

Appendix 6: Human immunodeficiency virus: evidence review for newly arriving immigrants and refugees

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ABSTRACT

Background: Subgroups of immigrants and refugees bear a disproportionate burden of HIV infection. In 2006, the HIV-infection rate in Canada for immigrants and refugees from countries where HIV is endemic was 12.6 times higher than for the Canadian-born population. We conducted an evidence review to determine the burden of HIV infection within immigrant and refugee populations, to evaluate the effectiveness of HIV screening procedures and treatment, and to identify barriers to and facilitators of HIV screening procedures in primary care.

Methods: Using the Grading of Recommendations Assessment, Development and Evaluation approach, we systematically assessed evidence on HIV screening procedures and treatment: benefits and harms, applicability, clinical considerations and implementation for newly arriving immigrants and refugees to Canada.

Results: Immigrants and refugees from countries where HIV is endemic have a higher prevalence of HIV than the Canadian-born population. Screening procedures linked to treatment for HIV can reduce morbidity and mortality. Knowledge of HIV-positive status can decrease high-risk sexual behaviour. Stigma related to HIV reduces uptake of HIV preventive services and testing, and can result in postponement or rejection of treatment and care. Explanations of screening options and treatments can increase likelihood that patients will accept HIV screening tests.

Interpretation: After settlement, the incidence of HIV is higher and at times increases among people from countries where HIV is endemic. This review highlights the role of HIV screening procedures with sensitivity to migration experience, cultural background and sex issues in order to achieve greater equity in prevention and management of HIV.

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The cases

Claire is a 36-year-old French-speaking woman born in Haiti. She immigrated to Quebec one year before seeking help at the local community health centre. Claire has two adolescent daughters: the eldest has just dropped out of college and is dating an older man.

Zacharias is a 30-year-old Tigrinya-speaking Eritrean refugee; he has been in Edmonton three months after a stay in a refugee camp in Ethiopia. He has a wife and three children in Eritrea. He presents to the clinic requesting a sick note, indicating that he has missed one work day at a construction site.

How would you approach these patients?

Introduction

An estimated 33.2 million women, men and children are infected with HIV worldwide.¹ Researchers, practitioners and communities continue to seek concerted approaches to prevent, detect and improve access to screening tests and treatment for vulnerable populations.^{1,2} Preventive approaches have included condom promotion,^{3,4} needle exchange,⁵ and safe injection sites for intravenous (IV) drug users,⁶ enhancing capacity for both sexes to facilitate equitably healthy choices⁷ and community mobilization.⁸

Routine prenatal HIV screening procedures and treatment has reduced the incidence of mother–child transmission.⁹

Since the arrival of effective antiretroviral treatments,¹⁰ provider-initiated HIV testing and counselling has emerged as an important strategy to address the global HIV epidemic.¹¹

In Canada, the Canadian Public Health Agency has focused attention on at-risk populations, especially women and men from countries where HIV is endemic.¹² This specific exposure group is at increased risk of heterosexual transmission and mother-to-child transmission resulting in a higher relative burden of disease among women and young adults.² Although HIV testing is now part of the immigration medical examination, women and men with HIV are not necessarily excluded from entering Canada. However, delayed patient disclosure of positive results to partners and practitioners, as well as the ongoing risk of HIV transmission attributable to various factors, such as high mobility of migrant communities to their country of origin where HIV could be endemic, remain a concern. We conducted an evidence review to determine the burden of HIV infection for such immigrant- and refugee-receiving countries as Canada, to evaluate the

effectiveness of HIV screening tests and treatment and to identify barriers to and facilitators of HIV screening procedures in primary care. Recommendations on HIV screening procedures and treatment are outlined in Box 1.

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

Children:

Screen for HIV, with informed consent, all adolescents and adults from countries where HIV is prevalent (> 1%). Link HIV-positive patients to HIV treatment programs in association with posttest counselling.

Basis of recommendation

- **Balance of benefits and harms:** The decision to screen men and women for HIV is based on a dramatic reduction in mortality with treatment, e.g., with a combination of three versus two antiretrovirals (number needed to treat [NNT] = 132, 95% confidence interval [CI] 91–357) and reduction of high-risk behaviour (NNT 5, 95% CI 4–7). Prevalence of HIV infection is higher in immigrants from countries where HIV is prevalent (> 1%) compared with other Canadians (< 0.18%). Harms included adverse drug reactions requiring change in regimen. Data on harms related to anxiety and possible discrimination related to HIV status are unavailable.
- **Quality of evidence:** Moderate
- **Values and preferences:** The Guideline Committee attributed more value to identifying HIV-positive women and men for appropriate treatment, support and prevention, less value on uncertain risk of couple discord and risk of discrimination, and less concern for burden of testing with informed consent.

Methods

We used the 14-step method developed by the Canadian Collaboration for Immigrant and Refugee Health.¹³ A clinician summary table was used to highlight the population of interest, the epidemiology of disease, population-specific considerations and potential clinical actions (Appendix 2). We constructed a logic model to define the clinical preventive actions (intervention), outcomes, and key questions. Details of the search and review are summarized below.

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 to assess evidence on HIV screening procedures and treatment for immigrants and refugees. The following databases were searched from January 1995 to February 2008: MEDLINE, CINAHL, EMBASE and Cochrane Database of Systematic Reviews and the following websites were hand-searched: National Guideline Clearinghouse (www.guideline.gov/), Public Health Agency of Canada (www.phac-aspc.gc.ca/aids-sida), United States Preventive Services Task Force (www.ahrq.gov/clinic/USpstfx.htm), Canadian Task Force on Preventive Health Care (www.canadiantaskforce.ca/), and UNAIDS (www.UNAIDS.org). Two independent reviewers assessed eligible systematic reviews for relevance to HIV screening procedures with links to treatment. We appraised eligible systematic reviews using the National Institutes of 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; we appraised relevant guidelines using the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument.¹⁴ A reference systematic review was chosen for selected outcomes: high-risk sexual behaviour and HIV-related morbidity and mortality.

We conducted a second literature search using the same databases, extending the search dates to July 31, 2008. Studies were included if the study design was a randomized controlled trial, controlled clinical trial or cohort study that was relevant to our specific question: Should practitioners offer HIV screening tests to immigrants and refugees to reduce HIV morbidity and mortality and reduce high-risk sexual behaviour? Using the same database (January 1, 1995 to February 1, 2008), we conducted a final literature search for HIV, specific to immigrants and refugees. Areas of focus included baseline risk or prevalence; risk of clinically important outcomes; genetic and cultural factors (e.g., preferences, values, knowledge); and compliance variation. An updating search, focusing on randomized controlled trials and systematic reviews during the period January 1, 2007 to January 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 recent trials using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) summary of findings tables,¹⁵ which assesses both relative and absolute effects of interventions (Box 2). 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. In addition to the implementation issues reported from quantitative designs, qualitative data provided information on preferences and values of HIV-affected women and men for clinical considerations. Finally, we identified gaps in the research evidence.

Results

Our initial search identified 96 articles relevant to HIV screening procedures in immigrants and refugees. Only eight met our inclusion criteria. Of these eight papers, three¹⁶⁻¹⁸ recommended not only routine screening procedures for HIV among refugees entering the United States but also for several other infectious diseases; however, none of these papers reported a systematic review methodology. Three other papers¹⁹⁻²¹ provided literature reviews of HIV-related risks among migrants, without further clinical recommendations. Of the eight papers, one was a systematic review of HIV prevalence studies in sub-Saharan African refugees²² and one was a systematic review of retention of African patients in antiretroviral treatment programs.²³ While these papers detailed complexities of HIV issues among immigrants and refugees, highlighting the need for sensitivity to socio-cultural context in the interventions, none provided direct evidence of benefits and harms of screening tests and treatment among vulnerable populations.

In the searches for HIV screening procedures and treatment without restrictions to immigrants, we identified an additional 1719 titles. Thirteen were identified as systematic reviews and guideline articles relevant to screening procedures and treatment for HIV in the general population.²⁴⁻³⁵ We excluded guidelines or reviews if procedures focused on children, on antenatal care or on postexposure prophylaxis or investigated new laboratory techniques for screening tests. From these 13 systematic reviews, we selected the US Preventive Services Task Force article on HIV screening procedures²⁵ and the Centers for Disease Control and Prevention (CDC)³⁶ as the most up-to-date systematic reviews providing evidence on screening procedures for HIV and AIDS in the general population (which would include immigrants and refugees). Our overall search allowed for identification and appraisal of antiretroviral treatment longitudinal studies,^{10,37} a meta-analysis on behaviour change related to HIV screening tests,²⁶ a meta-analysis on ART³³ and a Cochrane systematic review on antiretroviral treatment.²⁴ The results were

assessed for consistency of effect, and data were used to evaluate the relative effectiveness of HIV screening procedures when linked to antiretroviral treatment (Appendix 1).

In the population-specific literature search focused on HIV and immigrants and refugees without restriction to systematic reviews, we identified 104 of 238 titles that addressed the prevalence, burden of disease, disease risk and barriers to care for immigrants and refugees.

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

The HIV infection rate is approximately 12.6 times higher among immigrants and refugees from countries where HIV is endemic than it is in the Canadian-born population,² accounting for 7% of HIV cases in large urban centres.³⁸ A multivariate analysis of the Canadian Mortality Database from 1980 to 1998 showed higher standardized mortality rates from AIDS in immigrant women than in women born in Canada (OR 3.66, 95% CI 2.1–5.2). In subgroup analyses, both male and female Caribbean immigrants had higher mortality from HIV infection (standardized mortality rates 4.2; 27.4).

Results from screening immigrant applicants to Canada older than 15 years from 2001 to 2002 revealed a HIV prevalence of 0.146%.³⁹ Seventy percent of those testing positive were refugees or refugee claimants from regions where HIV is endemic (Table 1). The HIV seropositivity in applicants from sub-Saharan Africa was greater than 3%. A 1999 Montréal seroprevalence study of Haitian immigrants (15–49 years) in primary health care⁴⁰ showed an overall HIV prevalence of 1.3%, while women and men who had travelled to Haiti in the previous five years had a prevalence of 2%, highlighting the ongoing risk of exposure related to travel. A retrospective cohort study of refugees, 83% from sub-Saharan Africa, aged 15 years and older arriving in Ottawa in 2005 revealed 6.3% HIV seropositivity in a primary care setting.⁴¹ The estimated overall prevalence of HIV in Canada was approximately 0.18% in 2002.⁴²

While the magnitude of each risk factor varies greatly depending on context (e.g., country, population), determinants of vulnerability to HIV include increased mobility (e.g., 1.5–1.8 times higher for mobile populations in South Africa)⁴³; experience of violence, including war-related violence (e.g., 10%–12% of women experiencing sexual violence in the Democratic Republic of Congo contract HIV)⁴⁴; high-risk activities such as sex work (UNAIDS reports increased HIV prevalence among sex workers ranges greatly by region, citing

Table 1: Prevalence of HIV by region in 2007 (Adapted with permission from Joint United Nations Programme on HIV/AIDS [UNAIDS])

Region	HIV prevalence, % (95% CI)
Sub-Saharan Africa	5.0 (4.6–5.5)
Caribbean	1.0 (0.9–1.2)
Eastern Europe and central Asia	0.9 (0.7–1.2)
North America	0.6 (0.5–0.9)
Latin America	0.5 (0.4–0.6)
Oceania	0.4 (0.3–0.7)
Middle East and north Africa	0.3 (0.2–0.4)
Southeast Asia	0.3 (0.2–0.4)
Western and central Europe	0.3 (0.2–0.4)
East Asia	0.1 (< 0.2)

Note: CI = confidence interval, HIV = human immunodeficiency virus.

prevalence 5.9 times higher in Dakar, Senegal, to prevalence 100 times higher in Vietnam)⁴⁵; certain sexual practices (a review highlights the complex relationship between douching, genital tract infections and HIV transmission; some studies suggest a two-fold risk of HIV with vaginal douching)⁴⁶; limited knowledge about HIV and AIDS (a systematic review demonstrated that knowledge levels correlated with varying levels of intervention effects of decreased HIV high-risk behaviour in most of 18 studies in the US⁴⁷; limited language proficiency, usually English or French in Canada; experiences of discrimination among women and men seeking health care services; and both unequal and limited access to high-quality health care.^{1,48–52} Risk is higher among those born in a country or to a parent from a country where HIV is endemic (more than 12.6 times higher in Canada)² and those who have recently had unprotected intercourse in a country where HIV is endemic (i.e., two times higher among those visiting Haiti from Canada).^{40,53}

Women 20–39 years comprised 66% of positive HIV test reports among adult women in Canada in 2006⁵⁴; most of these women were exposed to HIV in areas where infection was endemic. Sexual transmission of HIV from a man to a woman is two to eight times more likely than from a woman to a man. A woman's susceptibility to HIV infection is further increased if she or her partner has a sexually transmitted infection, if she has experienced genital trauma, or if her partner is HIV-positive with a high viral load.⁵⁵ Low socio-economic position and unequal family sex roles have been shown to affect a woman's decision-making power. This, in turn, limits her ability to acquire information and

knowledge about rules and consequences of HIV infection in the receiving society; condom use cannot, therefore, be negotiated in such cases. This context of vulnerability increases the probability that male heterosexual partners will deny HIV-positive status, will be reluctant to disclose private information, will refuse to undergo testing, or will fail to disclose one's status to children.^{49-51,56-59}

In a 2002 analysis of data from Canada and Catalonia (Spain), Geduld and Romaguera⁶⁰ found that being born outside the host country was associated with delayed HIV diagnosis and delayed treatment. Stigma related to HIV, linguistic distance and patients' perceived fears of both misunderstandings and poor treatment by peers and family members are associated with decreased access to health services.^{50,56,61} Delayed access to HIV screening and treatment for immigrants and refugees is a concern in several immigrant- and refugee-receiving

Does screening for HIV decrease related morbidity and mortality?

Screening procedures

Most laboratories in Canada use a two-step testing strategy for HIV. Enzyme-linked immunosorbent assays are sensitive ($\geq 99\%$) and specific ($\geq 99\%$) for both HIV-1 and HIV-2 after approximately three weeks of infection.^{64,65} Western blot testing eliminates those tests that have shown nonspecific antibody binding to ELISA antigens due to autoimmune disease, transfusions, multiple pregnancies or any other causes of a false-positive test.

Streamlined pretest counselling (less than five minutes' duration with a brief description of risk and benefits of testing) has recently been promoted as part of screening procedures.^{36,66} However, we did not find evidence documenting relative effectiveness compared with other

Table 2: Summary of findings on how pretest counselling and screening affect high-risk behaviour

Patient or population: HIV-positive patients, many men

Setting: United States

Intervention: Counselling and screening tests

Comparison: No screening procedures

Source: Weinhardt LS, Carey MP, Johnson BT, et al. Effects of HIV counseling and testing on sexual risk behavior: a meta-analytic review of published research, 1985–1997. *Am J Public Health* 1999;89:1397-405.

Outcomes	Absolute effect		Relative effect, OR† (95% CI)	No. of participants (studies)	GRADE quality of evidence	Comments (95% CI)
	Risk for control group	Difference with Intervention (95% CI)				
Unprotected intercourse—HIV+	No baseline data available		d+ = 0.47 (0.32–0.61)	402 (5)	Very low	NNT: 5 (4–7)‡
Unprotected intercourse—HIV-	No baseline data available		d+ = 0.19 (0.08–0.31)	599 (7)	Very low	
Unprotected intercourse, discordant couples	No baseline data available		d+ = 0.75 (0.59–0.92)	293 (2)	Very low	
Condom use—HIV+	No baseline data available		d+ = 0.65 (0.42–0.87)	160 (4)	Very low	
Adverse effects§—anxiety and marital conflict	No numerical data available¶					

Note: CI = confidence interval, d+= standardized mean difference index, GRADE = Grading of Recommendations Assessment, Development and Evaluation, NNT = number needed to treat, OR = odds ratio.

†d+ is computed by behaviour before and after HIV counselling and testing. An effect size of 0.20 is considered small and 0.5 is considered medium. Positive effect sizes indicate a reduction in high-risk sexual behaviour.

‡We are very uncertain about the estimate.

§Serious adverse events: bronchospasm, gastroenteritis, headache, hypertension, pain at injection site or impaired joint movement in injected limb.

¶Qualitative studies have highlighted issues, but have also suggested immigrants favour increased access to testing.

countries.^{39,62,63}

forms of pretest counselling. Risk-reduction counselling has been shown to be most effective when targeted to HIV-positive or high-risk women and men, especially in the presence of linguistic barriers as well as potential HIV-related stigma and fear.^{26,36,67}

Relative benefits and harms of treatment

We selected the reduction of high-risk sexual behaviour and reduced mortality as desirable outcomes and anxiety or depression as undesirable outcomes. The meta-analysis by Weinhardt and associates²⁶ on behaviour change showed decreases in high-risk sexual behaviour in HIV-positive women and men; however, the 27 selected studies showed inconsistencies in counselling approaches and outcomes.³³ We were unable to find data on anxiety or depression, changes in relationships with sexual partners, or discrimination associated with false-positive results.⁶⁸ We rated the overall quality of this evidence as very low. Four recent studies report voluntary counselling and testing for HIV as cost-effective in populations with an HIV prevalence of > 0.1%; three

studies were carried out in the US^{66,69,70} while the fourth⁷¹ focused on prevention and treatment issues in selected countries of Africa. No studies specifically addressed refugees and immigrants (Table 2).

The meta-analysis by Enanoria and colleagues³³ on three- versus two-drug antiretroviral treatment showed a decrease in mortality: RR 0.62 (0.45–0.86) and treatment efficacy for viral suppression: RR 4.41 (1.54–12.62), and we rated this evidence as high quality. The meta-analysis by Siegfried and coauthors²⁴ reported a relative risk of 1.3 for antiretroviral treatment adverse events²⁴; however, most adverse events, including metabolic disturbances associated with cardiovascular events, can be ameliorated by changes in regimen or appropriate treatment.²⁵ (Table 3). Evidence for greater than 80% reduction in HIV transmission among HIV-discordant couples receiving antiretroviral treatment comes from Spain, Thailand and Uganda.⁷²⁻⁷⁴ Combination antiretroviral therapy is associated with dramatic decreases in mortality, regardless of sex, race, age and risk factors for transmission of HIV (i.e., mortality

Table 3: Summary of findings table on treatment with antiretrovirals for HIV and AIDS

Patient or population: patients with HIV or AIDS

Setting: outpatient clinics Australia, Europe, North America

Intervention: treatment with 3 antiretrovirals

Comparison: treatment with 2 antiretrovirals

Source: Enanoria WTA, Ng C, Saha SR, Colford JM Jr. Treatment outcomes after highly active antiretroviral therapy: a meta-analysis of randomised controlled trials. *Lancet Infect Dis* 2004;4:414–25.

Outcomes	Absolute effect		Relative effect (95% CI)	No. of participants (studies)	GRADE quality of evidence	Comments (95% CI)
	Risk for group treated with 2 antiretrovirals	Difference with treatment with 3 antiretrovirals (95% CI)				
Death	20 per 1000	8 less per 1000 (1 less to 9 less per 1000)	RR 0.62 (0.45–0.86)	3979 (15)	Moderate†	NNT 132 (91–357)
Treatment efficacy number of people achieving cut-off value of HIV RNA	220 per 1000	750 more per 1000 (119 more to 780 more per 1000)	RR 4.41 (1.54–12.62)	1932 (6)	Low‡§	NNT 1 (1–8)
Withdrawals due to adverse effects	100 per 1000	81 more per 1000 (38 more to 198 more per 1000)	RR 1.81 (1.19–2.79)	6380 (11)	Low§†	NNH 12 (6–53)

Note: CI = confidence interval, GRADE = Grading of Recommendations Assessment, Development and Evaluation, NNH = number needed to harm, NNT = number needed to treat, RNA = ribonucleic acid, RR = risk ratio.

†Consistency downgraded because test for heterogeneity was statistically significant.

‡Indirect because viral load is indirect outcome for mortality and morbidity.

§Adverse events are indirect outcome for severe side effects.

among patients declined from 29.4 per 100 person-years in 1995 to 8.8 per 100 person-years in 1997).¹⁰

Clinical considerations

Are immigrants tested for HIV during migration?

In general, all immigrants and refugees must complete the Citizenship and Immigration Canada Immigration Medical Examination no longer than 12 months before immigration. Since 2002, this examination includes HIV testing for all immigrant applicants older than 15 years, temporary residents from selected countries, and refugee claimants.³⁶ In combination with selected measures of severity of HIV disease, HIV status is considered in the final acceptance of all immigrants to Canada. However, refugees, refugee claimants, spouses and children of Canadians are “excessive demand exempt,” meaning that their HIV status will not be used as a reason for exclusion.⁷⁵ Citizenship and Immigration Canada tests children younger than 15 years only if the principal applicant tests positive for HIV or another sexually transmitted disease. Citizenship and Immigration Canada notifies regional public health authorities regarding arriving immigrants with HIV and provides women and men who test positive with an information sheet, including public health phone numbers, to facilitate appointments upon arrival. However, there is no mechanism to ensure that HIV-positive people do actually benefit from HIV-treatment programs; there are, rather, anecdotal reports of immigrants not disclosing the results from this mandatory testing process.

What are potential implementation issues?

The political status of refugee claimants (asylum seekers) sometimes remains insecure for a prolonged period; either refugee status is granted or refugees might be required to leave Canada. Refugees and refugee claimants might be reluctant to accept screening tests because they fear limited access to antiretroviral treatment, in addition to the potential fear of failing to obtain legal immigration status if HIV-positive.⁴⁹⁻⁵¹ Immigrants and refugees suffering from post-traumatic stress or depression could require additional social support and reassurance on many fronts before finding the treatment for HIV infection acceptable.⁴⁹

Young people 15–24 years old account for half of all new infections worldwide and serve to predict future trends in the HIV epidemic.¹ Many HIV-positive women and men adopt codes of silence, which precludes providing sex education to their children, highlighting a crucial role for primary care practitioners in sex and HIV education of youth.⁴⁹⁻⁵¹ Limited education, lower health

literacy, linguistic barriers, psychological issues that stem from HIV-related stigma, practitioner reluctance to offer screening tests and perceptions of low risk among women and men suffering from HIV have been identified as factors impeding HIV testing.⁷⁶

Clinical practices that include respect; reassurance about confidentiality; acknowledgement of different cultural contexts for women and men; background and experience of migration; recognition of and sensitivity to emotional, psychological and trauma issues; provision of HIV education sensitive cultural and sex roles; and positive outlook on patients’ status were cited as facilitators for HIV screening tests and treatment among subgroups of immigrants and refugees.^{49,50} Other strategies to improve access to care include on-site child care, provision of comprehensive and holistic care, presence of HIV-positive peer educators, and integration of HIV information within settlement services.^{49,50}

In Canada, there are generally three options for HIV screening tests: anonymous, nominal (name-based) and non-nominal (initial or code-based). Anonymous screening tests provide the greatest confidentiality and can encourage people affected by HIV-related stigma to seek screening tests.⁷⁷ Qualitative studies^{50,58,78} show that most immigrant women who are unaware of screening options prefer anonymous screening tests when informed, and support HIV screening procedures as part of routine medical care.

Practitioners can also be obstacles to screening procedures. The study of HIV-positive African and Caribbean populations in Canada by Lawson and coworkers⁴⁹ revealed that some immigrant participants were discouraged from undergoing HIV screening tests. Reluctance to screen for HIV can arise from either fear of complex derived care if results of screening tests are positive³⁶ or other factors. Crosby and colleagues⁷⁹ suggest that practitioners fear that discordance of beliefs, exacerbated by language barriers, increases the risk of HIV discussions actually calling attention to cultural taboos rather than providing reassurance. Culturally sensitive routine procedures might reduce such barriers.^{50,80}

What stigma and discrimination are associated with HIV?

Stigma and discrimination related to HIV have been described as the most important impediment to HIV testing and treatment.^{50,59,63,80} UNAIDS¹ defined HIV-related stigma and discrimination as “a ‘process of devaluation’ of people either living with or associated with HIV and AIDS,” and discrimination can result from this stigma when inequitable treatment is based on real or perceived HIV status. The effects of HIV-related stigma

are magnified by structural inequities, cultural imperatives and sex roles; negative attitudes and discrimination by health care providers; and social attitudes in general.⁸¹⁻⁸⁴ Stigma can also be affected by the limited availability of health services and extent of HIV-related death rates in the immigrant's country of origin. Some cultural and sex-related barriers to disclosure are self-imposed; for example, patients wish to protect family either from shame or from obligation to help, and some avoid sharing highly personal information.⁸⁵ In our clinical experience, such fear of disclosure often leads to repeat HIV testing after arrival to rule out or confirm HIV diagnosis and initiate treatment if indicated. Universal access to HIV testing and antiretroviral treatment has been shown to reduce HIV stigma.^{80,86-88} Universal access can improve access to HIV screening procedures for vulnerable people and improve dissemination of HIV-related prevention and treatment information.^{36,50,76,89}

As indicated above, traditional and religious beliefs present barriers to prevention, testing and treatment.^{51,63,90,91} Examples include poor acceptance of condom use, taboos regarding sexuality and its health consequences, homophobia, the view of AIDS as God's punishment, and conflicts between allopathic medicine and spiritual healing.⁴⁹⁻⁵¹ Failure to perceive risk, especially among youth, and limited knowledge of HIV risk factors are often cited as reasons for delayed HIV diagnoses.^{2,36,50,76}

Recommendations from other groups

The US Task Force²⁵ recommends that clinicians screen all pregnant women and all adolescents and adults at increased risk for HIV (greater than 1% prevalence of HIV). Task Force members highlight the absence of clinical trials looking at clinical outcomes of population screening procedures and limited benefits of screening procedures for very low prevalence groups. The Centers for Disease Control and Prevention³⁶ recommend screening tests for all sexually active adolescents and adults (15 to 64 years) citing substantial individual and population benefits of early detection. The United Kingdom guidelines³⁰ recommend HIV testing for all who present to genitourinary clinics. No recent Canadian recommendations address the general population; however, consensus guidelines recommend routine HIV testing for all pregnant women.⁹²

The cases revisited

Claire is concerned about her daughter, who has dropped out of school and is dating an older man. In listening to her concerns, you detect strong religious beliefs, a reluctance to discuss healthy sexuality with her daughter, fear and limited knowledge of HIV. In addition to general counseling, you offer culturally sensitive HIV screening procedures to communicate information and testing options to Claire. You suggest she recommend the same for her daughter.

Zacharias just wants a sick note and is reluctant to discuss his symptoms or disclose details of his refugee experience. He has never had a preventive health care examination. With some encouragement, he agrees to a series of prevention-oriented tests, including HIV. He tests positive for HIV, and over time, you learn he is a victim of torture. After several follow-up visits, and with some practical advice from the Canadian Centre for Victims of Torture, you are able to link him to HIV treatment. Follow up and social support will be required, as will tuberculosis prevention.

Conclusion and research needs

Immigrants and refugees and their families who come from regions in which HIV is endemic are vulnerable to HIV infection mostly because of increased HIV prevalence in their home countries. Poverty, limited access to HIV information and HIV-related stigma also increase risk of delayed treatment. Refugees, particularly refugee women, often are at increased risk because of social and sex inequity and for some, war-related violence (e.g., rape). Risk of HIV infection is greater because of higher rates of infection in home communities and continuing contact with high-incidence populations during travel. Preventing HIV in communities requires collaborative and context-sensitive policy and initiatives from practitioners and community leaders.⁹³ More research is needed to determine the effect of screening tests on HIV-related stigma, depression, social consequences (such as marital discord) and use of antiretroviral treatment. Applied research could help streamline the screening process and develop and assess HIV decision aids tailored for patients' complex lives within immigrant communities.

Key points

- Immigrants and refugees from countries where HIV is prevalent (> 1%) are vulnerable owing to high HIV prevalence in their home country and high levels of HIV-related stigma.

- Stigma and discrimination related to HIV are associated with avoidance of or delays in seeking HIV testing, delays in disclosure of seropositive status to partners and practitioners, and postponement or rejection of treatment.
- The effects of HIV-related stigma are magnified among socially vulnerable minority groups. Providing information on HIV testing options and effectiveness of treatment can improve likelihood of testing and acceptance of care.

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.

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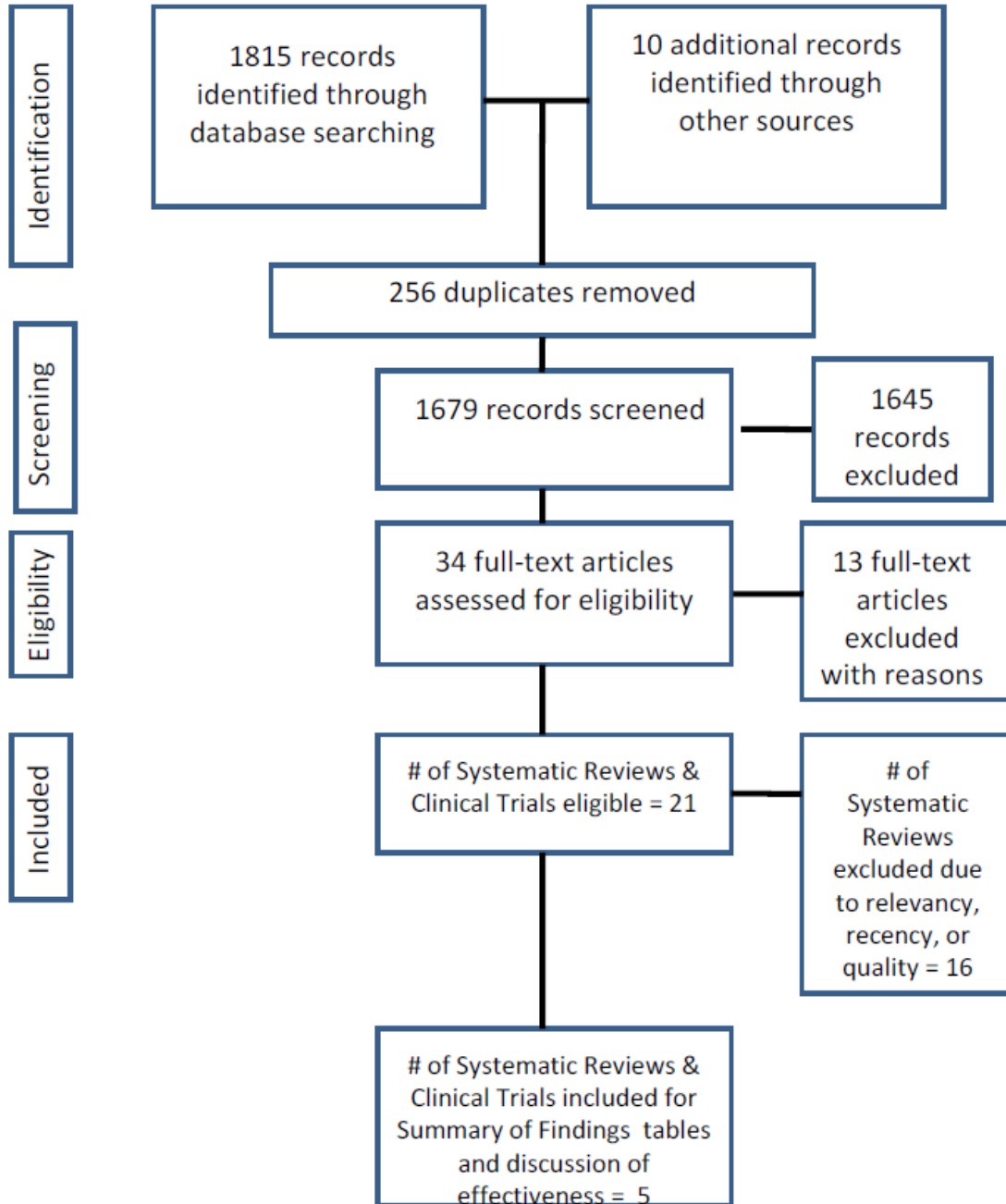
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Clinical preventive guidelines for newly arrived immigrants and refugees

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

Appendix 1: Figure 1

Figure 1: Search and Selection Flow Sheet



Appendix 2: HIV Evidence Based Clinician Summary Table

Screen for HIV, with informed consent, all adolescents and adults from countries where HIV is prevalent (>1%). Link HIV positive individuals to HIV treatment programs in association with post-test counselling.

Prevalence: Increased prevalence of HIV in immigrants and refugees from countries where HIV is endemic (>1% prevalence).

Burden: Gender inequities and sexual violence increase risk of infection and decrease access to medical care among refugee women. Homosexuality may be concealed because of cultural taboos and fear of reprisal. Contact with higher incidence population may occur through travel or within naturalized ethnic communities

Access to Care: Refugees and refugee claimants may be reluctant to accept screening due to fear of limited access to antiretroviral therapy (ART) and/or fear of failing to obtain legal immigration status if HIV-positive.

Limited education, lower health literacy, linguistic barriers, psychological issues that stem from HIV-related stigma, practitioner reluctance to offer screening, and lack of perceived risk from the person suffering from HIV have been identified as factors impeding HIV testing

Key Risk Factors for HIV: Determinants of vulnerability to HIV include: increased mobility; violence, including war-related violence; lack of ability to make decisions for one's health; discriminatory practices in the health care system; unequal and limited access to quality health care, sex work, certain sexual practices and limited knowledge about HIV and AIDS. Additional risk factors include being born in or having a parent from a country where HIV is endemic and recent travel with unprotected intercourse in a country where HIV is endemic.

Screening Test: HIV test (ELISA: sensitive ($\geq 99\%$) and specific ($\geq 99\%$) for both HIV-1 and HIV-2 after approximately three weeks of infection)

Treatment: Treatment includes antiretroviral therapy: relatively high cost, but cost effective and potentially life saving.

Special Considerations:

- Immigrants and refugees may already be aware of their HIV positive status, but may have limited knowledge of effective screening and treatment options.
- HIV-related stigma and discrimination puts immigrants and refugees at risk for delayed diagnosis and unequal treatment rates for HIV.
- Providing information on the process of testing and the effectiveness of treatments can improve likelihood of testing and acceptance of treatment. Some individuals may be interested in anonymous or non-nominal testing.
- In non-nominal testing, the physician orders the test using the patient's initials or a code and takes responsibility, with the patient, for notifying partners who may have been exposed. The local Medical Officer of Health will check with the physician about the case and, if satisfied that the partners have been notified, will not ask for the person's name.