# Frequency and Adequacy of Depression Treatment in a Canadian Population Sample

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**Objective:** Population-based data about depression treatment are largely restricted to estimates of the frequency of antidepressant (AD) use. Such frequencies are difficult to interpret in the absence of information about dosages, reasons for taking the medications, and participation in nonpharmacologic treatment. The objective of this study was to describe the pattern of treatment for major depression (MD) in Alberta.

**Method:** Telephone survey methods were employed. Random digit dialing was used to select a sample of 3345 household residents aged 18 to 64 years in Alberta. A computer-assisted telephone interview that included the Mini Neuropsychiatric Diagnostic Interview and questions about pharmacotherapy and psychotherapy was administered. Estimates were weighted for design features and population demographics.

**Results:** The point prevalence of MD was 4.4% (95% confidence interval [CI], 3.4% to 5.5%), and the overall prevalence of current AD use was 7.4% (95%CI, 6.2% to 8.6%). The ADs taken most commonly, serotonin-specific reuptake inhibitors, were taken at therapeutic dosages 87.4% of the time. Most (80.7%) of those taking ADs reported taking them for more than 1 year. The frequency of receiving counselling, psychotherapy, or talk therapy was 3.9% overall and 14.3% in respondents with MD. However, most of these subjects were unable to name the type of counselling they were receiving.

**Conclusions:** When compared with previous estimates, these results suggest continued progress in the delivery of evidence-based care to the population. There is room for additional improvement, especially in the provision of nonpharmacologic treatment.

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# **Clinical Implications**

- The frequency of AD treatment is now greater than the prevalence of depressive disorders. This appears to be partially owing to the use of these medications for reasons other than depression and partially owing to maintenance treatment.
- Most users of ADs are taking them at standard dosages and for adequate durations.
- The health care system appears to be more effective in its delivery of pharmacologic than nonpharmacologic treatments for depression. There appears to be much room for improvement in nonpharmacologic treatment delivery.

#### Limitations

- This was a telephone survey and may have been vulnerable to selection bias.
- Only a brief diagnostic measure could be included in the survey interview.
- The study relied on self-report data concerning medication use.

*Key Words: depressive disorder, antidepressive agents, cross-sectional studies* 

The impact of MD on population health is considerable, partially because of its high prevalence: about 5% of the general population will experience an episode of MD in any given year.<sup>1-3</sup> However, its impact is magnified by a peak prevalence in individuals aged under 45 years,<sup>3</sup> a critical period for education, establishment of careers and relationships, as well as economic productivity.

Although effective treatments for MD exist, it has generally been felt that MD is undertreated. The replication of the NCS-R in the United States reported that only 57.3% of respondents with past-year major depressive disorder received treatment.<sup>1</sup> Comparable estimates have been reported for Canada.<sup>4</sup> Estimates in other countries have generally been lower.<sup>5,6</sup>

Deficiencies in depression care relate to under diagnosis, inadequate treatment, and lack of patient follow-up. For these reasons, the public health response has tended to emphasize secondary and tertiary prevention strategies.<sup>7</sup> These strategies may include case-finding efforts<sup>8,9</sup> or implementation of disease management in primary care.<sup>10–21</sup> Such initiatives are predicated on the principle that improved detection as well as the provision of higher quality treatment should lead to better clinical and population health outcomes.<sup>7</sup> Recently, there has been considerable interest in shared care strategies.<sup>22–24</sup> In some countries, national initiatives targeting public and professional education, typically combined with case-finding efforts, have emerged.<sup>8,9,25,26</sup>

Several studies have examined trends in the frequency of use of ADs in various countries during recent decades. Generally, an increase in the prevalence of use has been reported, for example.<sup>27</sup> One Australian report suggests that the trend toward increasing use of these medications may be slowing.<sup>28</sup>

#### Abbreviations used in this article

AD	antidepressant
CBT	cognitive-behavioural therapy
CI	confidence interval
CIDI	Composite International Diagnostic Interview
DDD	defined daily dosage
MD	major depression
MINI	Mini Neuropsychiatric Diagnostic Interview
NCS	National Comoribidity Survey
SRI	serotonin reuptake inhibitors
TCA	tricyclic antidepressants

Only a few population-based studies have attempted to evaluate the adequacy of treatment<sup>1,29,30</sup> and to our knowledge, there are no estimates of the frequency of evidence-based nonpharmacologic treatment, such as CBT or interpersonal therapy, in the general population.

The Alberta Depression Initiative is a collaboration of government, the Institute of Health Economics (http://www.ihe.ab.ca), and Alberta researchers. The initiative funds policy- and practice-relevant research aimed at improving the detection and treatment of depression in the Alberta population.<sup>31</sup> The purpose of this Alberta Depression Initiative-funded study was to describe trends in the frequency of AD use, to further elucidate the adequacy of AD treatment, and to describe the use of psychotherapy for depression.

# Method

# Sample Selection

Alberta has a population of 3.3 million, dispersed over an area of  $661 \, 190 \, \mathrm{km}^2$ . Telephone survey methods were the most feasible strategy for obtaining a representative sample in this geographically dispersed population. About two-thirds of Albertans reside in 1 of 2 equally sized cites: Edmonton and Calgary. The sampling procedure employed in this study was therefore stratified so that about one-third of the sample would come from each of these cities, with the balance coming from the remaining rural areas. The population targeted by the study consisted of adult Albertans. The sampling frame was household residents aged 18 to 64 years with access to a residential telephone line.

## Data Collection

Data collection was carried out by the population survey unit of the Quality, Safety and Health Information portfolio in the Calgary Health Region. A listing of provincial residential telephone numbers is maintained and updated by the survey unit. A random sample of these numbers was selected for the survey. The last digit of these residential numbers was randomly substituted to increase coverage of unlisted numbers<sup>32,33</sup> and to avoid bias that might be introduced if households with unlisted numbers differed from those with listed numbers.

When a household was reached, a pseudo-random procedure, the "last birthday method," was used to select a single subject from the household. Telephones that were not answered were called back as many as 9 times in an effort to reach all sampled households. These calls were distributed over working hours, evenings, and weekends.

# Measurement and Data Analysis

The MINI, a brief structured diagnostic interview,<sup>34,35</sup> was used as a diagnostic indicator for MD and a set of other

common disorders. The version employed was the MINIplus, version 5.0 (http://www.medical-outcomes.com). The MINI interview was developed jointly at the University of South Florida and the National Institute for Mental Health in Paris in the 1990s and has continued to evolve since then. This instrument was developed for case-finding in primary care, where it was felt that a brief structured interview could lead to improved detection of mental disorders by allowing nonphysician clinical staff to derive preliminary psychiatric diagnoses. For major depressive episodes, past 14-day prevalence is assessed (essentially, point prevalence for this disorder). In the remainder of this report, past 14-day MD is abbreviated as MD. For dysthymia, the prevalence period covers the past 2 years. For agoraphobia and social phobia, the prevalence period was 1 month. For generalized anxiety disorder, the version of the MINI employed produces 6-month prevalence estimates. In keeping with the original goal of the MINI as a case-finding tool for primary care, the development process emphasized sensitivity over specificity. Previous experience with the MINI indicates that the instrument tends to overestimate population prevalence.<sup>36</sup> As it has been shown that differences between psychiatric survey instruments often relate to the role of clinical significance probes in the scoring algorithms,<sup>37</sup> we incorporated an interference item to reduce false positive results: asking respondents whether their psychiatric symptoms interfered with their life. Episodes were considered clinically significant if respondents reported "a lot" of interference with their life.

A pharmacoepidemiology module and a module designed to identify nonpharmacologic treatment were also included in the interview. The pharmacoepidemiology module had a cyclical item-flow structure, initially asking about medications taken for the treatment of broadly defined relevant symptoms ("Do you currently take any prescription medications for anxiety, depression, stress, energy levels, sleeping, pain management, fibromyalgia, or migraine headaches?"), and then looping through each reported medication with a series of items inquiring about the number and size of tablets, reasons for use of the medication, and duration of use. Dosage was determined by combining information about the size(s) and number of relevant tablets or capsules taken, including pro re nata schedules. The dosages were recorded in milligrams per day. Respondents were prompted to report information directly from their pill bottle labels to ensure accuracy of this information. Finally, a set of questions was used to probe for nonpsychiatric uses of ADs: migraine headaches and chronic pain-providing data to complement the self-reported "main reason for use."

DDDs<sup>38</sup> were calculated using the WHO Collaborating Centre for Drug Statistics Methodology database (http://www.whocc.no/atcddd/) as a means of standardizing dosages across specific medications. The DDD is the assumed average maintenance dosage per day for a drug used for its main indication. The proportion of respondents equalling or exceeding a DDD was calculated and also the ratio of the reported daily dosage to the DDD. Adequacy was estimated by considering both dosage and duration of treatment. The pharmacologic therapy was considered adequate if the dosage was equal or more than 1 DDD, and if the duration of treatment was at least 8 weeks. The 8-week threshold was selected because a 6- to 8-week treatment trial of ADs is generally required to assess its effectiveness.

Previous studies have drawn attention to a methodological issue that may result in systematic underestimation of AD treatment rates. The frequency of use of ADs is traditionally estimated only in respondents determined to have had a recent or current depressive episode.<sup>39,40</sup> This method neglects the population of respondents who have had a successful outcome of treatment and therefore no longer meet diagnostic criteria for MD. If an estimate of the proportion of nondepressed AD users who are taking the medications for treatment or prevention of depression is available, an adjustment can be made by adding these individuals to the numerator and denominator of the AD use frequency.<sup>40</sup> An adjustment of this type was made in this study.

A set of questions was also developed for the measurement of nonpharmacologic treatment. This module was designed to identify the use of psychotherapy as well as measure the adequacy of exposure to psychotherapy (defined as at least 6 sessions, lasting a minimum of 15 minutes each, with a health professional). It was not considered possible to evaluate the quality of therapy using a telephone interview. Respondents were asked whether they remembered the name of the type of therapy in which they were engaged. Our expectation was that subjects who had received evidence-based therapies would be able to name the type of therapy. We assumed that this would be particularly true of CBT, which typically includes homework assignments, didactic instruction, and readings.

Items evaluating demographic variables (sex, marital status, education level, employment status, and income) and various forms of health care use were included.

Interviewers working on the project were experienced telephone interviewers. Data collection was preceded both by a pilot study and by a series of training sessions that incorporated didactic instruction and practice. However, reliability was not formally assessed or quantified. Sampling weights were calculated to account for design effects (number of "voice" phone lines, as opposed to those used exclusively for fax or Internet access; number of eligible household residents; and differential probability of selection owing to stratified



Figure 1 Disposition of random digit dialed telephone calls

sampling). It was not possible to include unlisted cellular and Internet phone lines in the sampling frame. A poststratification adjustment was made to the weights to standardize estimates to the age and sex distribution of the Alberta population. A cross-tabulation of age and sex by health region from the Alberta Health and Wellness Stakeholder Registry was used to define the population demographics. Statistical analyses were carried out using survey analysis commands in STATA version 9.0.<sup>41</sup>

# Results

#### Sample Characteristics

The data collection started in October 2005 and was completed in February 2006. In total, 18 113 telephone numbers were called. The final analysis included data collected from 3345 individuals. A summary of call dispositions is presented in Figure 1. If household level refusals are incorporated into calculation of the response rate, then this is: 3345/7497 (45%). However, an impact of mental health status on the refusal rate is the main concern with respect to selection bias. This may be more likely to occur at the level of individual rather than household refusal; therefore, the best response rate estimate may be the individual level rate: 3419/4054, or 84.3% (see Figure 1).

The unweighted sample included 1345 (40.2%) men and 2000 (59.8%) women. Weighted proportions of men and women were 50.2% and 49.8%, respectively. Table 1 shows weighted and unweighted estimates from the survey and, for comparison, weighted estimates from the 2005 Canadian Community Health Survey, iteration 3.1 for the Alberta population within the relevant age range. The sample was generally representative, but appeared to underrepresent those with post-secondary education.

Weighted and unweighted prevalence estimates are presented in Table 2. The weighted prevalence of MD was 4.4% (95%CI, 3.4% to 5.5%). MD was slightly more common in women, 4.9% (95%CI, 3.5% to 6.3%), than in men, 4.0% (95%CI, 2.5% to 5.5%); in divorced, widowed, or separated respondents, 16.3% (95%CI, 10.0% to 22.6%), than married– common-law subjects, 3.0% (95%CI, 1.9% to 3.9%), or never married subjects 4.9% (95%CI, 2.5% to 7.3%). Generalized anxiety disorder was also slightly more common in

Table 1 Demographic characteristics of the sample: comparison with CCHS 3.1				
	%			
Characteristic	Unweighted estimate	Weighted estimate	CCHS 3.1ª	
Sex				
Men	40.2	50.2	50.1	
Women	59.8	49.8	49.9	
Age				
18–29	18.7	26.8	27.3	
30–44	35.7	35.1	35.1	
45–64	45.6	38.1	37.6	
Marital status				
Married	58.1	58.1	58.3	
Common law	8.3	10.3	8.4	
Widowed, divorced, separated	13.4	8.0	8.0	
Never married	20.2	23.6	25.3	
Education				
Less than secondary	7.8	5.7	3.3	
Secondary level graduation	22.0	21.1	11.5	
Some post-secondary	13.7	16.0	7.0	
Post-secondary graduation	56.5	57.2	78.3	

<sup>a</sup>CCHS 3.1 (2005) participants from the province of Alberta within the relevant age range (*n* = 8522). CCHS estimates derive from the Public Use Microdata File (PUMF) and are weighted using the PUMF file master weight.

Table 2 Prevalence of mental disorders according to the MINI <sup>a</sup>					
	n = 3345	Unweighted prevalence	Weighted prevalence		
Disorder (prevalence period)	п	%	%	95%CI	
Major depressive episode (current)	157	4.7	4.4	3.4–5.5	
Dysthymia (2 years)	20	0.6	0.4	0.1–0.7	
Panic disorder (current)	39	1.2	1.3	0.7–1.9	
Agoraphobia (1 month)	175	5.2	4.6	3.5–5.6	
Social phobia (1 month)	77	2.3	2.2	1.4–2.9	
Generalized anxiety disorder (6 months)	145	4.3	4.2	3.2–5.2	
Panic disorder with agoraphobia	45	1.4	1.2	0.7–1.8	
<sup>a</sup> Diagnoses were considered valid if they were associated with "a lot" of interference with life.					

Table 3 Reported reasons for AD use <sup>a</sup>					
		Frequency			
Reason	TCAs %	SSRIs %	Venlafaxine %	Other %	
Depression	33.3	67.1	70.7	73.2	
Anxiety	16.7	8.4	8.5	19.5	
Stress	0.0	2.1	6.1	9.8	
Sleep	43.3	17.5	23.2	53.7	
Low energy	0.0	1.4	1.2	2.4	
Migraine headaches	23.3	6.3	8.5	7.3	
Pain management	33.3	12.6	9.8	36.6	
Fibromyalgia	26.7	0.7	4.9	4.9	
<sup>a</sup> Among subjects who reported using 1 or more ADs. Subjects were allowed to report more than one reason for use					

<sup>a</sup>Among subjects who reported using 1 or more ADs. Subjects were allowed to report more than one reason for use, hence, some percentages add up to > 100%.

women, 4.6% (95%CI, 3.2% to 6.1%), than in men, 3.8% (95%CI, 2.3% to 5.2%); and also had a higher prevalence in divorced, widowed, or separated participants, 11.9% (95%CI, 7.1% to 16.7%), than in never married, 6.2% (95%CI, 3.5% to 9.0%) or in married–common law, 2.6% (95%CI, 1.7% to 3.6%) respondents.

## Pharmacologic Treatment

The overall current prevalence of AD use was 7.4% (95%CI, 6.2% to 8.6%). There was a higher frequency of medication use in women, 10.8% (95%CI, 8.8% to 12.7%), than men, 3.9% (95%CI, 2.5% to 5.2%). The frequency of AD use increased with age, from 4.3% (95%CI, 1.2% to 7.3%) in individuals aged 18 to 25 years to 9.0% (95%CI, 7.1% to 10.1%) in individuals aged 45 to 65 years.

The use of TCAs was reported by 14.5% of respondents taking ADs and 75.8% of these took daily dosages that were lower than 1 DDD. Among those taking TCAs, 63.6% were age 45 years or older. SRIs were taken by 54.0% of the subjects who reported AD use. Here, the majority (87.4%) were taking dosages of at least 1 DDD. Venlafaxine was taken by 25.7% of those taking AD medications. An additional 17.6% were taking other AD medications: bupropion, trazodone, or mirtazapine. These percentages add up to more than 100% because some subjects were taking more than 1 AD.

In relation to MINI diagnoses, 40.5% (95%CI, 28.5% to 52.6%) of participants with MD reported taking ADs. A slightly lower frequency was observed among those with anxiety disorders (29.6%, 95%CI, 21.4% to 37.7%). Most of the respondents who reported taking an AD did not have a MINI diagnosis (67.2%).

The traditional way to estimate the frequency of AD treatment is to calculate the proportion of respondents with MD who also report taking ADs. This was the procedure used in arriving at the 40.5% estimate presented above. There were 157 individuals with current MD, with 60 of these taking ADs (an unweighted frequency of 38.2%, closely resembling the 40.5% weighted frequency reported above). However, there were 248 individuals without current MD who were taking ADs, with 139 of these reporting that they were taking their medication for treatment of depression. These subjects may represent successful treatment outcomes (that is, people in the maintenance phase of treatment). Adding the 139 respondents who were undergoing depression treatment to the numerator and denominator of the frequency estimate<sup>40</sup> resulted in an adjusted AD treatment frequency of 67%. The main reasons reported for taking ADs are listed in Table 3.

# **Treatment Adequacy**

Among people taking at least 1 AD, 80.7% reported taking the medication for more than 1 year; 14.5% for more than 8 weeks, but less than 1 year; and 4.7% for less than 8 weeks. The frequency with which ADs were taken for more than 1 year was 78.8% for SRIs, 70.7% for TCAs, 90.0% for venlafaxine, and 76.6% for other ADs. Defining treatment adequacy as the duration of therapy ( $\geq 1$  year) together with the dosage prescribed (DDD  $\geq 1$ ), we found adequate treatment in 90.0% of people taking SRIs, 61.1% of people taking venlafaxine, 28.6% of people taking TCAs, and 40.0% of people in the other AD group. The frequency of adequate treatment defined in this way among people with MD was 60.4%. However, the persistence of symptoms in this group could also be interpreted as prima facie evidence of inadequate

Table 4 Professional who providednonpharmacologic treatment ( $n = 133$ )			
Professional	п	Unweighted %	
Family doctor	8	6.0	
Psychiatrist	26	19.5	
Psychologist	50	37.6	
Social worker	13	9.8	
Nurse	3	2.3	
Employee assistance program <sup>a</sup>	2	1.5	
Other	52	39.1	
<sup>a</sup> Specific professional not designated.			

treatment in the sense that although the treatment met minimal standards, a remission had not been achieved.

#### Nonpharmacologic Treatment

Overall, 3.9% reported that they had received counselling, psychotherapy, or talk therapy amounting to at least 6 sessions lasting longer than 15 minutes during the year preceding the interview. Receipt of therapy was strongly related to the presence of MD. Among individuals with current MD, 14.3% (95%CI, 6.6 to 22.1) reported this extent of participation in therapy. The following estimates are unweighted as they refer to the group reporting receipt of therapy rather than the general population. The 133 respondents who met the definition above were asked to name the professional providing the treatment. The most common professionals named were psychologists (37.6%). Some of the professionals named by the subjects were not necessarily professionally trained by conventional standards. In reviewing the responses, we estimated that 78.6% could probably be considered professional therapists, the remainder consisted of responses such as friends, pastor, and herbologist, who may or may not be professionally trained therapists, although they were considered to be so by the respondents. Table 4 presents a list of reported therapy providers. Participants were asked to rate their level of satisfaction with the therapy they had received. Responses to this inquiry were provided by 109 of the subjects, with 93 (85.3%) reporting that they were satisfied or very satisfied. Sixty-eight (62.4%) reported that the therapy had helped "a lot" and only 3(2.7%) reported that it had not helped at all. When asked to name the type of counselling, psychotherapy, or talk therapy they were receiving, 114 (85.7%) responded, but none indicated that they were engaged in CBT, whereas only 1 indicated interpersonal therapy. Among those meeting the study's definition of therapy, 36.8% also reported taking an AD.

# Discussion

The estimated prevalence of MD found in this study was consistent with the 4.9% prevalence of 30-day MD reported from NCS in the United States,<sup>42</sup> but higher than the 1.8% 30-day prevalence estimate from a recent Canadian survey.<sup>3</sup> Both of these national studies used the CIDI, although a Canadian adaptation of the instrument was used in the latter study. The CIDI is a more elaborate instrument than the MINI and may be more capable of distinguishing between mild situational depressions and MD. This may account for the higher prevalence observed here. Whereas the CIDI does use clinical significance probes, these are applied separately to each disorder detected during the interview. In this survey, an omnibus item was included that made broad reference to interference caused by psychiatric symptoms but did not attempt to tie reported interference to specific mood and anxiety disorders. This could mean that some respondents with comorbid conditions and subclinical depression may have been classified as having MD.

An unexpected finding was that the sex difference in MD prevalence did not attain statistical significance in this study. This phenomenon has been reported by other studies recently.<sup>43</sup> It is possible that the use of an interference item to eliminate false positives may have resulted in a smaller than expected sex difference. For example, if men were relatively more likely (or women relatively less likely) to report interference owing to their symptoms, the association of MD with sex may have been biased toward the null value. Consistent with this idea, removal of the interference criterion resulted in a weighted odds ratio for women of 1.5 (95%CI, 1.1 to 2.1).

The choice of the MINI, with its 2-week prevalence period, has the advantage of being less subject to recall bias than instruments addressing lifetime or annual prevalence, potentially avoiding a major problem in the epidemiologic literature.<sup>44</sup> However, the instrument will miss episodes that have occurred in the recent past if these do not have a sufficient level of current symptoms.

The overall proportion of respondents taking ADs, 7.4% (95%CI, 6.2 to 8.6), is comparable to that reported in a similar survey conducted in Alberta in 2003, called the Alberta Mental Health Survey.<sup>45</sup> This is consistent with Australian data, suggesting a levelling off in the frequency of use in recent years<sup>28</sup> following increases in previous decades.<sup>46</sup> AD use in the general population now seems to consist more often of maintenance treatment than new prescriptions. The results reported here are in stark contrast to studies of new AD exposures, which are often found to be very brief.<sup>47</sup> It is likely that many new trials are terminated early, but also that many people take these medications for long periods of time. As such, although most of the people evaluated here were taking ADs for long periods of time, this should not be interpreted as meaning that most AD trials are long-lasting. Epidemiologically, it is predictable that long-term users will tend to predominate among prevalent as opposed to new or incident users. Longitudinal data would be needed to observe the proportion of the population starting and stopping ADs over time. Past 2-week MD prevalence and current AD use were measured, therefore not all AD trials occurring during the MD prevalence period were necessarily detected.

Telephone surveys are subject to selection bias if factors related to telephone access or willingness to participate in such surveys are also related to the variables under investigation. If factors influencing the household or individual response rates were also related to depression and its treatment, then bias might have resulted. Similarly, selection bias could result from the trend toward cellphone or Internet phone use if exclusive users of cellphones (or Internet phones) differ in ways that are related to depression and its treatment.

We used an adjustment to AD treatment rates to deal with bias inherent in the traditional way of calculating this rate, which only includes people with current or recent episodes. The adjustment that was employed in this analysis included people who did not have past 14-day MD, but who were taking an AD for depression. Because this type of adjustment has not been widely employed, most other studies suggest more drastic undertreatment, for example.<sup>48</sup> However, the approach to adjustment might overestimate the treatment frequency if it includes people who are receiving unnecessary treatment.

We applied a definition of treatment adequacy that was based on self-reported treatment, along with information about duration and dosage. This is the same approach taken by NCS-R investigators,<sup>1</sup> but with some differences. The estimated frequency of adequate treatment reported here is higher than that reported by this and previous surveys.<sup>1,29,30</sup> These differences are partially owing to differing definitions of the adequacy of treatment. For example, the NCS-R required at least 4 visits plus adequate pharmacotherapy or 8 visits to a mental health specialist without AD therapy. When we applied these extra requirements for visit frequency to our definition of adequacy, the estimated frequency of adequate treatment changed from 60.4% to 36.3%.

The higher prevalence of adequate treatment among women, more educated, and younger people is consistent with rates reported by previous surveys<sup>1,29,30</sup> but, perhaps because of sample-size constraints, these variables were not statistically significant predictors of treatment adequacy in this analysis. To have an estimate of the adequacy of dosages, we used the DDD methodology. Because DDDs reflect average rather than optimal dosages, our definition of adequate dosage was somewhat arbitrary. The DDD was originally designed to allow for the use of pharmaceutical sales or claims data in estimating treatment rates, not as a measure of adequate dosages. However, the DDD does provide a way of determining the frequency with which at least usual AD dosages were being used.

This study is one of the first to attempt to evaluate the frequency of nonpharmacologic depression treatment in a general population sample. The frequency of multiple visits consistent with possible receipt of psychotherapeutic treatment occurred less commonly than the frequency of AD use. However, of more interest was the failure of any study respondent to indicate that they were participating in CBT. We assumed that, given the nature of CBT, patients participating in it would know the name of that type of therapy. While this assumption could not be confirmed from our data, the fact that not a single survey participant named this type of therapy provides a strong suggestion that the health care system is not as effective in delivering evidence-based psychotherapy for depression as it is for delivering pharmacologic treatments. While requiring confirmation, the result points toward considerable room for improvement in the delivery of nonpharmacologic treatments for depression in the population.

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# Résumé : La fréquence et le caractère adéquat du traitement de la dépression dans un échantillon de la population canadienne

**Objectif :** Les données en population sur le traitement de la dépression sont largement limitées à des estimations de la fréquence d'utilisation des antidépresseurs (AD). Cette fréquence est difficile à interpréter en l'absence d'information sur les doses, les raisons de prendre les médicaments, et la participation à un traitement non pharmacologique. L'objectif de cette étude était de décrire le modèle de traitement de la dépression majeure (DM) en Alberta.

**Méthode :** Des méthodes de sondage téléphonique ont été employées. La composition aléatoire a servi à sélectionner un échantillon de n = 3 345 résidents des ménages de 18 à 64 ans, en Alberta. Une entrevue téléphonique assistée par ordinateur, qui incluait la mini-entrevue diagnostique neuropsychiatrique et des questions sur la pharmacothérapie et la psychothérapie, a été administrée. Les estimations ont été pondérées pour les particularités de la méthode et les données démographiques de la population.

**Résultats :** La prévalence ponctuelle de la DM était de 4,4 % (95 % intervalle de confiance [IC], 3,4 % à 5,5 %), et la prévalence globale de l'utilisation courante d'AD était de 7,4 % (95 % IC, 6,2 % à 8,6 %). Les AD pris le plus souvent, soit les inhibiteurs spécifiques du recaptage de la sérotonine, étaient pris à des doses thérapeutiques 87,4 % du temps. La plupart (80,7 %) de ceux qui prenaient des AD déclaraient les prendre pendant plus d'un an. La fréquence de réception de consultation, de psychothérapie ou de thérapie par la parole était de 3,9 % en général et de 14,3 % chez les répondants souffrant de DM. Cependant, la plupart des sujets étaient incapables de nommer le type de thérapie qu'ils recevaient.

**Conclusions :** Comparativement aux estimations précédentes, ces résultats suggèrent un progrès continu de la prestation de soins fondés sur des données probantes à la population. Il y a place à plus d'amélioration, surtout dans la prestation de traitements non pharmacologiques.

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