maprotiline Hydrochloride
 Nortriptyline Hydrochloride
 Protriptyline Hydrochloride
 Trimipramine Maleate
 Citalopram Hydrobromide
 Fluoxetine Hydrochloride
 Fluvoxamine Maleate
 Paroxetine Hydrochloride
 Sertraline Hydrochloride
 Venlafaxine Hydrochloride
 Bupropion Hydrochloride
 Nefazadone Hydrochloride
 Trazadone Hydrochloride
 L-Tryptophan

Corporate Information Management Directorate, Information Management Branch, Department of Indian Affairs and Northern Development, 2002).

Indian Status numbers were utilized to identify pharmacy claimants and determine FN population figures. Confidence intervals were calculated using the following formula: 95% Confidence Intervals = $p \pm 1.96^{1/2} [p(1-p)/n]$, where p = prevalence of antidepressant medication use and n = number of FN persons residing within British Columbia.

Results

There were 112,305 FN people residing in British Columbia in 2001 and 51% were female (First Nations and Northern Statistics Section, Corporate Information Management Directorate, Information Management Branch, Department of Indian Affairs and Northern Development, 2002). During 2001, 10,982 individuals (9.8% of the population, 95% Confidence Interval = 9.81, 9.79) filled an antidepressant medication prescription. The majority, 7,787 (70.1%), were female and the average age of claimants was 40.3 years (Standard Deviation of +/- 14.5 years).

The most frequently prescribed antidepressant medications were: Paxil (Paroxetine Hydrochloride), Apo-Amitriptyline, Effexor (Venlafaxine

Hydrochloride), and Celexa (Citalopram Hydrobromide). The number of antidepressant medication claimants for these are as follows, respectively: 9,828, 4,846, 3,921, and 3,784.

Discussion

This study is the first to identify that antidepressant medication use was common among FN people in British Columbia during 2001. Furthermore, the majority of those filling prescriptions for antidepressant medication were women. This high prevalence of antidepressant medication use may be explained by a higher prevalence of disorders treated with antidepressant medications or that these disorders may be over-diagnosed in FN people. Care providers working with FN populations need to keep in mind how prevalent these conditions are and adjust their practice to meet client needs. Program planners and policy makers should plan accordingly based on these results.

Our study result of 9.8% may be greater than non-FN population antidepressant medication use, if one assumes conditions treated with antidepressant medication occur at a higher rate among FN populations. For example, among American Indians and Alaska Natives depression is thought to be disproportionately greater (Centers for Disease Control [CDC], 2003). Furthermore, FN patient expectations for "pill" treatments and physicians feeling inclined to offer some form of treatment given the well-known fact that rural and remote communities, as are many FN communities, often lack mental health services may also explain a higher antidepressant medication use. Conversely, FN antidepressant medication use may be lower than non-FN populations as treatment for depression is sought less by non-White patients (Bristow & Patten, 2002) and because barriers exist to mental health services for FN people (Barron, Oge, & Markovich, 1999; King, 1999). Perhaps antidepressant medication use is contradictory to the values and belief system of FN people.

In one sense our study results are limited, but do begin to indicate the prevalence of conditions treated with this class of medication. To further estimate the prevalence of these conditions within FN populations, community surveys and physician visit information should be utilized. Based on such information, our study results could help determine if adequate treatment is provided.

The female: male ratio identified in our study was 3:1 and could be due to a preponderance of females afflicted with conditions treated with antidepressant medications. Once again, with depression as an example, depression is more common among Native Indian females (Barron, Oge, & Markovich, 1999). Of note though, Bristow and Patten (2002) did not identify gender differences in treatment seeking rates for depression. Without comparison data and additional research on FN populations, it is difficult to interpret the 3:1 gender ratio.

The mean age of First Nations claimants was 40.3 years. This result could relate to the chronic nature of conditions treated with antidepressant medications and perhaps more disabling to an older patient. The mean age result may also be due to misdiagnosis at an earlier age and non-medication therapies are more likely to be recommended for or sought after by younger-aged patients. More research is needed to explore the mean age of antidepressant medication use, including onset of symptoms and age to access mental health services.

Conclusion

Our study results are the first of their kind and identify that a significant proportion of the FN population used antidepressant medications within British Columbia during 2001. Our study results begin to estimate the prevalence of conditions treated with antidepressant medications but more research is needed, such as the use community surveys and physician visit data, to estimate the prevalence of these conditions. These study results are useful for healthcare providers and program planners, and indicate a need to plan mental health services accordingly to meet the demand within FN communities.

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