

Appendix 10: Depression: evidence review for newly arriving immigrants and refugees

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ABSTRACT

Background: Depression is common worldwide. Rates of depression vary across geographic regions and, in migrants, are further influenced by their migration trajectory. Depression is commonly under-recognized and undertreated in immigrants and refugees. We reviewed evidence to improve primary care detection and treatment of major depressive disorder among immigrants and refugees during the first 5 years of resettlement.

Methods: We systematically reviewed screening and treatment guidelines and systematic reviews on depression from Canada, the United States and the United Kingdom and recent studies addressing the effectiveness of screening and treatment of major depressive disorder in immigrants and refugees. We assessed the quality of evidence using the Grading of Recommendations Assessment, Development, and Evaluation approach.

Results: Screening for depression alone has no reliable benefit for clinical outcomes. If integrated treatment providing enhanced care for depression is in place, however, screening is associated with improved outcomes, although effects are modest (1%–2% of variance in depression symptoms). This positive effect of screening and integrated care can be larger for certain ethnocultural minorities or migrant groups, particularly when barriers to access to care and cultural or linguistic differences between clinicians and patients exist, although this increase has not been demonstrated in studies designed for that purpose.

Interpretation: Systematic screening can improve the outcome for depression when integrated treatment is available. However, few primary care settings have the integrated systems in place. Effective detection and treatment among immigrants and refugees also can require interpreters or culture brokers to identify patient concerns, negotiate illness meanings, monitor progress, ensure adherence to treatment, and address social causes and consequences of depression.

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Box 1: Recommendations on depression from the Canadian Collaboration for Immigrant and Refugee Health

If linked to integrated treatment program, screen adults for depression with a systematic clinical inquiry or validated patient health questionnaire (PHQ-9 or equivalent). Link suspected cases of depression with integrated treatment program and case management or mental health care.

Basis of recommendations

- **Balance of benefits and harms:** The number needed to treat (NNT) to prevent one person with persistent depression was 18 (95% CI 10– 91) in studies of 1–12 months' duration. Depression treatment in enhanced depression-care models accounts for an additional 1%–2% reduction in depressive symptoms compared with usual care. Prevalence of depression is similar in Canadians and in immigrants and refugees (10.7%), but access to care can be limited for immigrant populations. No data on harms were reported, which would include patients' out-of-pocket costs and possible adverse effects of medication.
- **Quality of evidence:** Moderate
- **Values and preferences:** The Guideline Committee attributed more value to screening and treating depression to improve quality of life and less value to concerns about impairing rapport in therapeutic relationships; cultural acceptability and potential stigma of diagnostic labels; the cost and inconvenience of additional follow-up assessments; and possible adverse effects or costs associated with treating incorrectly diagnosed patients.

The cases

Rukhsana, a 23-year-old Bangladeshi woman who recently delivered her first child, visits the office with complaints of extreme fatigue, headaches, and diffuse muscle aches and pains. She is asking for a tonic or vitamins to give her some energy.

Ahmed, an 18-year-old Somali man, presents with recurrent abdominal pain. He is worried that something is seriously wrong with his stomach. He arrived in Canada alone one year ago after a period of two years in a refugee camp. He is attending school but doing poorly in his studies.

Introduction

Depression is a common and costly health care problem. Depressive disorders are estimated to account for 4.4%

of the global burden of disease and are the primary cause of loss of disability-adjusted life years in developed countries.¹ Nearly all people with major depression are seen only in primary care, but up to 60% of cases go undetected and untreated.² The level of underdiagnosis and inadequate treatment for depression in primary care is higher for migrants, who face cultural, linguistic and structural barriers to mental health care.³⁻⁵

Rates of depression vary widely across countries and among ethnocultural groups and communities within a given region.^{6,7} However, depression rates in countries of origin are poor predictors of depression in migrants because of factors involved in the process of migration itself. While migration in itself does not lead to an increase in depression, specific stressors and challenges can contribute to the onset of depression or influence its course, particularly among refugees or others who experience forced migration⁸ In general, immigrants to Canada have lower rates of depression and other psychiatric disorders than the general Canadian population, while refugees have comparable rates of depression but higher rates of post-traumatic stress disorder and related disorders.⁹⁻¹² Over time, the rate of depression in immigrant groups increases to match that of the general population.¹³

This review was undertaken to determine whether existing approaches to screening for depression in primary care are appropriate for immigrants and refugees and to identify clinical strategies that could improve the quality of care.

Methods

We used the 14-step approach developed by the Canadian Collaboration for Immigrant and Refugee Health.¹⁴ We first constructed a clinician summary table to highlight the epidemiology of depression in immigrant and refugee populations, clinical considerations and potential key clinical actions (Appendix 2). We then constructed a logic model to define the clinical preventive actions (intervention), outcomes and key questions.

Search strategy for systematic reviews, guidelines and population-specific literature

We designed a search strategy in consultation with a librarian scientist to identify relevant systematic reviews and guidelines from a selection of electronic databases (e.g., MEDLINE, Psychlit, CINAHL, EMBASE and Cochrane Database of Systematic Reviews) and hand-searching in websites of the National Guideline Clearinghouse (www.guideline.gov/), Public Health

Agency of Canada (www.phac-aspc.gc.ca), United States Preventive Services Task Force (www.ahrq.gov/clinic/USpstfix.htm), Canadian Task Force on Preventive Health Care (www.canadiantaskforce.ca/), and World Health Organization (www.who.int/en/). The search covered January 1998 through December 2008. Two reviewers screened eligible systematic reviews for their relevance to the key questions. We appraised eligible systematic reviews using the National Institute for Health and Clinical Evidence critical appraisal tool to assess systematicity (the review must apply a consistent and comprehensive approach), transparency, quality of methods and relevance. A reference systematic review was chosen for each outcome of clinical importance. Studies were included if the study design was a randomized controlled trial, controlled clinical trial, or cohort study using a placebo or no-treatment comparison that was relevant to our key questions.

Using the same databases, we conducted a separate literature search for depression and immigrant- and refugee-specific issues on the diagnosis and treatment of depression in primary care. The searches were limited to English-language articles. This restriction should not have a large effect on the results because the countries most similar to Canada in patterns of migration and primary health care system are English-speaking (e.g., United Kingdom, United States and Australia), and guidelines of international organizations are published in English. An updating search, focusing on randomized controlled trials and systematic reviews during the period Jan. 1, 2007, to Jan. 1, 2010, was conducted to determine whether any recent publications would change the position of the recommendation.

Synthesis of evidence and values

We compiled evidence from systematic reviews and pertinent cohort and clinical trials using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) summary of findings tables, which assess both relative and absolute effects of interventions (relative risk and absolute event rate). We also appraised quality of evidence for each outcome using the GRADE quality-assessment tool, which assesses study limitations, directness, precision, consistency and publication bias across all studies (Box 2). In the synthesis of data on clinical considerations, we identified both clinically relevant considerations and implementation issues relevant to our population. Finally, we identified gaps in the research evidence.

Results

The search found no guidelines or outcome studies on screening and prevention of depression specifically for immigrants and refugees. Accordingly, this review focused on using available studies on migrant populations and ethnocultural communities to evaluate the relevance and generalizability of existing guidelines intended for the general population and on identifying specific clinical considerations relevant to prevention and treatment of depression among immigrants and refugees.

Existing guidelines on screening for depression in primary health care from the Canadian Task Force on Preventive Health Care¹⁵ and from the US Preventive Services Task Force^{16,17} and on treatment of depression from the Canadian Psychiatric Association,¹⁸ the American Psychiatric Association,¹⁹ and the United Kingdom National Institute for Health and Clinical Excellence²⁰ all make scant mention of immigrants and refugees. The Canadian Psychiatric Association's guidelines have a brief section on "implications of culture and ethnicity during the assessment and treatment of depression" that notes evidence for differences in drug metabolism "in various groups including Asian and African Americans." The American Psychiatric Association's guidelines for the treatment of depression note that language and other cultural variables can hamper accurate diagnostic assessment and treatment and also mention ethnic differences in the response to pharmacotherapy. The British National Institute for Health and Clinical Evidence guidelines include statements on ethnic variations in prevalence and on the importance of social and cultural factors in choice of treatment.

Neither the US Preventive Services Task Force guidelines nor the Canadian Task Force on Preventive Health Care recommendations addressed screening practices for immigrants or refugees, and the literature in this area is very limited. Several more recent studies, however, have reported evidence that can inform the implementation of depression screening and integrated care for immigrants and refugees in primary care (Appendix 1).

What is the burden of depression in immigrant and refugee populations?

The most recent Canadian data from the Canadian Community Health Survey (CCHS 1.2) found a lifetime prevalence of depression of 10.8% in the general population.²¹ An analysis of the 2000-2001 CCHS found that 6.2% of immigrants reported symptoms suggesting at least one major depressive episode in the 12 months

before the survey, compared with 8.3% of Canadian-born community members.²² Immigrants who had arrived in Canada in the previous four years had the lowest rates of depression, 3.3%–3.5%. Immigrants who arrived 10–14 years ago (rate 8.5%) or more than 20 years ago (rate 6.8%–7.2%) had similar rates to those of the Canadian-born population. Proficiency in English or French and employment status did not affect the rates. A meta-analysis of studies on serious mental disorders among refugees found rates of depression similar to those in the general population but much higher levels of post-traumatic stress disorder, often in association with depression.²³

Studies using self-report questionnaires in several countries have found high levels of depression among refugees, including children, adolescents and unaccompanied minors.^{24–28} However, use of symptom questionnaires to measure the prevalence of psychiatric disorders and need for care is imprecise and can produce inflated estimates.

Immigrant status has been identified as a risk factor for elevated symptoms of depression on the basis of self-report questionnaire during pregnancy and in the postpartum period.^{29–33} Several studies have identified risk factors for depressive symptoms among child-bearing immigrant women. These include stressful life events, lack of social support or isolation, physical health problems, inability to speak the language of the host country, the demands of multiple roles, and separation from children who remained in the country of origin.^{34–39} Results concerning the effect of length of stay in the host country as a risk factor are inconsistent: some studies found that more recent immigrants were at greater risk,^{32,38,39} while others indicated that those who migrated in childhood were at greater risk.⁴⁰

Does screening for depression decrease morbidity and mortality?

Screening tools

Many different screening instruments for depression have been validated in primary care settings, and little evidence suggests that any particular instrument performs better than other instruments although brief tools tend to be less specific.^{41,42} Brief 2- to 3-item screening tools appear to perform otherwise similarly to longer instruments for screening purposes.^{43,44} However, both brief and longer screening tools tend to have relatively high false-positive rates of 60%–70% when the prevalence of depression is 10%.^{43,45} Thus, positive screens must be confirmed by a full diagnostic interview.^{15,46} Most screening instruments have not been

validated with many of the immigrant or refugee groups commonly seen in primary care in Canada, although the patient health questionnaire (PHQ) has been validated with Chinese, South Asian and other populations.^{47–51}

No recommendations have been made regarding the optimal interval for screening, although the US Preventive Services Task Force noted that recurrent screening is “most productive” for patients with a history of depression or other psychiatric conditions, unexplained somatic symptoms, chronic pain or substance abuse.¹⁶ Depression can emerge at any point after migration. One study of Vietnamese refugees in Norway found that, compared with assessment upon arrival, rates of psychiatric disorder had not diminished 3 years later, and 18% of refugees had major depression at 3 years.⁵² Thus, periodic screening would appear to be most appropriate.

Relative benefits and harms of treatment

Benefits of treatment include reduction in the severity and duration of depression. Adverse effects from screening for depression among immigrants and refugees have not been systematically studied but can include impaired rapport and less use of general medical services if patients believe they are being labelled and stigmatized or are being treated improperly, the cost and inconvenience of additional follow-up assessments, and possible adverse effects or costs associated with treating incorrectly diagnosed patients. To date, no quantitative studies have explored the prevalence or magnitude of these potential harms.

Table 1 presents a summary of findings adapted from the US Preventive Services Task Force’s systematic review of screening for depression in 2002.⁵³ On the basis of guidelines formulated by the US Preventive Services Task Force,^{16,53} a 2005 report of the Canadian Task Force on Preventive Health Care recommended screening adults for depression in primary care when integrated systems that include diagnostic, treatment and follow-up components are in place.¹⁵ Clinical trials of integrated programs have demonstrated modest improvement in patient outcomes, but benefits have not been observed when screening results are simply reported to physicians without coordinated treatment and follow-up.^{15,53} A recent review for the US Preventive Services Task Force confirms these findings⁵⁴ (Table 1).⁵³ Recent reviews and meta-analyses by Gilbody et al^{42,55} also found no benefit for screening alone (Table 2),⁴² although there was some benefit in high-risk populations. However, a cumulative meta-analysis found modest benefit of collaborative care when an integrated system of care is in place to follow up (Table 3);⁵⁶ the

Table 1: Summary of findings on screening and feedback for depression in primary care (adapted from the US Preventive Services Task Force)⁵³

Patient or population: Adults
Setting: Primary care
Intervention: Screening and feedback
Comparison: Usual care
Source: Pignone MP, Gaynes BN, Rushton JL, et al. Screening for depression in adults: a summary of the evidence for the U.S. Preventive Services Task Force. *Ann Intern Med* 2002;136:765-76.

Outcomes	Absolute effect		Relative effect (95% CI)	No. of participants (studies)	GRADE quality of evidence	Comments
	Risk for control group	Difference with screening and feedback (95% CI)				
Proportion of patients with persistent depression (3–12 mo)	55 per 1000	6 less per 1000 (39 less to 48 less per 1000)	0.90 (0.82–0.98)	2114 (6)	Moderate†	One study excluded because it was overwhelmingly positive and contributed to heterogeneity
Stigma or labelling	No data					
Out-of-pocket costs	No data					

Note: CI = confidence interval, GRADE = Grading of Recommendations Assessment, Development and Evaluation.

Table 2: Summary of findings on screening and case-finding instruments for depression

Patient or population: Patients with depression
Setting: Non-mental health care settings
Intervention: Screening and case-finding instruments
Comparison: No screening
Source: Gilbody S, Sheldon T, House A. Screening and case-finding instruments for depression: a meta-analysis. *CMAJ* 2008;178:997-1003.

Outcomes	Absolute effect		Relative effect (95% CI)	No. of participants (studies)	GRADE quality of evidence	Comments
	Risk for control group	Difference with screening and case-finding instruments (95% CI)				
Depression			SMD 0.02 (-0.25 to 0.20)	966 (5)	Moderate‡§	
Depression outcome measured using different scales (follow-up: 3–24 months)						

Note: CI = confidence interval, GRADE = Grading of Recommendations Assessment, Development and Evaluation, SMD = standard mean difference.

†Inconsistency: “low between-study heterogeneity,” which we did not explore.

‡Indirectness: uncertainty about whether effects of screening and case finding in refugees and immigrants are similar to effects in general population despite differences in literacy, language, cultural issues.

§Imprecision: 95% CI includes both small benefit to small detriment (SMD of -0.25 to 0.20); SMD of 0.3 is considered small effect.

standardized mean difference of 0.25 [95% confidence interval 0.18-0.35] is equivalent to 1%-2% change in symptoms of depression.⁴²

A low-quality longitudinal study by Wells et al.⁵⁶ examined the effect of screening for depression within an integrated system of care with follow-up by nurses and with other improvements in quality-of-care. The greatest improvement was seen for minority groups (African Americans and Latinos) (Table 4). This improvement could reflect the greater barriers to care faced by ethnic or racial minorities and migrants in the

US, where they might have no health care insurance. Though not restricted to migrants, this study suggests that, to the extent immigrants and refugees face similar barriers to care, they can benefit from depression screening coupled with an integrated treatment system. It is unclear to what degree the results of this study would generalize to Canada because an important element of the intervention involved providing access to resources that were unavailable to many ethnic or racial minorities in the US, but that would be available in Canada. Further, Wells et al. used cut-off points to

Table 3: Summary of findings on effects of collaborative care for depression

Patient or population: Patients with depression
Setting: Primary care
Intervention: Collaborative care
Comparison: Usual (single-practitioner) care
Source: Gilbody S, Bower P, Fletcher J, et al. Collaborative care for depression: a cumulative meta-analysis and review of longer-term outcomes. *Arch Intern Med* 2006;166:2314-21.

Outcomes	Absolute effect		Relative effect (95% CI)	No. of participants (studies)	GRADE quality of evidence	Comments (95% CI)
	Risk for control group	Difference with collaborative care (95% CI)				
Depression at 6 mo	See comment	0.25 (0.18-0.2)		12 344 (35)	Moderate†	NNT 18 (10-91)
Standardized depression outcomes (median follow-up of 6 months)						

Note: CI = confidence interval, GRADE = Grading of Recommendations Assessment, Development and Evaluation, NNT = number needed to treat.

†Directness uncertain because these studies were conducted in the US health system, and it is unclear whether they apply to immigrants and refugees in Canada's health system.

Table 4: Summary of findings on quality-improvement therapy compared with usual care for depression

Patient or population: Patients with depression
Setting: Primary care practices in managed-care organizations
Intervention: Quality-improvement therapy
Comparison: Usual care
Source: Wells K, Sherbourne C, Schoenbaum M, et al. Five-year impact of quality improvement for depression: results of a group-level randomized controlled trial. *Arch Gen Psychiatry* 2004;61:378-86.

Outcomes	Absolute effect		Relative effect (95% CI)	No. of participants (studies)	GRADE quality of evidence	Comments (95% CI)
	Risk for control group	Difference with quality-improvement therapy (95% CI)				
Latino or African American—probable depression	500 per 1000	180 less per 1000 (60 less to 245 less per 1000)	RR 0.64 (0.48-0.85)	233 (1)	Low	NNT 6 (4-13)
Screening measure (mean follow-up 57 months)						
White—probable depression	350 per 1000	18 less per 1000 (238 less to 420 less per 1000)	RR 0.95 (0.73-1.25)	391 (1)	Low	NNT 57 (NS)
Screening measure (mean follow-up 57 months)						

Note: CI = confidence interval, GRADE = Grading of Recommendations Assessment, Development and Evaluation, NNT = number needed to treat, NS = not statistically significant, RR = risk ratio.

define treatment success without regard to extent of improvement, a method that is generally less accepted than others and that produces inflated estimates of efficacy. When transformed into a standardized effect size in a recent meta-analysis, the effect size of the Wells et al. intervention was much more modest (e.g., approximate standardized mean difference of 0.25, equivalent to 1%–2% change in depressive symptoms at 6 months).⁴²

Clinical considerations

Does screening for depression occur during migration?

The immigration medical examination asks “Have you ever had anxiety, depression or nervous problems requiring treatment.” This examination is not linked to preventive services or follow-up for identified mental health problems. In addition, the incidence of depression increases after migration in some groups.

What must be taken into account when screening and treating for depression?

General: Evidence that conventional approaches to diagnosis and treatment of depression can work with ethnic and cultural groups in North America, including immigrants and refugees, is increasing.^{57,58} However, screening should be conducted in a language in which the patient is fluent—either with translated instruments or through a trained interpreter. As well, cut-off scores for screening tools developed in the general population might not be accurate in specific cultural groups. Cultural variations in symptom presentation, ways of coping and the stigma attached to mental health problems can complicate detection and treatment.⁵⁹

Among refugee patients with depression, more than half also have post-traumatic stress disorder, and this comorbidity can complicate the recognition of depression.⁶⁰ Many cultures strongly stigmatize mental health problems, which can limit disclosure of behavioural or emotional difficulties. Depression can be distinguished from other forms of mental health problems and explained as a state of “energy depletion” and demoralization, providing a rationale for psychosocial assessment and treatment.

Child-bearing women: Existing guidelines for screening pregnant or postpartum women are not based on evidence reviews of the likely effectiveness of screening. The only large study to date on the prevalence of major depression in these groups found that rates for women in the postpartum period ($n = 994$, 9.3%) were significantly greater than those for nonpregnant women ($n = 13\ 025$, 8.1%), but the difference is not of a magnitude that would change the effect of screening.⁶¹ Depressed mothers are more likely than non-depressed mothers to use general health services.⁶²

For women in the postpartum period, the Edinburgh Postnatal Depression Scale is the most widely used screening measure across cultures.⁶³ Guidelines from British Columbia propose that the Edinburgh Postnatal Depression Scale be administered in the third trimester of pregnancy, at 1–2 weeks postpartum, and possibly at 2, 4, and 6 months postpartum.⁶⁴ The Registered Nurses Association of Ontario recommends using the Edinburgh Postnatal Depression Scale to screen for depressive symptoms in postpartum women.⁶⁵ Guidelines from the American College of Obstetricians and Gynecologists recommend psychosocial screening at least once per trimester of pregnancy.⁶⁶ They advocate the use of a two-item screen for depression that asks about depressed mood and anhedonia over the past two weeks. The PHQ-9 has also been validated as a screening

tool for postpartum depression.⁶⁷ Positive results from screening should be followed up by procedures for diagnosis, treatment and follow-up. It is important that women be interviewed *without* other family members present, to avoid the possibility of self-censorship; this requires the availability of culturally competent interpreters and health professionals.⁶⁸

Women from many different cultural backgrounds usually do not seek help for postpartum depression but rather for somatic symptoms that they attribute to physical or social causes.^{69,70} Community studies also indicate that pregnant women are reluctant to agree to assessment or treatment after screening.⁷¹ Among the barriers to care that have been identified are lack of knowledge about postpartum depression and treatment options, reluctance to disclose emotional problems outside the family, unwillingness to undertake medical treatment for what is perceived as a psychosocial problem,⁷² concern that maternal mental illness will burden or stigmatize the family, feelings of shame at being labelled mentally ill, and fear of losing one’s baby. Women’s multiple roles in the home and the workplace also impede access to health services for immigrant women.⁷³ Availability of child care facilities, transportation and support from family members and spouses can facilitate help seeking.⁷³ Group meetings can be an effective way to provide social support and health-promotion information.⁷⁴

Adolescents and children: The 2002 US Preventive Services Task Force did not identify any studies on outcomes for children or adolescents who were screened for depression in primary care,⁵³ and the Canadian Task Force on Preventive Health Care concluded that evidence was insufficient to make a recommendation for or against screening among children and adolescents.¹⁵ A recent update by the US Preventive Services Task Force recommended screening adolescents (ages 12–18) when integrated systems of treatment (including assessment, psychotherapy and follow-up) were in place, but concluded evidence was insufficient to make any recommendation for children 7–11 years of age.^{75,76}

No studies address how screening for depression affects immigrant or refugee children or adolescents. It is unclear which of the more than 30 available depression scales⁷⁷ is best for screening and diagnosing depression among immigrant and refugee youth.²¹ Some researchers have attempted to develop specific interventions for depression among refugee youth and their families.²⁴

Seniors: Screening for depression followed by continued support and treatment through collaborative care can improve the outcomes for older patients.⁷⁸ Seniors make

up a relatively small proportion of the refugee and immigrant population in the initial migration, but can later join the family. They often experience social isolation, as learning a language is harder with advanced age. Their ability to interact with others in the community can be limited either by their role as child minders or by reduced mobility associated with aging. Migrant seniors are not a well-studied group and could have a high risk of depression.⁷⁹⁻⁸¹ This risk could reflect the loss of familiar surroundings and the changing nature of the family as members adapt to the new social context. Because seniors often join an already settled family, their health needs during the early stages of migration are often missed.

Treatment considerations: The Canadian Network for Mood and Anxiety Treatments has provided detailed clinical guidelines for management of major depressive disorder in adults that detail clinical strategies and a stepped-care approach.⁸²⁻⁸⁴ Choice of intervention should include consideration of patients' preferences and expectations and might incorporate culturally based validated treatments.⁸⁵

Mild depressive symptoms can be approached with watchful waiting or self-management methods.⁸⁶ Psychosocial interventions are first-line treatments for mild major depressive disorder and crucial concurrent interventions for more severe disorders.⁸⁷⁻⁸⁹ Moderate depressive disorder responds best to combined psychotherapy and pharmacotherapy.^{83,84} Severe or persistent depression generally requires consultation or referral to a mental health specialist.⁹⁰

Antidepressant medications: Between 25% and 35% of patients in primary care discontinue prescribed antidepressants within one month of initiation, and as many as half within three months.⁹¹ Two recent meta-analyses on antidepressants showed that their efficacy is generally modest (mean weighted effect size of 0.31, equivalent to 2% of variance in reduction of depressive symptoms)⁹² and perhaps is present only for patients with severe depression.⁹³ Low rates of adherence to antidepressant medications could stem from unpleasant adverse effects and from misunderstandings about the course of therapeutic effects.⁹⁴ Patients need to be educated about what to expect in terms of antidepressant adverse effects, the importance of following a schedule, the probable delay in positive treatment effects, the concept of daily medication dosage rather than use as needed, need for long-term use of medication for treatment and prevention, and the way to cope with "bad days" or setbacks.

Ethnic differences in the metabolism of antidepressant medications exist.^{95,96} However, great variation within ethnic groups prevents reliable prediction of a person's response. Hence, current recommendations are to begin with a standard dose for the patient's age and size, to provide clinically appropriate monitoring, and to adjust medication according to clinical response.

What are potential implementation issues?

Linguistic and cultural differences can constitute substantial barriers to recognition of depression and subsequent treatment negotiation and delivery.⁹⁷⁻¹⁰¹ The ready availability of medical interpreters, culture brokers, bilingual and bicultural mental health practitioners, clinician training in cultural competence, and cultural consultation can mitigate these potential barriers, although evidence for an effect on clinical outcomes is limited.¹⁰²⁻¹⁰⁶

In the general population, screening for depression has produced benefits for patients only when an integrated system of care is in place.^{55,88} An integrated system involves changes in the organization of health care delivery that include some or all of the following elements: systematic patient education (using videotapes, pamphlets or books); availability of allied health professionals to provide case management or continuity of care; frequent follow-up; a caseload registry to track patients; caseload supervision by a psychiatrist if indicated; stepped care; and a relapse prevention plan.¹⁰⁷ Stepped care involves a progression of levels from patient education and self-management to medication or psychotherapy and, for complex cases, referral to a mental health practitioner for more intensive treatment.⁹⁰

Effective screening for depression requires more than an accurate screening tool. Many immigrants and refugees with symptoms of depression do not view their problems as psychiatric and resist discussing them in the context of a medical examination. Stigma, including the fear of being labelled "crazy," the belief that mental health problems are hereditary, and other meanings related to cultural explanatory models, as well as fears related to precarious immigration and employment status can also be barriers to screening. In a US study, Barnes¹⁰⁸ found that most refugees refused in-clinic psychiatric screening, which is consistent with high rates of nonadherence reported in other intercultural settings because of both differences in expectations and inadequate communication. Screening at home was more acceptable. Thus, for screening to be effective, physicians must sufficiently understand the patient's perspective and provide a reasonable explanation of why mental health

screening is a standard component of good medical care.⁵⁹

The clinical relationship is central to detection and treatment of mental health problems in primary care. Screening with structured questionnaires cannot replace clinical sensitivity, systematic inquiry, and relationship building. Given the great diversity of immigrant and refugee patients, no single approach is likely to be sufficient for optimal recognition and appropriate treatment of depression.

Other recommendations

The Canadian Task Force on Preventive Health Care recommends screening adults for depression in primary care when integrated systems that include diagnostic, treatment, and follow-up components are in place.¹⁵ The US Preventive Services Task Force recommends screening adolescents (ages 12–18) when integrated systems of treatment (including assessment, psychotherapy and follow-up) are in place, but concludes evidence is insufficient to make any recommendation for children 7–11 years of age.^{75,76}

The cases revisited

When asked if she is depressed, Rukhsana says, “No, I have no problem like that. I am just so tired after having my child. I need some medicine.” On further questioning, she reports that she has been eating and sleeping poorly (even when her baby is asleep) with a 2-kg weight loss. She misses her mother and sisters and feels very alone and unsure about how to care for her first-born. She says that food has no taste and she is too tired to cook even a simple meal. She finds it hard to concentrate on her daily tasks and derives little pleasure from her usual activities. Her physician discusses depression as a form of energy depletion and exhaustion. Rukhsana finds this explanation fits her experience, and she accepts referral to a new mothers’ support group. Her physician plans frequent follow-up visits until she shows improvement.

In response to the PHQ-9 filled out in the waiting room, Ahmed reports loss of interest in activities, sleep difficulties, decreased appetite and difficulty concentrating. On follow-up questioning in the clinical interview, he clarifies that he stays in bed trying to sleep for ten or more hours a night, but his sleep is restless and punctuated by frequent nightmares. He denies sadness but has lost interest in his usual activities and is avoiding his friends because he anticipates feeling uncomfortable because of abdominal pain. Asked about his experiences before migration, he mentions that he had some “very

bad” experiences in a refugee camp but does not seem comfortable elaborating. He denies having thoughts of suicide. His physician explains to Ahmed that his symptoms are likely related to the stress and tension he has experienced, which have worn him down. The physician prescribes a dose of a generic selective serotonin reuptake inhibitor antidepressant to be taken in the morning and arranges for follow-up in two weeks to reassess the need for medication. Finally, the physician emphasizes the importance of reducing the symptoms of poor sleep and pain through the help of a specialist and refers Ahmed to a counselor affiliated with the primary care clinic for a course of cognitive-behavioural therapy for management of somatic symptoms and depression.

Conclusion and research needs

New immigrants to Canada show lower rates of depression than the general population, but rates often rise to match the general population rate over time. Prevalence of depression in refugees is comparable to that in the general population. Existing guidelines for depression for the general population are likely to apply to immigrants and refugees. These guidelines suggest that all patients should be screened for depression when integrated systems are in place to provide follow-up treatment.

Primary care services for migrants should provide descriptive materials regarding depressive disorder in relevant languages; use translated screening questions and trained interpreters to facilitate the diagnostic interview; and inquire systematically about losses, stressors and symptoms. Mild cases of depressive symptoms should be treated with education in self-management techniques with follow-up to assess resolution. Moderate to severe cases should be treated with stepped care beginning with psychoeducation and antidepressant medication, close follow-up, and culturally appropriate counselling. There continues to be a paucity of research on the prevalence, detection, prevention and effective treatment of depression among migrant populations in primary care. There is a particular need for research on strategies for assessment, treatment and prevention of depression in clinics with high cultural diversity.

Key points

- New immigrants to Canada show lower rates of depression than the general population, but these rates generally rise to match the general population rate over time. Prevalence of depression in refugees is comparable to that in the general population.

- Existing guidelines for depression for the general population are likely to apply to immigrants and refugees. These guidelines suggest that all patients should be screened for depression when integrated systems are in place to provide follow-up treatment.
- Primary care for immigrants should provide descriptive materials regarding depressive disorder in relevant languages, translated screening questions and trained interpreters to facilitate the diagnostic interview, and systematic inquiries about losses, stressors and symptoms.
- Mild depressive symptoms should be treated with education in self-management techniques with follow-up to assess resolution. Moderate to severe cases should be treated with a stepped-care model beginning with psychoeducation and antidepressant medication, close follow-up, and culturally appropriate counselling.

Box 2: Grading of Recommendations Assessment, Development and Evaluation Working Group grades of evidence (www.gradeworkinggroup.org)

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and could change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

REFERENCES

1. Chisholm D, Sanderson K, Ayuso-Mateos JL, et al. Reducing the global burden of depression: population-level analysis of intervention cost-effectiveness in 14 world regions. *Br J Psychiatry* 2004;184:393-403.
2. Bland R. Depression and its management in primary care. *Can J Psychiatry* 2007;52:75-6.
3. Kirmayer LJ, Weinfeld M, Burgos G, et al. Use of health care services for psychological distress by immigrants in an urban multicultural milieu. *Can J Psychiatry* 2007;52:295-304.
4. Gwynn RC, McQuiston HL, McVeigh KH, et al. Prevalence, diagnosis, and treatment of depression and generalized anxiety disorder in a diverse urban community. *Psychiatr Serv* 2008;59:641-7.
5. Mojtabai R, Olfson M. Treatment seeking for depression in Canada and the United States. *Psychiatr Serv* 2006;57:631-9.
6. Ustun TB, Ayuso-Mateos JL, Chatterji S, et al. Global burden of depressive disorders in the year 2000. *Br J Psychiatry* 2004;184:386-92.
7. Kirmayer LJ, Jarvis GE. Depression across cultures. In: Stein D, Schatzberg A, Kupfer D, editors. *Textbook of mood disorders*. Washington (DC): American Psychiatric Press; 2005:611-29.
8. Beiser M. Resettling refugees and safeguarding their mental health: lessons learned from the Canadian Refugee Resettlement Project. *Transcult Psychiatry* 2009;46:539-83.
9. Kandula NR, Kersey M, Lurie N. Assuring the health of immigrants: what the leading health indicators tell us. *Annu Rev Public Health* 2004;25:357-76.
10. Harlem Brundtland G. Mental health of refugees, internally displaced persons and other populations affected by conflict. *Acta Psychiatr Scand* 2000;102:159-61.
11. Bhugra D. Migration and depression. *Acta Psychiatr Scand Suppl* 2003;108(Suppl. s418): 67-72.
12. Smith KL, Matheson FI, Moineddin R, et al. Gender, income and immigration differences in depression in Canadian urban centres. *Can J Public Health* 2007;98:149-53.
13. Tran TV, Manalo V, Nguyen VT. Nonlinear relationship between length of residence and depression in a community-based sample of Vietnamese Americans. *Int J Soc Psychiatry* 2007;53:85-94.
14. Tugwell P, Pottie K, Welch V, Ueffing E, J. F. Evaluation of evidence based literature and formulation of recommendations for Clinical Preventative Guidelines for Immigrants and Refugees in Canada. Canadian Medical Association Journal 2010;DOI:10.1503/cmaj.090289.
15. MacMillan HL, Patterson CJ, Wathen CN, et al. Screening for depression in primary care: recommendation statement from the Canadian Task Force on Preventive Health Care. *CMAJ* 2005;172:33-5.
16. U.S. Preventive Services Task Force. Screening for depression: recommendations and rationale. *Ann Intern Med* 2002;136:760-4.
17. Screening for depression in adults: U.S. preventive services task force recommendation statement. *Ann Intern Med* 2009;151:784-92.
18. Canadian Psychiatric Association and the Canadian Network for Mood and Anxiety Treatments (CANMAT). Clinical guidelines for the treatment of depressive disorders. *Can J Psychiatry* 2001;46(Suppl 1):5S-90S.
19. American Psychiatric Association. Practice guideline for the treatment of patients with major depressive disorder (revision). *Am J Psychiatry* 2000;157(4 Suppl):1-45.
20. National Institute for Clinical Excellence. *Depression: management of depression in primary and secondary care. Clinical Guideline 23*. London (UK): The Institute; 2004.
21. Patten SB, Wang JL, Williams JV, et al. Descriptive epidemiology of major depression in Canada. *Can J Psychiatry* 2006;51:84-90.
22. Ali J. Mental health of Canada's immigrants. *Health Rep* 2002;13(Suppl):1-11.
23. Fazel M, Wheeler J, Danesh J. Prevalence of serious mental disorder in 7000 refugees resettled in western countries: a systematic review. *Lancet* 2005;365:1309-14.
24. Fazel M, Stein M. The mental health of refugee children. *Arch Dis Child* 2002;87:366-70.
25. Hodes M. Three key issues for young refugees' mental health. *Transcult Psychiatry* 2002;39:196-213.
26. Kinzie JD, Sack WH, Angell RH, et al. The psychiatric effects of massive trauma on Cambodian children: I. The children. *J Am Acad Child Psychiatry* 1986;25:370-6.

27. Stein B, Comer D, Gardner W, et al. Prospective study of displaced children's symptoms in wartime Bosnia. *Soc Psychiatry Psychiatr Epidemiol* 1999;34:464-9.
28. Duncan J. *Sudanese girls in Kakuma*. Kakuma (Kenya): Kakuma Refugee Camp, Kenya;(unpublished report, 2000).
29. Glasser S, Barell V, Shoham A, et al. Prospective study of postpartum depression in an Israeli cohort: prevalence, incidence and demographic risk factors. *J Psychosom Obstet Gynaecol* 1998;19:155-64.
30. Goyal D, Murphy SO, Cohen J. Immigrant Asian Indian women and postpartum depression. *J Obstet Gynecol Neonatal Nurs* 2006;35:98-104.
31. Onozawa K, Kumar RC, Adams D, et al. High EPDS scores in women from ethnic minorities living in London. *Arch Womens Ment Health* 2003;6(Suppl 2):S51-5.
32. Dennis CL, Ross LE. Depressive symptomatology in the immediate postnatal period: identifying maternal characteristics related to true- and false-positive screening scores. *Can J Psychiatry* 2006;51:265-73.
33. Stewart DE, Gagnon A, Saucier JF, et al. Postpartum depression symptoms in newcomers. *Can J Psychiatry* 2008;53:121-4.
34. Zerkowicz P, Milet TH. Screening for postpartum depression in a community sample. *Can J Psychiatry* 1995;40:80-6.
35. Edge D, Rogers A. Dealing with it: black Caribbean women's response to adversity and psychological distress associated with pregnancy, childbirth and early motherhood. *Soc Sci Med* 2005;61:15-25.
36. Miranda J, Siddique J, Der-Martirosian C, et al. Depression among Latina immigrant mothers separated from their children. *Psychiatr Serv* 2005;56:717-20.
37. Parvin A, Jones CE, Hull SA. Experiences and understandings of social and emotional distress in the postnatal period among Bangladeshi women living in Tower Hamlets. *Fam Pract* 2004;21:254-60.
38. Small R, Lumley J, Yelland J. Cross-cultural experiences of maternal depression: associations and contributing factors for Vietnamese, Turkish and Filipino immigrant women in Victoria, Australia. *Ethn Health* 2003;8:189-206.
39. Zerkowicz P, Schinazi J, Katofsky L, et al. Factors associated with depression in pregnant immigrant women. *Transcult Psychiatry* 2004;41:445-64.
40. Heilemann M, Frutos L, Lee K, et al. Protective strength factors, resources, and risks in relation to depressive symptoms among childbearing women of Mexican descent. *Health Care Women Int* 2004;25:88-106.
41. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med* 2001;16:606-13.
42. Gilbody S, Sheldon T, House A. Screening and case-finding instruments for depression: a meta-analysis. *CMAJ* 2008;178:997-1003.
43. Mitchell AJ, Coyne JC. Do ultrashort screening instruments accurately detect depression in primary care? A pooled analysis and meta-analysis of 22 studies. *Br J Gen Pract* 2007;57:144-51.
44. Gilbody S, Richards D, Brealey S, et al. Screening for depression in medical settings with the Patient Health Questionnaire (PHQ): a diagnostic meta-analysis. *J Gen Intern Med* 2007;22:1596-602.
45. Williams JW Jr, Pignone M, Ramirez G, et al. Identifying depression in primary care: a literature synthesis of case-finding instruments. *Gen Hosp Psychiatry* 2002;24:225-37.
46. Patten SB. Major depression prevalence is very high, but the syndrome is a poor proxy for community populations' clinical treatment needs. *Can J Psychiatry* 2008;53:411-9.
47. Gagnon AJ, Tuck J, Barkun L. A systematic review of questionnaires measuring the health of resettling refugee women. *Health Care Women Int* 2004;25:111-49.
48. Hollifield M, Warner TD, Lian N, et al. Measuring trauma and health status in refugees: a critical review. *JAMA* 2002;288:611-21.
49. Husain N, Waheed W, Tomenson B, et al. The validation of personal health questionnaire amongst people of Pakistani family origin living in the United Kingdom. *J Affect Disord* 2007;97:261-4.
50. Chen TM, Huang FY, Chang C, et al. Using the PHQ-9 for depression screening and treatment monitoring for Chinese Americans in primary care. *Psychiatr Serv* 2006;57:976-81.
51. Poongothai S, Pradeepa R, Ganesan A, et al. Reliability and validity of a modified PHQ-9 item inventory (PHQ-12) as a screening instrument for assessing depression in Asian Indians (CURES-65). *J Assoc Physicians India* 2009;57:147-52.
52. Hauff E, Vaglum P. Organised violence and the stress of exile. Predictors of mental health in a community cohort of Vietnamese refugees three years after resettlement. *Br J Psychiatry* 1995;166:360-7.
53. Pignone MP, Gaynes BN, Rushton JL, et al. Screening for depression in adults: a summary of the evidence for the U.S. Preventive Services Task Force. *Ann Intern Med* 2002;136:765-76.
54. O'Connor EA, Whitlock EP, Beil TL, et al. Screening for depression in adult patients in primary care settings: a systematic evidence review. *Ann Intern Med* 2009;151:793-803.
55. Gilbody S, Bower P, Fletcher J, et al. Collaborative care for depression: a cumulative meta-analysis and review of longer-term outcomes. *Arch Intern Med* 2006;166:2314-21.
56. Wells K, Sherbourne C, Schoenbaum M, et al. Five-year impact of quality improvement for depression: results of a group-level randomized controlled trial. *Arch Gen Psychiatry* 2004;61:378-86.
57. Lewis-Fernandez R, Das AK, Alfonso C, et al. Depression in US Hispanics: diagnostic and management considerations in family practice. *J Am Board Fam Pract* 2005;18:282-96.
58. Schraufnagel TJ, Wagner AW, Miranda J, et al. Treating minority patients with depression and anxiety: what does the evidence tell us? *Gen Hosp Psychiatry* 2006;28:27-36.
59. Kirmayer LJ. Cultural variations in the clinical presentation of depression and anxiety: implications for diagnosis and treatment. *J Clin Psychiatry* 2001;62(Suppl 13):22-8, discussion 29-30.
60. Mollica RF, Sarajlic N, Chernoff M, et al. Longitudinal study of psychiatric symptoms, disability, mortality, and emigration among Bosnian refugees. *JAMA* 2001;286:546-54.
61. Vesga-Lopez O, Blanco C, Keyes K, et al. Psychiatric disorders in pregnant and postpartum women in the United States. *Arch Gen Psychiatry* 2008;65:805-15.
62. Dennis CL. Influence of depressive symptomatology on maternal health service utilization and general health. *Arch Womens Ment Health* 2004;7:183-91.
63. Eberhard-Gran M, Eskild A, Tambs K, et al. Review of validation studies of the Edinburgh Postnatal Depression Scale. *Acta Psychiatr Scand* 2001;104:243-9.
64. *Reproductive mental health guideline 4. Mental illness during the perinatal period: major depression*. Vancouver (BC): British Columbia Reproductive Care Program; 2003. Accessed February 10,

- 2011 at: <http://www.perinataleservicesbc.ca/List%20of%20Guidelines.htm>
65. McQueen K, Montgomery P, Lappan-Gracon S, et al. Evidence-based recommendations for depressive symptoms in postpartum women. *J Obstet Gynecol Neonatal Nurs* 2008;37:127-36.
 66. ACOG Committee on Health Care for Underserved Women. ACOG Committee Opinion No. 343: psychosocial risk factors: perinatal screening and intervention. *Obstet Gynecol* 2006;108:469-77.
 67. Weobong B, Akpalu B, Doku V, et al. The comparative validity of screening scales for postnatal common mental disorder in Kintampo, Ghana. *J Affect Disord* 2009;113:109-17.
 68. Bashiri N, Spielvogel AM. Postpartum depression: a cross-cultural perspective. *Primary Care Update for OB/GYN*. 1999;6:82-7.
 69. Dennis CL, Chung-Lee L. Postpartum depression help-seeking barriers and maternal treatment preferences: a qualitative systematic review. *Birth* 2006;33:323-31.
 70. Chaudron LH, Kitzman HJ, Peifer KL, et al. Self-recognition of and provider response to maternal depressive symptoms in low-income Hispanic women. *J Womens Health (Lrcht)*. 2005;14:331-8.
 71. Carter FA, Carter JD, Luty SE, et al. Screening and treatment for depression during pregnancy: a cautionary note. *Aust N Z J Psychiatry* 2005;39:255-61.
 72. Oates MR, Cox JL, Neema S, et al. Postnatal depression across countries and cultures: a qualitative study. *Br J Psychiatry Suppl* 2004;46:s10-6.
 73. Ahmad F, Shik A, Vanza R, et al. Popular health promotion strategies among Chinese and East Indian immigrant women. *Women Health* 2004;40:21-40.
 74. Hawthorne K, Rahman J, Pill R. Working with Bangladeshi patients in Britain: perspectives from primary health care. *Fam Pract* 2003;20:185-91.
 75. U.S. Preventive Services Task Force. Screening and treatment for major depressive disorder in children and adolescents: US Preventive Services Task Force Recommendation Statement. *Pediatrics* 2009;123:1223-8.
 76. Williams SB, O'Connor EA, Eder M, et al. Screening for child and adolescent depression in primary care settings: a systematic evidence review for the US Preventive Services Task Force. *Pediatrics* 2009;123:e716-35.
 77. Burgos G. *Race, ethnicity, and adolescent depression in multi-level context*. Bloomington (IN): Sociology, Indiana University; 2006.
 78. Alexopoulos GS, Reynolds CF III, Bruce ML, et al. Reducing suicidal ideation and depression in older primary care patients: 24-month outcomes of the PROSPECT study. *Am J Psychiatry* 2009;166:882-90.
 79. Lai DW. Impact of culture on depressive symptoms of elderly Chinese immigrants. *Can J Psychiatry* 2004;49:820-7.
 80. Thapa SB, Hauff E. Gender differences in factors associated with psychological distress among immigrants from low- and middle-income countries—findings from the Oslo Health Study. *Soc Psychiatry Psychiatr Epidemiol* 2005;40:78-84.
 81. Minas H, Klimidis S, Ranieri N, et al. Relative prevalence of psychological morbidity in older immigrants. *Int J Cult Ment Health* 2008;1:58-72.
 82. Patten SB, Kennedy SH, Lam RW, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) clinical guidelines for the management of major depressive disorder in adults. I. Classification, burden and principles of management. *J Affect Disord* 2009;117(Suppl 1):S5-14.
 83. Parikh SV, Segal ZV, Grigoriadis S, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) clinical guidelines for the management of major depressive disorder in adults. II. Psychotherapy alone or in combination with antidepressant medication. *J Affect Disord* 2009;117(Suppl 1):S15-25.
 84. Lam RW, Kennedy SH, Grigoriadis S, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) clinical guidelines for the management of major depressive disorder in adults. III. Pharmacotherapy. *J Affect Disord* 2009;117(Suppl 1):S26-43.
 85. Ravindran AV, Lam RW, Filteau MJ, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) clinical guidelines for the management of major depressive disorder in adults. V. Complementary and alternative medicine treatments. *J Affect Disord* 2009;117(Suppl 1):S54-64.
 86. Bilsker D, Goldner EM, Jones W. Health service patterns indicate potential benefit of supported self-management for depression in primary care. *Can J Psychiatry* 2007;52:86-95.
 87. Kates N, Craven M. *Managing mental health problems: a practical guide for primary care*. Seattle (WA): Holgreffe & Huber Publishers; 1998.
 88. Kates N, Mach M. Chronic disease management for depression in primary care: a summary of the current literature and implications for practice. *Can J Psychiatry* 2007;52:77-85.
 89. Cuijpers P, van Straten A, van Schaik A, et al. Psychological treatment of depression in primary care: a meta-analysis. *Br J Gen Pract* 2009;59:e51-60.
 90. Katon W, Von Korff M, Lin E, et al. Stepped collaborative care for primary care patients with persistent symptoms of depression: a randomized trial. *Arch Gen Psychiatry* 1999;56:1109-15.
 91. van Geffen EC, Gardarsdottir H, van Hulst R, et al. Initiation of antidepressant therapy: do patients follow the GP's prescription? *Br J Gen Pract* 2009;59:81-7.
 92. Turner EH, Matthews AM, Linardatos E, et al. Selective publication of antidepressant trials and its influence on apparent efficacy. *N Engl J Med* 2008;358:252-60.
 93. Kirsch I, Deacon BJ, Huedo-Medina TB, et al. Initial severity and antidepressant benefits: a meta-analysis of data submitted to the Food and Drug Administration. *PLoS Med* 2008;5:e45.
 94. Kinzie JD, Leung P, Boehnlein JK, et al. Antidepressant blood levels in Southeast Asians: clinical and cultural implications. *J Nerv Ment Dis* 1987;175:480-5.
 95. Lin KM, Smith MW, Ortiz V. Culture and psychopharmacology. *Psychiatr Clin North Am* 2001;24:523-38.
 96. Pi EH, Simpson GM. Cross-cultural psychopharmacology: a current clinical perspective. *Psychiatr Serv* 2005;56:31-3.
 97. Scheppers E, van Dongen E, Dekker J, et al. Potential barriers to the use of health services among ethnic minorities: a review. *Fam Pract* 2006;23:325-48.
 98. Das AK, Olfson M, McCurtis HL, et al. Depression in African Americans: breaking barriers to detection and treatment. *J Fam Pract* 2006;55:30-9.
 99. Wong EC, Marshall GN, Schell TL, et al. Barriers to mental health care utilization for U.S. Cambodian refugees. *J Consult Clin Psychol* 2006;74:1116-20.

100. Alegria M, Chatterji P, Wells K, et al. Disparity in depression treatment among racial and ethnic minority populations in the United States. *Psychiatr Serv* 2008;59:1264-72.
101. Chen AW, Kazanjian A, Wong H. Why do Chinese Canadians not consult mental health services: health status, language or culture? *Transcult Psychiatry* 2009;46:623-41.
102. Fernandez A, Schillinger D, Grumbach K, et al. Physician language ability and cultural competence. An exploratory study of communication with Spanish-speaking patients. *J Gen Intern Med* 2004;19:167-74.
103. Betancourt JR, Green AR, Carrillo JE, et al. Cultural competence and health care disparities: key perspectives and trends. *Health Aff (Millwood)* 2005;24:499-505.
104. Beach MC, Price EG, Gary TL, et al. Cultural competence: a systematic review of health care provider educational interventions. *Med Care* 2005;43:356-73.
105. Goode TD, Clare Dunn M, Bronheim SM. *The evidence base for cultural and linguistic competency in health care*. New York: The Commonwealth Fund, Report 962; 2006. <http://www.commonwealthfund.org>
106. Bhui K, Warfa N, Edonya P, et al. Cultural competence in mental health care: a review of model evaluations. *BMC Health Serv Res* 2007;7:15.
107. Katon WJ, Seelig M. Population-based care of depression: team care approaches to improving outcomes. *J Occup Environ Med* 2008;50:459-67.
108. Barnes DM. Mental health screening in a refugee population: a program report. *J Immigr Health* 2001;3:141-9.

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Clinical preventive guidelines for newly arrived immigrants and refugees

This document provides the review details for the CMAJ CCIRH Depression paper. The series was developed by the Canadian Collaboration for Immigrant and Refugee Health and published at www.cmaj.ca.

More detailed information and resources for screening, assessment and treatment of depression can be found at: www.mmhrc.ca.

Appendix 1: Figure 1

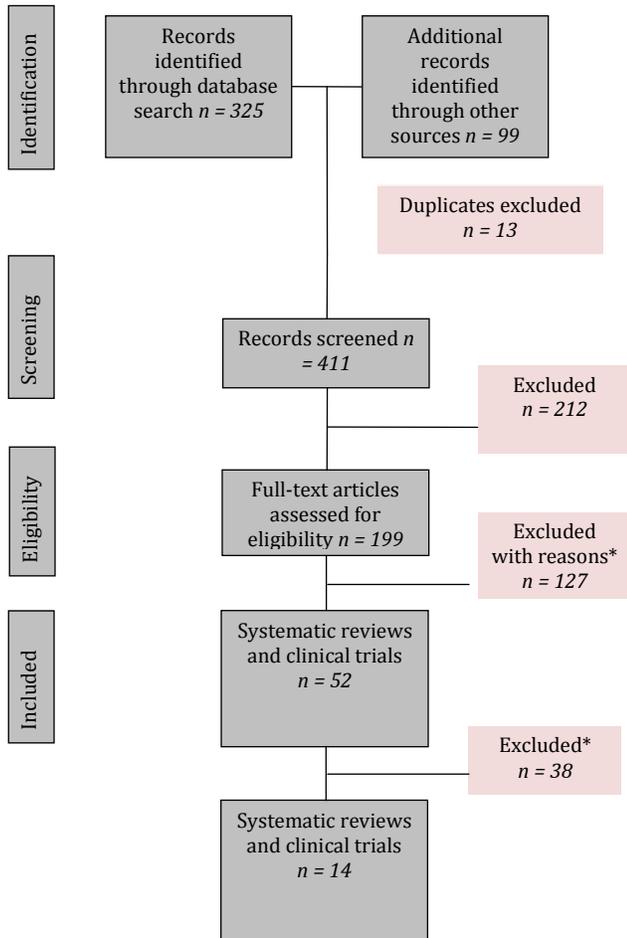


Figure 1: Search and selection flow sheet. *Low quality or lack of national sample, availability of more recent data or lack of relevance to immigrant health status

Appendix 2: Depression Evidence Based Clinician Summary Table

If linked to integrated treatment program, screen adults for depression with a systematic clinical inquiry or validated patient health questionnaire (PHQ-9 or equivalent). Link suspected cases of depression with integrated treatment program and case management or mental health care.

Prevalence: The lifetime prevalence of depression in Canadians is 10.8%, and the prevalence of depression in immigrants is generally no higher than general population. Refugees and pregnant and postpartum immigrant women are at higher risk.

Burden: Depression is among the most common mental health problems worldwide and is a major cause of health care use and disability.

Access to Care: Language difficulty and cultural modes of expressing distress may complicate recognition of depression and treatment adherence. Stigma of mental illness is a major barrier. Attribution of distress to difficult life circumstances by patient or physician may lead to under-recognition and under-treatment of depression. Women with postpartum depression make increased use of health care, but often present with somatic symptoms

Key Risk Factors for Depression: Refugees and asylum seekers (refugee claimants) are at higher risk than other immigrants because of traumatic losses and stressors, including uncertainty about refugee status determination. Other risk factors for depression include stressful life events, lack of social support or isolation, physical health problems, inability to speak the language of the host country, the demands of multiple roles, and separation from children who remained in the country of origin.

Screening Test: Use systematic clinical interview or screening questionnaire (PHQ-9 or equivalent) translated into patients' language at periodic health examination or when patients present with new symptoms suggestive of depression (e.g., pain, fatigue, vegetative symptoms).

Treatments: For mild depression, supported self-management; for moderate-to-severe depression, stepped collaborative care with antidepressant medication, cognitive behaviour therapy, or interpersonal therapy.

Special Considerations:

- If not routinely screening as part of an integrated system of care, practitioners should remain vigilant for signs of depression. The majority of people with major depression present primarily with somatic symptoms, most frequently pain, fatigue or other nonspecific symptoms. Among refugees, depression commonly co-occurs with posttraumatic stress disorder and other anxiety disorders, complicating its detection and treatment.
- Conduct systematic clinical inquiry or validated questionnaire in language in which patient is fluent. Link suspected cases of depression to integrated treatment programs and follow up with a stepped-care approach.
- Effective detection and treatment of depression among immigrants and refugees may also require the use of interpreters or culture brokers to identify patient concerns, negotiate illness meanings, monitor progress, ensure adherence, and address social causes and consequences of depression