Hepatitis C and Other Related Communicable Diseases in High-Risk Immigrant Ethnic Communities: *Sexually Transmitted Infections and Tuberculosis Co-infections*

A Training Manual for Healthcare Providers
Part 2

Produced by
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Disclaimer

This Training Manual has been developed as a concise source of currently available information to help healthcare practitioners and service providers. It is for reference only. For details on the diseases, consult a healthcare professional. The views expressed in this manual do not reflect those of the Canadian Ethnocultural Council or the Public Health Agency of Canada.

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1.0 Background

In 2014, the Canadian Ethnocultural Council (CEC) completed the project "Hepatitis C and Other Related Communicable Diseases in High-Risk Immigrant Ethnic Communities." Resources on hepatitis C (HCV), hepatitis B (HBV), and human immunodeficiency virus (HIV) were developed and used for training healthcare providers from five ethnic communities (Chinese, East Indian, Egyptian, Filipino, and Vietnamese) in five Canadian cities (Calgary, Montreal, Toronto, Vancouver, and Winnipeg). The resources disseminated by the trainers to their respective communities were well received and significant follow-up activities are being carried out in the communities after the initial project.

The healthcare providers who participated in that project recommended that the project be extended to focus on two other related communicable diseases – sexually transmitted infections (STIs) and tuberculosis (TB). In response, the CEC conducted a brief survey in the five communities to assess the awareness and knowledge of STIs and TB among individuals and their healthcare providers in these communities.

The survey results clearly showed that individuals in these communities had little knowledge about the two diseases and the effective screening and treatment options available. Further, the stigma and discrimination associated with these diseases prevented many individuals in ethnic communities from seeking diagnosis or treatment. Language and cultural barriers also prevented them from learning more about these diseases and taking appropriate preventative action. Educating their healthcare providers became, therefore, important in creating community awareness about these diseases so that individuals in high-risk immigrant ethnic communities can benefit from early detection and treatment and can work to prevent others from becoming infected.

Thus, the current project "Hepatitis C and Other Related Communicable Diseases in High-Risk Immigrant Ethnic Communities: STIs and TB Co-infections" is an extension of the initial project. The objectives are (i) to build on the resources and networks created in the previous project, (ii) to develop culturally appropriate resources on STIs and TB, and (iii) to educate the healthcare providers and the communities they serve to take the necessary action to seek treatment needed by infected individuals and enlist community help in preventing the spread of these diseases.

The following pages contain accurate and current baseline information related to STIs and TB in the ethnic communities selected for this project. The information is intended for healthcare practitioners and professionals, health educators, multicultural outreach workers, and settlement counsellors who work in health and social service agencies, hospitals, and community centres.

The manual has been developed as an educational resource for training purposes. It is not intended to replace expert medical advice. The training package includes, in addition to this manual, the following:

- Fact sheets on STIs for each of the five communities (Chinese, East Indian, Egyptian, Filipino, and Vietnamese) in English and French, as well as in Arabic, Chinese, Punjabi, Tagalog, and Vietnamese;

- Fact sheets on TB for each of the five communities (Chinese, East Indian, Egyptian, Filipino, and Vietnamese) in English and French, as well as in Arabic, Chinese, Punjabi, Tagalog and Vietnamese;

- E-tool on STIs and TB in five ethnic communities. Voice-over narration in Arabic, Chinese, French, Punjabi, Tagalog, and Vietnamese.

This training manual, fact sheets, and e-tool are available for download on the hepatitis C portal of the CEC website: www.ethnocultural.ca/HepC

2.0 Introduction

In Canada, STIs and TB continue to be significant public health concerns. However, very little information is available on the prevalence of these diseases in the selected ethnic populations.

Sexually Transmitted Infections

According to the World Health Organization (WHO), more than one million people acquire an STI every day. The consequences of STIs have a profound impact on sexual and reproductive health.[1]

In Canada, the reported rates of STIs caused by bacteria (chlamydia, gonorrhea, and syphilis) have increased significantly among middle-aged adults (40-59 years) over the past decade.[2] Bacterial STIs are also increasing among young Canadians, and they are spreading fast.[3] A lack of awareness about STIs and their prevention may be contributing to the increased rates. People infected with STIs often have no symptoms, which increases the difficulty in estimating how widespread the infections are.[4]

Canada draws immigrants from countries where the prevalence of STIs is high. India, for example, records about 30 million cases of individuals with STI annually. In 2012, WHO reported that in the Western Pacific Region, which includes China, the Philippines, and Vietnam, the prevalence estimate for three of the STIs (chlamydia, gonorrhea, and syphilis) totalled 51.66 million. The actual incidence of STIs in some countries, such as Egypt, is not known. However, in recent years, there has been an increase in the reported incidence of HIV in Egypt.

STIs are commonly found in people with HIV infections. Having an STI can increase an individual's risk of HIV infection and transmission. STIs can be more dangerous when the infected person has HIV and these cases are even more difficult to treat because the individual's immunity is reduced.

Canadian Guidelines on Sexually Transmitted Infections was developed to provide a resource for clinical and public health professionals to help in preventing and in managing STIs.[5]

Tuberculosis

Over the past decade, 80% of the immigrants and refugees who have come to Canada each year have originated from countries that have a high incidence of TB.[6] Although foreign-born persons make up approximately 22% of Canada's population, they account for almost 71% of all cases of TB.[7]

By far the highest rates of TB are seen in immigrants to Canada from Asia, in particular Vietnam, the Philippines, China, and India. Most TB patients from these countries (90%) had not previously been identified as requiring medical surveillance in Canada after arrival.[8]

Alberta, British Columbia, Ontario, and Quebec have each reported that the majority of their TB cases were among foreign-born individuals.[9] The lungs were the most commonly reported site of the disease in these individuals.[9]

A TB and HIV co-infection occurs when a person is infected with both HIV and TB infection (or TB disease). Infection with TB bacteria and HIV infection are two completely different infections. However, when an individual has both HIV and TB, each disease speeds up the progress of the other. For example, for individuals who have a TB infection, a dual infection with HIV is the most important risk factor for developing active TB disease. The annual risk of progressing to active TB disease varies from 3% to 13%. Thus, identifying the presence of a TB infection is extremely important for individuals who are also infected with HIV.[6]

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3.0 Sexually Transmitted Infections

Sexually transmitted diseases or STDs, have now been replaced by the more appropriate term sexually transmitted infections (STIs). An "infection" means that symptoms may or may not be present. Disease is associated with symptoms being present. So an individual who has an STI may not feel ill but can spread the infection. Infections that are sexually transmitted or transmitted through the blood are called sexually transmitted and blood-borne infections (STBBIs).

What are Sexually Transmitted Infections (STIs)?

- STIs are infections which are passed from one person to another through sexual contact, such as vaginal, anal, and oral sex.[1]
- Worldwide, more than one million people acquire an STI every day.[1]
- The occurrence of STIs in Canada has continued to increase, and this is now a major public health concern.
- STIs have consequences beyond the actual infection. They may lead to male and female infertility, problems in pregnancy, or stillborn babies, or they may cause other diseases in newborn babies. Other health consequences include pain and swelling, damage to organs, the risk of contracting other STIs, and the risk of passing on STIs to a partner.
- Some STIs make the risk of acquiring HIV three times more likely.[1]
- Most STIs are present without symptoms so that it is possible to have an STI without knowing it.
- The burden of STIs is greatest in low-income countries.[1] STI control in these countries is based on symptom management that is simple, rapid, and ensures same day treatment. This approach misses the asymptomatic infections which are the greatest burden of STI disease.
- Effective treatments for several STIs are currently available.
- Because STIs often have no symptoms, regular testing for people at risk is important.

What are the most common STIs?

Among the most common STIs are the human papillomavirus (HPV), human immunodeficiency virus (HIV), syphilis, gonorrhea, and chlamydia.

- An estimated 500 million new infections of curable STIs occur throughout the world every year; these include syphilis, gonorrhea, and chlamydia.[1]

- In Canada, the rates for chlamydia, gonorrhea, and syphilis have been rising since 1997.[2]
- More than 290 million women have an HPV infection.[1]

What are some concerns about STIs?

- STIs such as gonorrhea and chlamydia are major causes of pelvic inflammatory disease, adverse pregnancy outcomes, and infertility.
- HPV causes genital warts, which are highly infectious when the symptoms are present; condoms alone cannot prevent infection because they do not cover all areas where HPV is present.
- Some subtypes of this HPV (HPV 16 and 18) can cause cervical cancer in women.[1]
- Syphilis, gonorrhea, and chlamydia are caused by bacteria. They can usually be treated successfully with appropriate medical attention.
- HIV and HPV are viruses and although their infections cannot be cured they can be treated and managed.

What are the symptoms of STIs?

- The majority of STIs have no symptoms.
- Some STI symptoms that may occur are unusual discharge from penis or vagina, genital ulcers, abdominal pain, pain during intercourse, unusual bleeding, and a burning sensation when urinating.[3]

How are STIs passed from one person to another?

STIs are passed from one person to another:

- Through unprotected sexual contact. This means
  - vaginal, anal, or oral sex without a condom or dental dam
  - sharing sex toys without using protection.
- By sharing drug use equipment.
- From mother to infant.

A person can have more than one STI at a time.

How are STIs diagnosed?

The most accurate method of diagnosing STIs is by laboratory testing of cells and body fluids taken during an STI test.

What are the tests for STIs?

Testing for STIs is conducted by a qualified medical professional and includes the following methods:

- Visual inspection
- Blood test
- Urine test
- Swab test (a swab taken from penis, vagina, throat, or other areas of the body where there may be sores).

Are there treatments for STIs?

- STIs (syphilis, gonorrhea, and chlamydia) caused by bacteria can be treated and cured. STIs (AIDS and genital warts) caused by viruses (HIV and HPV) usually cannot be cured, but they can be treated and managed.
- Individuals can get bacterial STIs over and over again, even though the infection was treated and cured in the past.

Are STIs preventable diseases?

Yes! There are ways to prevent STIs passing from one person to another. They include the following:

- Practice safer sex.
- Limit the number of sexual partners.
- Always use a condom even when sharing sex toys.
- Use new needle and syringe every time.
- Never share drug use equipment.
- Get tested regularly. Regular testing helps people know whether or not they have an STI, helps treat them effectively, and helps to prevent infecting others by encouraging safer sex practices.
- Abstinence is the ONLY sure way to prevent getting most of the STIs.

What can people do to live well with STIs?

You can live well with a short- or long-term STI by following these suggestions:

- Practice safer sex. This helps to prevent getting other STIs (some STIs and HIV can be easier to acquire if a person already has an STI).
- Get tested regularly. Getting tested is the only way to know your status. There are effective treatments, and they work best when started early.
- Implement lifestyle changes, such as eating a well-balanced diet, exercising regularly, and avoiding smoking, alcohol, and high-risk behaviours.
- Know that no alternative therapies – including herbal remedies, homeopathic medicines, and minerals – have been proven safe and effective for treating STIs.
- Inform your healthcare providers of medication taken for any other conditions because some medications may interfere with STI treatment.
- Access counselling and mental health services regularly. Having an STI can be very emotionally and mentally stressful. Taking good care of mental and emotional health can encourage overall general well-being and help to support the immune system.

Where is more information available?

More information is available from:

- Physicians, public health nurses, community health clinics, and health services available in the city.
- Websites of the following organizations: Canadian Federation for Sexual Health (www.cfsh.ca/), Canadian AIDS Treatment Information Exchange (www.catie.ca), Sexuality Education Resource Centre MB (www.serc.mb.ca), Public Health Agency of Canada (www.phac-aspc.gc.ca), and World Health Organization (www.who.int/).

Getting tested is the only way to know your status. There are effective treatments, and they work best when started early.

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4.0 Tuberculosis (TB)

- The reported incidence of active TB disease in the general Canadian population is the lowest in the world. The reported number of new and re-treatment TB cases in 2012 was 1,686.[1] The majority of these individuals were either born in countries with a higher prevalence of TB than that of Canada or belong to First Nations or Inuit communities.[2]
- In 2013, according to the World Health Organization, an estimated 9.0 million people worldwide became sick with TB, and 1.5 million died as a result of TB disease. 360,000 of these were also HIV-positive.[3]
- More than half (56%) of the TB cases worldwide in 2013 occurred in Southeast Asia and the Western Pacific Regions and one quarter were in the African Region. India and China alone accounted for 24% and 11% of the total cases, respectively.[3]
- 56 million TB patients have been successfully treated since 1995.[4]
- About one-third of the world's population has TB infection, which means people have been infected by the TB bacterium (germ) but are not (yet) ill with the disease and cannot transmit the disease.
- The bacterium that causes TB can develop resistance to the drugs used to cure the disease.
- Multidrug-resistant tuberculosis (MDR-TB) is TB that does not respond to the two most powerful anti-TB drugs: isoniazid and rifampicin.
- A person with MDR-TB disease needs special TB antibiotics and must take these drugs for a longer period of time than the person with only TB. Unfortunately, these drugs usually have more side effects and are not as effective as the first-line drugs.
- MDR-TB is present in almost all countries.[5]

What is TB?

- TB is an infectious disease caused by a bacterium (germ) called mycobacterium tuberculosis.
- TB usually affects the lungs, but it can affect other parts of the body such as lymph nodes, bones, intestines, or brain.

What is TB disease?

- TB germs become active when the body's immune system cannot stop the germs from growing.
- The active TB germs begin to grow and cause damage to the body.

What are the symptoms of TB disease?

- A cough (lasting longer than 2 weeks)
- Coughing up blood
- Fever, chills, and night sweats
- Feeling tired all the time
- Unexplained weight loss
- If the TB disease is in another part of the body, the symptoms will depend on where the TB is growing; examples include a swollen lymph node or joint pain.

Who is at risk of getting TB?

- People who spend a lot of time with someone who has active TB disease in the lungs.
- People who have lived in or travelled to areas in the world where TB is common, such as India, Pakistan, China, the Philippines, Vietnam, and Africa.
- HIV, malnutrition, diabetes, and cancer treatment can all weaken the immune system. People with these conditions are at higher risk of developing active TB disease.
- Individuals who abuse drugs or alcohol.
- Persons living or working in conditions that facilitate the spread of TB, such as overcrowded housing, shelters, and correctional institutions.

How is TB spread?

- TB is spread from person to person through the air, when someone with TB in the lungs coughs, sings, talks, or sneezes.
- TB is not highly contagious. Close, prolonged, or regular contact with someone who is sick with TB disease in the lungs is needed to spread the disease.
- TB in other parts of the body is not spread to other persons.

What are the tests for TB disease?

- A skin test (Mantoux test) is the usual screen test for TB; it determines whether a person has been exposed to TB. The result is read within 48-72 hours after the skin test.
- A physical examination, chest x-ray, and testing of sputum (mucus coughed up from the lungs) by a smear and/or culture are done to check for TB disease.
- A biopsy is done to test for TB disease in other parts of the body.

How is TB disease treated?

- People with TB disease must complete at least six months of treatment with a special combination of TB antibiotics to cure the disease. All patients with TB disease have a public health nurse supporting them and their family during treatment.
- In Canada, laboratory testing is done for every TB patient to make sure the patient is taking the right medications.
- **TB treatment and medication are free in Canada.**

What is TB infection?

- Most people who breathe in TB germs are able to stop them from growing.
- The immune system traps the TB germs and keeps them inactive. This is called TB infection or latent TB infection (LTBI). These people:
  - Do not feel sick and have no symptoms
  - **Cannot** spread TB germs
  - Have a 10% chance of developing TB disease over their lifetime.

What are the tests for TB infection?

- Screening for TB infection in people who are well is done by a skin test.
- A positive skin test means a person has TB germs in their body and should be tested further for TB disease.

How is TB infection treated?

- People with TB infection may benefit from medicine to prevent TB disease.
- **TB treatment and medication are free in Canada.**

What is Drug-Resistant TB?

- A lot of media attention has been given to drug-resistant TB because these strains of TB have been detected in many countries.
- Drug-resistant TB develops when patients do not take enough of the right medications for a long enough period of time to kill the bacteria.
- Drug-resistant strains of TB must be treated for a long time (up to 24 months) with additional medications.
- In Canada, most people with multidrug-resistant TB (MDR-TB) respond well to medications, due to access to better care.

Is TB a preventable disease?

- Yes, TB can be prevented!
- A strong immune system can contain or limit the infection in an individual.
- Eating well, not smoking, and adopting a healthy lifestyle will help to build a strong immune system that can control the infection.
- People with TB infection can take a course of preventative TB antibiotics. This is especially important for people who are at a higher risk of developing active TB disease.
- Public health units in Canada usually follow up with individuals exposed to TB so that they can get the medical care they need. Individuals with a positive skin test can take medication to prevent TB.

Is there a vaccine for TB?

- There is a vaccine (BCG) for TB, which can help to protect babies who are around infectious TB cases. It is given in many parts of the world but in Canada, because the rates of TB are so low in most of the country, it is only given to babies born in arctic and northern reserve communities.
- BCG does not provide lifelong protection from TB infection or TB disease and getting BCG as a baby will not result in a positive TB skin test as an adult.
- It is safe to get a TB skin test even though a person has had a BCG vaccination in the past.

Is there other information I need to know about TB?

Yes. TB is not:

- Hereditary
- Caused by a curse or an "evil eye"
- A punishment
- A reason for deportation (Canada does not deport people or their families because of a diagnosis of TB disease or TB infection).

If you think you have TB, it is important to see a healthcare provider. **TB treatment and medication are free in Canada.**

Tuberculosis is preventable, treatable, and curable.

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5.0 Co-infections

What is a Co-infection?

Co-infection is when a person is living with more than one infection at a time. Many types of co-infections exist. They occur mainly because the disease-causing organisms of both infections are transmitted in similar ways. Information about many aspects of co-infection remains largely incomplete.

Co-infections can be treated but the effectiveness of treatment depends on the type of co-infection. It is essential for healthcare providers to carefully monitor those taking treatment because of possible side effects from medications used to treat co-infections and the possibility of various drug interactions. Without treatment, co-infection can be more serious than either of the diseases alone.

People living with co-infections face increased challenges related to disease, treatment decisions, stigma, discrimination, health, and well-being. To overcome these challenges, high-risk immigrant ethnic communities need to receive information in a culturally appropriate manner, and they must have adequate access to appropriate healthcare services.

There are many types of co-infections but the ones that will be discussed here are the ones that are related to the hepatitis C virus (HCV), tuberculosis (TB), sexually transmitted infections (STIs), and human immunodeficiency virus (HIV). These co-infections can be found in the immigrant ethnic communities that have been selected for this project: Chinese, East Indian, Egyptian, Filipino, and Vietnamese.

HCV/HIV Co-infection

- HCV/HIV co-infection is an important public health problem in Canada.
- Approximately 13,000 people in Canada are co-infected with HCV and HIV.[1]
- People with HCV as well as HIV, develop severe liver disease (cirrhosis) and liver failure significantly faster than people without HIV.
- The risk of transmitting HCV by people who are co-infected is increased by the presence of HIV.
- The presence of HIV also decreases the accuracy of the antibody tests used to diagnose HCV.

- Co-infection with HCV may also affect the treatment outcomes of HIV infection. Treatment is expensive and complicated, and it also has side effects. New treatments for HCV are showing higher cure rates with fewer side effects.
- HCV/HIV co-infected individuals need care from a doctor with experience in treating both infections.

HCV/HBV Co-infection

- HCV and the hepatitis B virus (HBV) are transmitted in similar ways (blood to blood contact with an infected person).
- HCV/HBV co-infection is common in highly endemic areas where both viral infections are prevalent.
- The worldwide prevalence of HCV/HBV co-infection is unknown, and it might be underestimated because both infections can be silent.
- HCV/HBV can be transmitted or acquired at the same time or on separate occasions.
- Selection of treatment options is important, and treatment must be monitored by a specialist.

Viral Hepatitis/STI Co-infection

- Approximately 10% to 40% of the adults seeking treatment for STIs show evidence of a past or current HBV infection.
- Many of these infections could have been prevented through vaccination against HBV during prevention or treatment services for STIs.
- HCV can be transmitted through sexual activity in some cases. Practicing safer sex is one way to reduce the risk of HCV transmission and co-infections.

HIV/STI Co-infection

- Having an STI can increase the risk of getting another STI.
- Having an STI can increase an individual's risk of HIV infection and transmission.
- STIs can be more dangerous when the infected person has HIV.
- Because people with HIV have weakened immune systems they are at a greater risk of infection from various bacteria and viruses, including one or more types of HPV.

- People living with HIV are at a greater risk of getting syphilis than HIV-negative individuals.
- Syphilis infection in HIV-positive individuals increases the HIV viral load (amount of virus in their blood), and these individuals develop more advanced stages of syphilis with more severe symptoms than HIV-negative people. In these cases, the infection can be harder to treat.[2,3]
- Chlamydia infection increases the vulnerability to HIV infection and adds an increased viral load for an HIV-positive individual.[2,3]
- An HIV-positive person infected with gonorrhea has up to 10 times the HIV viral load and, therefore, is more likely to transmit the infection to a sexual partner.[2,3]
- Regular testing is the only way to diagnose co-infections, and treatment should be provided under the supervision of a specialist physician.

HIV/TB Co-infection

- About one-third of the 35.3 million people worldwide who have HIV also have TB infection, and they are about 30% more likely to develop active TB than individuals who do not have HIV.
- In 2012, it was estimated that there were 1.1 million HIV-positive new TB cases globally.[4]
- TB is the leading cause of death among people living with HIV. In 2013, about 360,000 died of HIV-associated TB.[5]
- People living with HIV are at an increased risk of developing a TB infection in organs other than the lungs.
- Diagnosing HIV-associated TB is complex.
- Without treatment, HIV and TB can work together to shorten lifespan.
- There are emerging threats of drug-resistant TB, which is especially dangerous to people with HIV.
- If an individual with TB is taking medication for HIV, the medication options for the treatment of TB will need to be different than for an individual without HIV due to hepatotoxicity (liver damage due to drugs) and drug interactions. Alternate options should be discussed with a doctor.

Co-infections can be treated but the effectiveness of treatment depends on the type of co-infection.

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6.1 Community Profile – Arab Republic of Egypt: Sexually Transmitted Infections and Tuberculosis

Hepatitis C and other related communicable diseases

In a previous project (2013-2014), statistics related to the prevalence of HCV, HBV, and HIV in Egypt were collected and uploaded on the hepatitis C portal of the CEC website (www.ethnocultural.ca/HepC). The current, extended project contains information on two other communicable diseases – STIs and TB – in the Egyptian community.

There is very little information on the prevalence of STIs and TB in the Egyptian population in Canada. The following text provides STI- and TB-related statistics reported in Egypt. It is possible that some of the reported data may be applicable to the Egyptian population in Canada.

Sexually Transmitted Infections in Egypt

- The actual incidence of STIs in Egypt is not known. However, in recent years there is an increase in the reported incidences of HIV. Little work has been done to evaluate this problem in Egypt. UNICEF, WHO, and USAID do not have any data on the prevalence of STIs in Egypt except for statistics on HIV.
- A study conducted in 1996 identified the most prevalent STIs among patients attending the STI clinic at Cairo Hospital for Skin and Venereal Diseases. Hence, these findings cannot be applied to the general population.
  - Of the patients tested, gonorrhea was detected in 36.8%, syphilis in 30.9%, HIV in 14.7%, and HCV in 11.8%.
  - Co-infections with STIs were detected in 26% of the patients.[1]
- In 2013, 383 new cases of HIV were detected in Egypt with an increase in the reported incidence rate of 5.16% between 2000 and 2013.[2]

Human Papillomavirus

- Human papillomaviruses (HPVs) are common throughout the world.
- Egypt has 28.37 million women aged 15 years and older who are at risk of developing cervical cancer.[3]
- Cervical cancer ranks as the 13th most frequent cancer among women in Egypt and the 10th most frequent cancer among women between 15 and 44 years of age.[3]

- However, in Northern Africa, where Egypt is located, about 3% of women in the general population are estimated to hold HPV 16 or 18 infection at a given time and these subtypes of HPV are known to cause cervical cancer.[3]
- Data on the HPV burden in the general population of Egypt are not available.

Tuberculosis in Egypt

In 2013, the total population of Egypt was 82 million and the WHO estimates of TB for Egypt were as follows:

- Prevalence (including HIV+TB): 22,000; rate per 100,000 population: 27
- Incidence (HIV+TB only): 97; rate per 100,000 population: 0.12
- TB patients with known HIV status: 783
- Total TB cases (new and relapse) reported to government: 8,183
- New cases for persons <15 years of age: 512; male:female ratio 1.3:1
- Treatment success (new and relapse cases): 88%; HIV positive TB cases: N/A.[4]

In Egypt, TB is the third greatest killer among infectious diseases. A recent survey showed a decline of 1.99% in the incidence rate of TB in the absence of HIV between 2000 and 2013.[2]

A study conducted in 1998 found that a majority of the TB patients in Egypt were living in rural areas and that rising poverty, illiteracy, overcrowded public transport, and widespread slums contributed to the spread of TB. TB was more common in males in Egypt. Females and students (both male and female) were motivated to seek healthcare earlier than others.[5]

In 2013, the WHO estimates of the MDR-TB cases in Egypt was 170 among new cases and 97 among relapse cases.

STI/HIV Co-infection

- Among patients attending an STI clinic in a Cairo Hospital, STIs were detected in 26% of patients with viral hepatitis.
- The prevalence of HIV among HCV-infected patients was 0.64% with a predominance among males.[6]

- HCV co-infection with HBV prevalence was 0.2% among healthcare workers in Egypt.[7]
- HCV co-infection with HBV prevalence was 0.7% among patients who were treated at a healthcare centre in upper Egypt.[8]
- Occult (hidden) HBV co-infection occurred in 3.9% of chronic HCV patients on hemodialysis.[9]

A 2011 study reported that transmission of HCV from HIV/HCV co-infected mothers to infants had increased compared to that which occurred in HCV mono-infection. In Egypt, the risk of infection had also been shown to be associated with the infection among family members; it is apparent that more studies are required on interactions between HCV and HIV.[10]

TB/HIV Co-infection

Less than 1% of the adult population in Egypt are HIV-positive TB patients. Only two-thirds of the actual cases are being identified and treated by the national program.

Control Strategy for STIs and TB in Egypt

Control strategy for STIs

- Egypt still faces several challenges in maintaining a low prevalence of HIV/AIDS. There is a general reluctance on the part of the government and civil society to discuss issues related to marginalized groups such as men who have sex with men (MSM), female sex workers (FSWs), and injection drug users (IDUs).
- In addition, there are persistent fears and stigmatization related to HIV/AIDS and a lack of effective STI/HIV/AIDS education programs and other preventive measures, such as peer education and outreach, and behaviour change communication, among at-risk groups.
- The National AIDS Program is the official governmental body responsible for HIV/AIDS prevention. The National Strategic Plan (2006–2010) builds on the successes of the previous five-year plan and is designed to maintain the low prevalence of HIV/AIDS and improve healthcare services for those infected or affected by the disease.

- Egypt receives grants from the Global Fund to Fight AIDS, TB, and malaria. The Global Fund created in 2002 is a partnership between governments, civil society, the private sector, and people affected by AIDS, TB, and malaria, and it supports programs for prevention, treatment, and care of men, women, and children affected by AIDS, TB, and malaria.[11]

Control strategy for TB

In 2009**, Stop TB Egypt** was initiated by the National TB Program (NTP) in Egypt.[12] It is supported by the regional partnership, Eastern Mediterranean Partnership, which operates in many countries in the Middle East and Northern Africa. The main activities are to organize awareness-raising campaigns and patient support activities. Egypt was one of the many countries that was involved in the Million Youth March to control TB.

In Egypt, the Japan International Cooperation Agency annually organizes two international training courses on TB in cooperation with the Egyptian government and institutes, and invites trainees from Africa, the Middle East, and South Asia.[13] One of the training courses, "Quality Management of Concurrent Infections Control of TB/HIV for Africa," is conducted for the government officers of the countries invited who are involved in their National Programs of TB and HIV, to promote cooperation between TB and HIV/AIDS programs.

Another training course, "Tuberculosis Control Training," is designed for NTP officers from Africa, the Middle East, and South Asia to strengthen their managerial capacity to conduct their national TB programs.[14]

Egypt offers free medical treatment to patients in 32 chest hospitals and the health ministry hopes to eradicate the disease by 2019.

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6.2 Community Profile – People's Republic of China: Sexually Transmitted Infections and Tuberculosis

Hepatitis C and other related communicable diseases

In a previous project (2013-2014), statistics related to the prevalence of HCV, HBV, and HIV in China were collected and uploaded on the hepatitis C portal of the CEC website (www.ethnocultural.ca/HepC). The current, extended project contains information on two other communicable diseases – STIs and TB – in the Chinese community.

There is very little information on the prevalence of STIs and TB in the Chinese population in Canada. The following text provides STI- and TB-related statistics reported in China. It is possible that some of the reported data may be applicable to the Chinese population in Canada.

Sexually Transmitted Infections in China

- Syphilis is now a major public health problem with around 20 people in every 100,000 in China carrying the infection.[1]
- In 2013, the government estimated that China had 99,659 cases of gonorrhea and 406,772 cases of syphilis.[2]
- WHO data from 2006, found syphilis prevalence levels at around 14% among some groups of sex workers and men who have sex with men (MSMs).
- The estimated incidence of chlamydia in the Chinese general population was about 2.6%.[3] The highest chlamydia prevalence was found in men aged 25-34 years and in women aged 35-44 years.[4]
- The number of genital chlamydial infection incidence in 2011 was 37.42 for 100,000 population.[5]
- The incidence of human papillomavirus (HPV) infection in China was 12.4% compared with 11.2% globally.[6] Some sub-types of HPV (16 and 18) are known to cause cancer. Around 30,000 women die in China every year of cervical cancer. The country is estimated to have 130,000 new cervical cancer cases each year, accounting for 28% of the global total.[7]
- Cervical cancer ranks as the 8th most frequent cancer among women in China.[8]
- The incidence rates of gonorrhea and chlamydia for most developed countries are higher than those in China. This might be the result of insufficient laboratory testing, which would lead to low diagnoses.

Tuberculosis in China

In 2013, the total population of China was 1,386 million and the WHO estimates of TB for China were as follows:

- Prevalence (including HIV+TB): 1,300,000; rate per 100,000 population: 94
- Incidence (HIV+TB only): 4,500; rate per 100,000 population: 0.33
- TB patients with known HIV status: 329,415
- Total cases (new and relapse) reported to government: 847,176
- New cases for persons <15 years of age: 4,830; male : female ratio 2.2:1
- Treatment success (new and relapse cases): 95%; HIV positive TB cases: 47%.[9]

China has the world's second largest TB prevalence (after India). It has an estimated 1 million new cases of TB every year.

In China, 80% of TB exists in rural areas, particularly in north and northwestern regions and among persons of low socio-economic status. The urban living style and working conditions promote the spread of TB in big cities because of crowded conditions and airborne pollution.

In China, it was estimated there are 63,000 new MDR-TB cases among the one million notified new cases of TB every year. China contributes approximately one third of the world's MDR-TB cases.[9]

TB mortality in China has declined rapidly, at an average rate of 8.6% per year between 1990 and 2010.[10] TB treatment in China has improved in recent years with a major shift in treatment from hospitals to local public health centres.

Co-Infections

HCV/HIV Co-infection

- Injection drug use is the primary reason for the spread of HIV and HCV epidemics throughout southern China.[11] China has the world's largest population of injection drug users (IDUs) with approximately 2.4 million people affected.[12]
- Overall data for the prevalence of HIV co-infection with HCV in China is unavailable. The Kaiyuan region in Yunnan has the highest prevalence of HIV/HCV co-infection with 37.1% among IDUs.[13]

STI/HIV Co-infection

- In Hong Kong, a study conducted in 2005 revealed that 5.1% of sexually active people attending an HIV clinic had either gonorrhea or chlamydial infections.[14]
- In a study conducted in an HIV clinic in Hong Kong in 2001, the rate of syphilis among people with HIV was 11% compared to the average in the general population of less than 0.5%.[15]
- The majority of syphilis cases are in regions of China that also have a substantial burden of sexually transmitted HIV infection, highlighting the importance of effective syphilis control efforts.
- A high prevalence of HIV and anal HPV co-infection was observed among MSM in China.[16] Use of HPV vaccine might reduce HIV infections by controlling HPV.
- People who are HIV positive are at a greater risk for having persistent infection with high-risk HPV types (HPV16 or 18). [17]

TB/HIV Co-infection

- A WHO report showed that 80% of TB/HIV co-infection cases were found by screening people living with HIV for TB while only 20% were found by screening TB patients for HIV.
- High mortality rates were found in TB/HIV co-infection cases.
- A review of the results from 29 studies on HIV/TB co-infection in mainland China showed the average prevalence of TB among the HIV/AIDS population was 7.2%; however, it was much higher (22.8%) when the analyses were restricted to AIDs patients. Higher prevalence was observed for males and in hospital-based studies.[18]

Control Strategy for STIs and TB in China

Control strategy for STIs

There are three major government initiatives. First, the government has prioritized interventions to control the epidemic among IDUs, female sex workers, MSM, and plasma donors. Second, routine HIV testing is being implemented in populations at high risk of infection. Third, the government is providing treatment for infected individuals.

The Global Fund Program launched in 2010 is a six-year program which aims to improve HIV/AIDS prevention, treatment, and care in China to achieve universal access for high-risk populations and people living with HIV.[19]

The new Sexually Transmitted Diseases Management Method developed to strengthen control, prevention, and treatment of STIs went into effect in 2013.[20]

Control strategy for TB

The Government has made great progress in TB control and prevention, resulting in a significant decline in the burden of TB. China is one of 22 countries with a steady decline in TB cases over the past 20 years.[21]

The National TB Program in China uses a network of TB dispensaries for services. But many people with TB symptoms go to hospitals that may not provide adequate care and do not refer them to TB dispensaries. Hence, they were "missed." Since 2004, it is mandatory to report all TB cases, and hospitals now report 40% of TB cases so they are able to receive needed care.

About 480,000 people in the world developed MDR-TB in 2013. China has the second highest estimated number of MDR-TB cases in the world, but the treatment coverage gaps for detected cases are huge.[21] WHO's *Stop TB Strategy* aims to drastically reduce TB at national levels.

The Ministry of Health issued the National Framework on TB/HIV Collaboration in 2005, and the National Implementation Protocol for TB/HIV Co-infection Control in 2010.

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6.3 Community Profile – Republic of India: Sexually Transmitted Infections and Tuberculosis

Hepatitis C and other related communicable diseases

In a previous project (2013-2014), statistics related to the prevalence of HCV, HBV, and HIV in India were collected and uploaded on the hepatitis C portal of the CEC website (www.ethnocultural.ca/HepC). The current, extended project contains information on two other communicable diseases – STIs and TB – in the East Indian community.

There is very little information on the prevalence of STIs and TB in the East Indian population in Canada. The following text provides STI- and TB-related statistics reported in India. It is possible that some of the reported data may be applicable to the East Indian population in Canada.

Sexually Transmitted Infections in India

- India records about 30 million cases of individuals with STIs annually.[1]
- The prevalence of bacterial STIs is decreasing due to increased access to over-the-counter antibiotics and improved healthcare facilities across the country; both of these have increased the potential of people with bacterial STIs to have access to appropriate treatment.
- The prevalence of viral STIs is increasing because of a large number of undiagnosed cases along with a lack of accessible and affordable diagnostic methods, the stigma attached to the diseases, and the incurable nature of viral diseases.
- Accurate information on the incidence of syphilis in India is not available. However, statistics from 1954 to 1994 show that while the syphilis cases increased from 6% to 15%, the syphilis load in the population declined from 61% to 9%. This is attributed to the availability of over-the-counter antibiotics and increased clinics for the treatment of syphilis.[2]
- Males outnumbered females (3:1) in contracting the syphilis infection.[2]
- Congenital syphilis is a serious disease that affects newborn babies and has a high prevalence in developing countries.[3]
- Data from 2004 in India shows that the prevalence of gonorrhea among STI clinic attendees ranged from 3% to 19% from 1977 to 2000. There has been a decline since 2000. The ratio of male to female cases was 10:1, with 80% to

90% of men acquiring gonorrhea from female sex workers.[4]

- In India the incidence of genital warts caused by the HPV has been reported to vary from 2% to 25% among STI clinic attendees. The prevalence rates vary in different regions of the country.[4]
- Cervical cancer is the second most frequent cancer among women in India.[5] About 5% of women in the general population are estimated to have HPV 16 or 18 infection at a given time, and these subtypes of HPV are known to cause cervical cancer.[5]
- In 2011, there were 1,033 STI clinics in the government sector and 4,500 in the private sector; combined, these clinics treated approximately 10 million people.[1]

Tuberculosis in India

In 2013, the total population of India was 1,252 million and the WHO estimates of TB for India were as follows:

- Prevalence (including HIV+TB): 2,600,000; rate per 100,000 population: 211
- Incidence (HIV+TB only): 120,000; rate per 100,000 population: 9.7
- TB patients with known HIV status: 887,903
- Total cases (new and relapse); reported to government: 1,243,905
- New cases for persons <15 years of age: 64,726; male:female ratio 2.2 : 1
- Treatment success (new and relapse cases): 88%; HIV positive TB cases: 77%.[6]

India has the world's highest TB prevalence. India is the second most populous country in the world, and one-fourth of the global TB cases occur in India annually. India has between 2 to 3 million people infected with TB and about 280,000 deaths due to TB each year. TB mainly affects the economically productive age group leading to a huge socio-economic impact on the country.

It is estimated that about 40% of the Indian population is infected with TB bacteria, the vast majority of whom have TB infection rather than TB disease.[7]
TB is the most common HIV-related opportunistic infection in India. HIV accounts for 20% of the new cases of TB reported in India each year.[8]

India has the highest number of TB patients who have become resistant to the most effective drugs available. Approximately 73,000 patients with MDR-TB were reported to the Union Health Ministry but only 1.6% of these MDR-TB patients were enrolled for treatment.

Despite the aim of treating 30,000 MDR TB cases annually by 2012-2013, just 10,267 MDR-TB patients had been diagnosed and only 6,994 provided with treatment by the end of 2011.[9]

In 2012, India declared TB to be a notifiable disease, meaning that all private doctors, caregivers, and clinics treating a TB patient are required to report every case of TB to the government immediately.[10] But, according to the WHO Global TB Report 2014, India tops the list of the world's missed TB cases with almost 24% of these cases in India. The number of missed cases is defined as the difference between the estimated number of incident cases and notified (new and relapse) cases.

Many people do not know that Indian government hospitals have all of the medicines required to treat TB patients and these are free of cost. Instead, people tend to spend large sums to go to private hospitals.

STI/HIV Co-infection

- The presence of an STI in an individual facilitates the transmission of HIV.
- In 2012, HIV prevalence in pregnant women attending antenatal clinics in India averaged 0.4%.[11]
- Higher percentages were found in female sex workers (2.7%), people attending STI clinics (3.6%), men who have sex with men (4.4%), and injection drug users (7.1%).[11]
- In some states and territories the average antenatal HIV prevalence is based on reports from only a small number of clinics.
- Presently in India, there is greater education and awareness about HIV/AIDS leading to more individuals seeking treatment and support.

TB/HIV Co-infection

- An HIV-positive person who is co-infected with TB bacteria has a 50% risk of developing TB, whereas an HIV-negative person who is exposed to TB bacteria has only a 10% risk of developing TB. This is especially important in India, where 40% of the adult population is infected with the TB bacteria[12] and 2.4 million are living with HIV.[13]

- The task of controlling the dual epidemic of TB and HIV/AIDS remains a major challenge to the country.

Control Strategy for STIs and TB in India

Control strategy for STIs

The main strategy in India aims to achieve effective management of people with established infections by integrating STI services into the existing healthcare system, particularly at the primary healthcare level. Managing diseases with similar causes and symptoms has been recommended by the National AIDS Control Organization (NACO) for case management, but the effectiveness of this type of management for women is not known. NACO has targeted high-risk groups and incorporated prevention, support, care, and treatment programs to control the epidemic. A large section of the Indian population is severely disadvantaged in terms of income, education, power structures, and gender. These basic issues need to be addressed in order to achieve better health outcomes for the greatest number of people in India.[14]

Control strategy for TB

In 2014, India's TB control program was on track to reduce the disease burden. There has been a 42% decline in the mortality rate from 1990 to 2012; the prediction for 2015 suggests a further decline in this rate. Secondly, the prevalence rate of TB is also declining – a 51% decline. If this decrease continues, the country will achieve the 2015 global targets for reduction in TB incidence, prevalence, and mortality.[15]

As shown in the report by the Department of AIDS Control of India, the prevalence of HIV in TB patients has been decreasing for the last five years. The main reason behind this decreasing trend is the improvement in testing facilities. In 2012, more than 618,000 out of 1.1 million notified TB patients had their HIV status assessed and more than 90% of HIV/TB cases were linked to Directly Observed Treatment Short-Course (DOTS), which is the most effective strategy available for controlling TB. Consistent improvement was observed in approximately 75% of HIV-infected TB patients.[16]

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6.4 Community Profile – Republic of the Philippines: Sexually Transmitted Infections and Tuberculosis

Hepatitis C and other related communicable diseases

In a previous project (2013-2014), statistics related to the prevalence of HCV, HBV, and HIV in the Philippines were collected and uploaded on the hepatitis C portal of the CEC website (www.ethnocultural.ca/HepC). The current, extended project contains information on two other communicable diseases – STIs and TB – in the Filipino community.

There is very little information on the prevalence of STIs and TB in the Filipino population in Canada. The following text provides STI- and TB-related statistics reported in the Philippines. It is possible that some of the reported data may be applicable to the Filipino population in Canada.

Sexually Transmitted Infections

- In 2005, the global prevalence estimate for STIs was 318 million.[1]
- Since 1991, STI prevalence rates have been increasing in both high-risk (sex workers) and low-risk (pregnant women) groups in the Philippines.[2]
- The percent of sex workers with active syphilis in 2009 was 1.3%.[3]
- In 2010, the rate of active syphilis among men who have sex with men (MSM) was 2.1%.[4]
- The notified number of reported cases of gonorrhea in 2003 and 2004 was 50 and 35 respectively.[5]
- A 2005 WHO survey of 357 sex workers in the Philippines showed a 36.7%. prevalence of gonorrhea (WHO Consultation, London).
- In a 2004-2005 survey conducted in Manila among 260 MSM, the rates of urethral chlamydial infection in the Philippines were higher (19.2%) among MSM, while rectal chlamydia was 9.2%. Rectal chlamydial infection is generally high among MSM.[1]
- Previous estimates of the prevalence of chlamydial infection among 1,484 FSWs in the Philippines have ranged from 27 to 36%. These estimates suggest that chlamydial infection is common in this population.[6]
- Chlamydial infection is a reportable disease in the Philippines, yet routine screening is not performed, even among high-risk populations, because of financial and technical constraints.[6]

- The Philippines has a population of 32.70 million women aged 15 years and older who are at risk of developing cervical cancer.[7]
- Cervical cancer ranks as the 2nd most frequent cancer among women in the Philippines. Some sub-types of HPV (HPV16 and 18) cause cervical cancer.[7]
- Cervical cancer screening programs in the Philippines are available but are not well utilized.
- Preventive HPV vaccination has been approved in the Philippines but no national or government vaccination policy has yet been implemented.[8]

Tuberculosis in the Philippines

In 2013, the total population of the Philippines was 98 million and the WHO estimates of TB for the Philippines were as follows:

- Prevalence (including HIV+TB): 430,000; rate per 100,000 population: 438, above the regional and global averages of 128 and 169, respectively
- Incidence (HIV+TB only): 310; rate per 100,000 population: 0.32
- TB patients with known HIV status: 5,034
- Total cases (new and relapse) reported to government: 229,918
- New cases for persons <15 years of age: 2,065; male:female ratio 2.3:1
- Treatment success (new and relapse cases): 88%; HIV positive TB cases: N/A.[9]

TB is still among the leading causes of morbidity (sickness) and mortality in the Philippines; it has the ninth highest TB incidence in the world and second highest in the Western Pacific Region.[10]

Since TB principally affects the adults of working age (15 years and older), it is estimated that the country loses some 26 billion Philippine pesos (US$ 540 million) annually due to premature, TB-related deaths.[11]

China, the Philippines, and Vietnam are also among the 25 countries with the highest prevalence of MDR-TB. Globally, 3.3% of all new TB cases have been found to be MDR-TB, while the Philippines has 4.0%.[1]

STI/HIV Co-infection

The prevalence of HIV in the Philippines is now low but the continuing trend of increases in the number of HIV cases indicates a likely increase in HIV prevalence. The government aims to reduce and maintain the level of cases to less than 1%.

Reported STI/HIV co-infection among 15-24 year old Filipinos increased five-fold according to the Department of Health AIDS Registry from 2007-2009.

A high STI prevalence and poor health-seeking behaviours among individuals at risk, along with the associated stigma and discrimination, result in the relative invisibility of people living with HIV and STIs.

Recognizing that STIs are risk factors in HIV infection, the Philippine government in 1993 integrated the STI program into the National AIDS Prevention and Control Program. The integrated program aims to reduce transmission of HIV infection and prevent development of complications from STIs.

TB/HIV Co-infection

In 2013, according to the WHO, the prevalence of HIV/TB co-infection in the Philippines was 438 per 100,000 population, which is above the global average of 169. But monitoring of HIV in notified TB cases is not routinely done in the Philippines. Some factors that contribute to delayed diagnosis and treatment are lack of knowledge about TB, financial constraints, inaccessibility of healthcare services and facilities, and stigma-related factors.

Control Strategy for STIs and TB in the Philippines

Control strategy for STIs

WHO has been operating in partnership with the Philippine government to form a strategic agenda over the period 2011-2016 that targets an improvement in the health of the Filipinos. The goals are to help the Philippine government achieve better health outcomes, sustained health financing, and a responsive health system.

The Philippine government in 2010 increased its efforts in identifying and treating STIs in pregnant women. Universal screening for syphilis as an entry point to identify other STI infections was established. However, in the Philippines to date

there is no reliable data on syphilis prevalence and incidence among pregnant women in general. The government also recognizes that there is a large portion of women, 90%, with STIs who have no symptoms.[4]

The "100% condom use" initiative of WHO is being actively implemented in the Philippines to reduce sexual transmission of HIV and other STIs among sex workers, their clients, and the public at large.

Control strategy for TB

Significant developments have been made in increasing case detection and treatment in the Philippines, despite the high TB incidence.

In 2007, the Philippines achieved a TB case detection rate of 75%, exceeding the WHO target of 70%. The Directly Observed Treatment Short-Course (DOTS) treatment is the internationally recommended strategy for TB control. The DOTS treatment success in the Philippines was 88%, which was higher than the WHO target of 85%.

The Philippines Coalition against Tuberculosis (PhilCAT), established in 1994, is a forum for the discussion of important issues in TB control. Major funding members were the Department of Health TB Control Service, infectious disease specialists, and pharmaceutical industry representatives. With an original group of 12 members, PhilCAT currently has 60 member organizations.

The WHO-CIDA Initiative in the Philippines was launched in early 2010. More than 10,000 additional TB cases were detected in the Philippines through this initiative, mainly through hospital engagement.[12]

The TB prevalence rate in the Philippines has shown a steady decline in recent years and, if this trend is maintained, the Philippines will likely meet the STOP TB Strategy target of 50% reduction in TB prevalence and death rates by 2015, compared with 1990 levels.[13]

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6.5 Community Profile – Socialist Republic of Vietnam: Sexually Transmitted Infections and Tuberculosis

Hepatitis C and other related communicable diseases

In a previous project (2013-2014), statistics related to the prevalence of HCV, HBV, and HIV in Vietnam were collected and uploaded on the hepatitis C portal of the CEC website (www.ethnocultural.ca/HepC). The current, extended project contains information on two other communicable diseases – STIs and TB – in the Vietnamese community.

There is very little information on the prevalence of STIs and TB in the Vietnamese population in Canada. The following text provides STI- and TB-related statistics reported in Vietnam. It is possible that some of the reported data may be applicable to the Vietnamese population in Canada.

Sexually Transmitted Infections in Vietnam

- The National Institute of STIs of the Vietnamese Ministry of Health recorded 202,856 cases of new STIs in Vietnam in 2006. However, the actual number of cases is likely to be higher as many patients went to private doctors and pharmacists who do not report to the Ministry of Health.[1]
- In 2001, out of a population of 82,662,800, the number of syphilis cases were 21,273[2], gonorrhea 243,125[3], and chlamydia 1,215,629.[4]
- In Ho Chi Minh City there were 6,224 new cases of HPV infection, and 3,334 patients died from HPV in 2002.[5]
- According to the WHO, in 2010, syphilis prevalence in Vietnam was 0.21%.[6]
- In 2006, the prevalence rates of STIs among female sex workers (FSWs) in two large cities of Vietnam were: Ha Noi – gonorrhea 17.5%, chlamydia 1.8%, and syphilis 1.1%; Ho Chi Minh City– gonorrhea 0.3%, chlamydia 6.4%, and syphilis 9.1%.[6.] The infection rates for MSM were higher.
- In Vietnam, there is a high prevalence of infection with HPV subtypes (HPV16 and 18) that are known to cause cervical cancer, and cervical cancer is the most frequently diagnosed cancer among women in southern Vietnam where its incidence is the highest observed in the world.
- Cervical cancer ranks as the 4th common cause of female cancer in Vietnam and the 2nd most common cancer in women between 15 to 44 years of age.[7]

- The few diagnostic tests available in Vietnam for treatable STIs are often expensive and geographically inaccessible. Therefore, STI treatment is based only on symptoms, which is not reliable; repeat infections after treatment are common.

Tuberculosis

In 2013, the total population of Vietnam was 92 million and the WHO estimates of TB for Vietnam were as follows:

- Prevalence (includes HIV+TB): 190,000; rate per 100,000 population: 209
- Incidence (HIV+TB only) in thousands: 9,400; rate per 100,000 population:10
- TB patients with known HIV status: 71,374
- Total cases (new and relapse) reported to government: 100,395
- New cases of persons <15 years of age: 143; male:female ratio 2.9 : 1

- With about 100,000 new cases of TB reported every year, Vietnam ranks 12 out of the 22 highest TB-burden countries identified by the WHO.[9]
- TB is the second highest cause of death in people with infectious diseases in Vietnam, where 18,000 deaths from TB are recorded every year.[9]
- Vietnam also ranks 14th among the 27 countries having the highest number of MDR-TB patients.[9]
- Vietnam is successful in treating patients once diagnosed but detection and prevention efforts are poor. Many of the TB cases go undetected.

HCV/HIV Co-infection

- WHO reported 170 million cases of HCV-positive individuals worldwide in 2012; 20% of those had co-infection with HIV.
- The infection rate was high among IDUs and higher in low income countries.
- Although the HCV prevalence is low in the general population in Vietnam, it is high among IDUs.[10]
- In 2013, it was reported that 98.5% of the IDUs in Vietnam were living with HCV. People with chronic HCV could not access treatment easily due to the high cost of antiviral drugs and a lack of resources.[11,12]

STI/HIV Co-infection

A study published by the Vietnamese Ministry of Health concluded that:

- STIs and HIV increase the rates of infection both ways. Individuals with STIs seem to get HIV infection easily, especially if they have ulcers.
- HIV is more easily transmitted if one or both persons have an STI. The rate of infection increases by 2 to 9 times in these cases.
- Cases of STIs without skin lesions also occur more frequently and more attention should be paid to these cases when checking for co-infections.[13]

TB/HIV Co-infection

- The TB/HIV co-infection rate varied from 8% to 25%, depending on the provinces.
- Since 2008, all patients receiving TB treatment in Ho Chi Minh City have been tested for HIV. The co-infection rate in this city was 22%.
- Before screening implementation, morbidity (sickness) from a TB/HIV co-infection was 25.4% in 2006. It had decreased to 11.3% in 2010.[14]
- In 2012, about 100,000 new cases of TB infection were reported in Vietnam; 66% of these tested positive for HIV.[15]

Control Strategy for STIs and TB in Vietnam

Control strategy for STIs

- Descriptions of causes, symptoms, preventative measures, and treatment methods for some STIs are published by the Ho Chi Minh City Public Health Institute.
- A description of causes, symptoms, preventative measures, and treatment methods for HPV was published in 2014.[16]
- A website set up by the Preventative Medical Association of Vietnam in 2012 receives and disseminates information on HPV.[17] It included the factors affecting the spread of chlamydia and other STIs and the detrimental effects of these diseases on individuals, and presents the goals of preventative programs.[18]
- Many efforts have been made to promote condom use among sex workers. The WHO's "100% condom use" program has been implemented in Vietnam and activities are currently stepped up to improve STI services and evaluate results.

Control strategy for TB

- Since 2007, PATH, an international non-profit health organization, has been working in Vietnam to improve detection and treatment of TB. The rate of TB detection in the 21 provinces and cities that were involved has doubled from 5.3 % in 2009 to 10.5 % in 2011.[9]
- The Centers for Disease Control and Prevention (CDC) Vietnam office, established in 2001, works with the Vietnam National TB Program to reduce TB transmission and death, to prevent the development of TB drug-resistance, and to reduce TB transmission among people living with HIV/AIDS.
- CDC supports the immigrant TB screening program in Ho Chi Minh City.[19]
- The causes, incubation periods, symptoms, personal and public preventative measures, treatment methods, and control of cross-border spread of TB are published by the Ho Chi Minh City Public Health Institute.[20]
- The WHO-CIDA Initiative in Vietnam started activities in 2010. The initiative targeted three large national hospitals that were not notifying many cases to the national TB program although it was clear that they were diagnosing a large number of TB cases. Through this initiative, about 4,000 TB cases were detected and started on treatment in the first 15 months of implementation. [21]
- The most recent treatment outcome data for patients started on MDR-TB treatment in 2011 shows a global success rate of 48%, and Vietnam, one of the high MDR-TB burden countries, achieved a treatment success rate of >70%.[9]

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7.0 List of Health Services for Sexually Transmitted Infections and Tuberculosis in the Five Selected Cities in Canada

1. Calgary

1.1 Sexually Transmitted Infections

AIDS Calgary Awareness Association (*Questions about HIV, STIs, or safer sex*)
Tel: (403) 508-2500
Website: http://cruiseline.ca/SS_Contact.html

Alberta Health Services Healthy Diverse Populations
(Education and training, resource information, referrals, and case consultations)
Tel: 1-866-408-5465
Website: http://www.albertahealthservices.ca/8431.asp

Alberta Health Services - Sexual and Reproductive Health Clinical Services
(Sexual health services, including STI and HIV testing and treatment. Most services are available on a drop-in basis.)
Calgary Locations:

- Sheldon M. Chumir Health Centre
  Tel: (403) 955-6200
- South Calgary Health Centre
  Tel: (403) 943-9300
- Sunridge Professional Building
  Tel: (403) 944-7666

Website: http://www.albertahealthservices.ca/services.asp?pid=service&rid=1671

Alberta Health Services Public Health Centres (G*eneral listing of public health centres across the province where young people can access sexual health services)*
Calgary Locations:

- Acadia Community Health Centre
- North Hill Community Health Centre
- Sheldon M. Chumir Health Centre
- South Calgary Health Centre
- Thornhill Library/Community Health Centre
- Village Square

Website: http://www.albertahealthservices.ca/facilities.asp?pid=ftype&type=4

Calgary Catholic Immigration Society *(Provides services to the ethnic community in many languages [62] from different satellite locations)*
Tel: (403) 262-2006
Website: http://www.ccis-calgary.ab.ca

Calgary Chinese Community Service Association
(Education on healthy living and disease prevention)
Tel: (403) 265-8446
Website: http://www.cccsa.ca

Calgary Sexual Health Centre *(Offers a variety of counselling and education services for people of all ages, including immigrant families)*
Tel: (403) 283-5580
Website: http://www.calgarysexualhealth.ca/programs-workshops/

Calgary Sexually Transmitted Infections Clinic *(Counselling, education, diagnosis, and treatment. Offers free and confidential services for specific ethnocultural communities, including immigrants, newcomers, refugees, and people from countries where HIV is endemic.)*
Tel: (403) 955-6700
Website: http://www.albertahealthservices.ca/facilities.asp?pid=saf&rid=1039203

Health Link Alberta *(Provides access to translators in up to 120 languages. Translators quickly [within two minutes] become a part of a three-way conversation including the caller and Health Link Alberta staff.)*
Mandarin Health Link Calgary, Tel: (403) 943-1554
Cantonese Health Link Calgary, Tel: (403) 943-1556
Toll-free: 1-866-408-5465 (LINK) Calgary, Tel: (403) 943-5465 (LINK)
Website: http://www.albertahealthservices.ca/223.asp

Margaret Chisholm Resettlement Centre *(Culturally appropriate, easily accessible primary and complementary health and wellness services to refugees and refugee claimants who are unfamiliar with the Canadian healthcare system)*
Tel: (403) 265-3410
Website: http://www.ccis-calgary.ab.ca/index.php?option=com_content&view=article&id=28%3Amargaret-chisholm-resettlement-centre&catid=30%3Alocation-maps&Itemid=13

Safeworks Harm Reduction Program - The DI (Calgary Drop-in Centre)
(STI/Drug education, prevention, and needle exchange)
Tel: (403) 699-8216
Website: http://www.albertahealthservices.ca/services.asp?pid=saf&rid=1040612

Sexually Transmitted Infections Clinic – AHS - Calgary Zone
(Management and prevention of STIs, including HIV/AIDS)
Tel: (403) 955-6700
Website: http://albertahealthservices.ca/services.asp?

Travel Health Services - AHS *(Counselling and immunization services for clients planning on travelling outside of Canada, provided on cost-recovery basis)*
Tel: (403) 955-6777
Website: http://www.albertahealthservices.ca/

1.2 Tuberculosis

Acadia Community Health Centre *(Offers free TB skin testing for eligible Albertans. Contact* Travel Health Services *to have travel or work-related TB skin testing done. If not eligible for free testing there will be a charge for the test.)*
Tel: (403) 944-7200
Website: http://www.health.alberta.ca/health-info/tuberculosis.html

Health Science Centre *(New treatment options for multidrug-resistant tuberculosis)*
Dr**.** Stephen K. Field. Room 1437, 3330 Hospital Dr. NW,
Calgary, AB T2N 4N1
Email: sfield@ucalgary.ca

Prevention and Control of TB
(A provincial program that offers complete services to prevent and control TB in Alberta, includes: screening, diagnosing, preventing, treating, and community follow-up.)
Tel: (403) 944-7660
Website: http://www.health.alberta.ca/health-info/tuberculosis.html

Thornhill Library/Community Health Centre
(Offers TB testing for eligible Albertans. Eligibility includes: recent contact with known TB cases, people with medical conditions and therapies that increase risk of progressing from latent TB infection [LTBI] to active TB, all refugees younger than age 50 who are from a country where TB is common AND who have immigrated here in the last two years, and people at risk for work-related exposure to infectious TB)
Tel: (403) 944-7500
Website: http://www.albertahealthservices.ca/facilities.asp?pid=saf&rid=1074816

Tuberculosis Program – Sunridge Professional Building
(Surveillance, screening, diagnosis, prevention, treatment, and community follow-up)
Tel: (403) 291-9185; (403) 944-7660
Website: http://www.health.alberta.ca/health-info/tuberculosis.html

2. Montreal

2.1 Sexually Transmitted Infections

AIDS Community Care Montréal *(Prevention of transmission and promotion of community awareness and action on AIDS and STIs)*
Tel: (514) 527-0928
Website: http://www.accmontreal.org

Centre for AIDS Services of Montreal (Women) - Focuses on needs of women and children infected and affected by HIV/AIDS *(HIV/AIDS education, outreach, individual support, and counselling)*
Tel: (514) 495-0990
Website: http://www.netrover.com/~casm

Clinique médicale l'Actuel *(HIV/AIDS and STIs and Hep C testing, treatment, and counselling)*
Tel: (514) 524-1001
Website: www.cliniquelactuel.com/

HIV-AIDS and Sexually Transmitted and Blood-Borne Infections
(Screening, information, counselling, and support)
Tel: (514) 286-6500
Website: http://www.santemontreal.qc.ca/en/support-services/services-by-type/hiv-aids-and-stbbis/

Jewish General Hospital – Infectious Diseases Clinic
(STI and TB education, research, and clinical lab-related activities)
Tel: (514) 340-8222 ext. 8230
Website: http://www.jgh.ca/en/infectiousdiseases

Santé et Services Sociaux Québec: Sexual Health Services by Region (SIDEPs)
(Provides a listing of sexual health clinics in the province that offer STI screening tests)
Tel: (514) 644-4545
Website: http://www.msss.gouv.qc.ca/sujets/prob_sante/itss/index.php?list_screening_test_centers

Testing for Sexually-Transmitted and Blood-Borne Infections *(Testing)*
Tel: (514) 848-2424 ext. 3565; SGW Campus
Tel: (514) 848-2424 ext. 3575; Loyola Campus
Website: http://www.itss.gouv.qc.ca/i-think-i-have-an-stbbi-what-should-i-do.dhtml

The Info-Santé (dial 811) *(Phone lines are open 24/7. Calls are directed to a nurse, who provides information and advice on a wide range of health and social problems and refers callers to the most appropriate resources, as needed.)*
Website: http://www.santemontreal.qc.ca/en/support-services/

2.2 Tuberculosis

CHU Sainte-Justine *(TB screening, testing, and treatment)*
Tel: (514) 345-4931
Website: http://www.chu-sainte-justine.org

Jewish General Hospital – Infectious Diseases Clinic
(TB education, research, and clinical lab-related activities)
Tel: (514) 340-8222 ext. 8230
Website: http://www.jgh.ca/en/infectiousdiseases

The Montreal Chest Institute (MCI)Foundation
(TB referral centre, home visits, screening, treatment, and preventative therapy)
Tel: (514) 934-4414
Website: http://www.mci.foundation.ca/MCI_Home.html

Tuberculosis Clinic – MCI (Respiratory Medicine) *(Screening, testing, and treatment)*
To reach all MUHC sites, call (514) 934-1934 and dial the five-digit extension number.
Website: http://muhc.ca/clinic/tuberculosis-clinic-mci-respiratory-medicine

3.0 Toronto

3.1 Sexually Transmitted Infections

AIDS & Sexual Health Infoline *(Province-wide free anonymous service staffed by professional, multidisciplinary, and multicultural counsellors who offer assistance in different languages, including Hindi, Punjabi, Urdu, Tagalog, Mandarin, and Cantonese)*
Tel: (416) 392-2437 Toll-free 1-800-668-2437
Website: http://sexualhealthontario.ca/toronto-public-health/2013/03/06/aids-sexual-health-infoline/

Alliance for South Asian AIDS Prevention *(A support organization for South Asians infected with and affected by HIV. Services are available in Tamil, Hindi, Urdu, Punjabi, and other languages. Other services include recreational and social programs for PLHIV(persons living with HIV), AIDS, STI prevention/awareness.*
Tel: (416) 599-2727
Website: http://www.asaap.ca

Asian Community AIDS Service *(HIV/AIDS and STIs education, prevention, treatment, information, and support in multiple East and Southeast Asian languages)*
Tel: (416) 963-4300
Website: http://www.acas.org

Hassle Free Clinic *(Provides free medical and counselling services in many areas of sexual health, including STIs; includes sexual health counselling, support, STI testing accompaniment)*
Tel: (416) 922-0566
Website: http://www.hasslefreeclinic.org/FindUs.phpWomen/men/trans clinic

Ontario Ministry of Health and Long-Term Care – Health Care Options Directory
(Provides a great search tool to help find sexual health services, including Community Health Centres, Public Health Units, and Walk-In/After-Hours Clinics)
For general information about Toronto Public Health programs and services, call 311 (24 hours a day). To speak to a health professional for free, confidential information and advice, call (416) 338-7600; (8:30am - 4:30pm Monday to Friday)
Website: http://wwwhttp://www.hco-on.ca/English/Search/.ontario.ca/locations/health/

Planned Parenthood Toronto (*A Canadian Federation for Sexual Health [CFSH] member organization that provides sexual health services, including STI testing and treatment)*
Tel: (416) 961-0113 ext. 121
Website: http://www.ppt.on.ca/

Sexual Health Services: York Region *(Confidential and non-judgmental; sexual health hotline, counselling services, and resources for schools)*
Tel: 1-800-361-5653; TTY (for the deaf or hard of hearing): 1-866-252-9933
Website: www.york.ca/wps/portal/yorkhome/health/yr/sexualhealth/

Telehealth Ontario *(Free, confidential telephone service you can call to get health advice or general health information from a Registered Nurse)*
Free access to a registered nurse—24 hours a day, 7 days a week.
1-866-797-0000 TTY: 1-866-797-0007
Website: http://sexualhealthontario.ca/sexual-health-resources/

TOHealth *(Sexual health text messaging program for Toronto youth [aged 12-24] on services such as STI prevention, testing, treatment, birth control information, sexual decision-making, and many more)*
Text 365247
Website: http://sexualhealthontario.ca/toronto-public-health/2013/03/06/tohealth/

Toronto Community Organizations *(Offers HIV and STI Testing)*
Website: http://toronto.gaycities.com/organizations/tid/1127/

Toronto Sexual Health Clinics *(Over 10 clinics that offer services on STI testing and free treatment, HIV testing, birth control counselling, low cost or free birth control, free condoms, emergency contraceptive pill [Plan B], pregnancy testing, counselling and referrals, and sexuality and relationship counselling). Neither a referral or OHIP coverage is needed to visit a clinic.*
Website: http://sexualhealthontario.ca/toronto-public-health/2013/03/06/toronto-sexual-health-clinics/

Women's Health in Women's Hands *(Provides clinical services, including STI testing and treatment, to women of color living in the Toronto area)*
General Inquiries: Tel: (416) 593-7655
Clinical Services: Tel: (416) 593-7655 ext. 7
Website: http://www.whiwh.com/

3.2 Tuberculosis (TB)

ServiceOntario, **Infoline** *(Information on TB)*
Toll-free: 1-866-532-3161
In Toronto, Tel: (416) 314-5518
Website: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/tbpc.aspx

St. Michael's Hospital *(TB program housing the busiest outpatient TB clinic in Toronto)*
Tel: (416) 864-6060 ext. 2673
Website: http://www.stmichaelhospital.com/

TB STOP *(Prevention, control, and impact reduction)*
Tel: (416) 392-7457
Website: http://www.toronto.ca/health/tb_prevention/tbstop.htm

Toronto Public Health – TB Prevention and Control Program *(Provides information on TB and recommendations for TB screening in various workplace settings within the City of Toronto including TB free skin test, or helps find them a family physician)*
Tel: (416) 338-7600
Website:http://www1.toronto.ca/wps/portal/
contentonly?vgnextoid=2f295dc06f002410VgnVCM10000071d60f89RCRD

Toronto Western Hospital *(TB Clinic)*
Tel: (416) 603-5853
Website: http://www.uhn.ca/docs/HealthInfo/Shared%20Documents/TWH_Tuberculosis_Clinic.pdf

4. Vancouver

4.1 Sexually Transmitted Infections

AIDS Vancouver Help Line (*Questions about HIV, STIs, or safe sex*)
Tel: (604) 687-2437 or **Health Education AIDS Liaison (HEAL),**
Tel: (604) 683-3405
Website: http://cruiseline.ca/SS_Contact.html

AIDS Vancouver Island *(HIV/HCV information, education, support, safe sex, HIV testing and information on HIV transmission, STDs, harm reduction, and street outreach services)*
Access Health Centre
Tel: (250) 384-2366
Toll-free Info Line 1-800- 665-2437
Website: http://avi.org/

Anonymous Help Line
Tel: (604) 696-4666

BC Centre for Disease Control: Sexually Transmitted Infections – Clinics and Programs
(Offers a listing of youth clinics, STI clinics, and public health units where young people can go to access sexual health services)
Tel: (604) 707-5600
Website: http://www.bccdc.ca/default.htm

Fraser Health
(HIV, AIDS, STIs, Hep C outreach, harm reduction, testing, education, and counselling)
Tel: (604) 587-4600; Toll-free: 1-877-935-5669
Website: http://www.fraserhealth.ca

HealthLink BC 811
(Provides health information, upon request, over the telephone in more than 130 languages)
Toll-free from anywhere in BC
Website: http://www.healthlinkbc.ca/servicesresources/811/

Options for Sexual Health (Opt) *(A Canadian Federation for Sexual Health [CFSH] member organization with clinic locations all across British Columbia; provides a wealth of sexual health services, including STI testing and treatment)*
Tel: (604) 731-4252
Website: http://www.cfsh.ca/Members/Find_a_member/

Qmunity – BC's Queer Resource Centre *(Provides a peer support and discussion group for Lesbian, Gay, Transgender, Bisexual, and Two Spirit people who have chronic health conditions. Also provides health and wellness promotion education sessions.)*
Tel: (604) 684-5307 ext. 100
Website: http://www.qmunity.ca/about-us/

Surrey Memorial Hospital: STI/HIV Clinic
(Hep C testing, individual support, and counselling)
Tel: (604) 585-5999; (604) 587-3855
Website: http://www.fraserhealth.ca

Teens Guide: Living with Sexually Transmitted Diseases *(Resources on STDs)*
Website: http://books.google.ca/books?id=kSVqn-w8kSUC&pg=PA174&lpg=PA174&dq=medline+plus+medical&source=bl&ots=yDf4wPpV9u&sig=AcvqLQpEZQSAtv5bVIeFIbfX6s&hl=en&sa=X&ei=aiRNVNmjFs-PxigKk5oGIAw&ved=0CCMQ6AEwAjge#v=onepage&q=medline%20plus%20medical&f=false

4.2 Tuberculosis

TB Information from HealthLink BC 811 *(Provides information by telephone; pamphlets available in Chinese, English, Vietnamese, and Punjabi)*
Website: http://www.healthlinkbc.ca/healthfiles/hfile51.stm

Vancouver - Downtown Outreach TB Clinic *(Diagnosis, treatment, and follow up of patients with active TB or latent TB infection. Medication for patients with active TB or latent TB infection. A safe and patient-centered environment for TB treatment. Resources and multilingual education materials about TB and related issues.)*
TB Nurse: Tel: (604) 216-4264
Website: http://www.bccdc.ca/dis-cond/a-z/_t/Tuberculosis/clinprog/default.htm

Vancouver - New Westminster TB Control Clinic *(Diagnosis, treatment, and follow up of patients with active TB or latent TB infection. TB medication for patients with active TB or latent TB infection. A safe and patient-centered environment for TB treatment. Resources and multilingual education materials about TB and related issues.)*
Tel: (604) 707-2698
Website: http://www.bccdc.ca/dis-cond/a-z/_t/Tuberculosis/clinprog/default.htm

Vancouver - TB Control Clinic *(Diagnosis, treatment, and follow up of patients with active TB or latent TB infection. TB medication for patients with active TB or latent TB infection. A safe and patient-centered environment for TB treatment. Resources and multilingual education materials about TB and related issues.)*
Tel: (604) 707-2692
Website: http://www.bccdc.ca/dis-cond/a-z/_t/Tuberculosis/clinprog/default.htm

5. Winnipeg

5.1 Sexually Transmitted Infections

AIDS & Sexuality Peer Education Project
(*Questions about HIV, STIs, or safe sex)*
Tel: (204) 284-5208
Website: http://cruiseline.ca/SS_Contact.html

AIDS/STD Information Line (Manitoba) *(Information and referrals)*
Tel: (204) 775-1514
Toll-free: 1-800-782-2437
Website: http://www.johnhoward.mb.ca/

Health Links-Info Sante *(24-hour, 7-days a week telephone information service to provide answers over the phone to healthcare questions and guide to the care needed)*
Toll-free 1-888-315-9257 Provincial Line
Website: http://www.wrha.mb.ca/healthinfo/healthlinks/

Klinic Community Health Centre *(HIV, AIDS, STI, and Hep C screening, treatment, counselling, education, and outreach)*
Tel: (204) 784-4090
Website: http://www.klinic.mb.ca/servicelines.htm#

Manitoba Health – Communicable Disease Control: Sexually Transmitted and Blood-borne Infections (*Sexual health services, including STI testing and treatment)*
AIDS/STI Information Line: 1-800-782-2437
Website: http://www.gov.mb.ca/health/publichealth/cdc/sti/index.html

Mount Carmel Clinic *(STI testing, treatment, and education; HIV testing with pre- and post-test counselling, including care for the mental, emotional, and physical health of immigrants and refugees.)*
Tel: (204) 582-2311
Website: https://www.mountcarmel.ca/

Nine Circles Community Health Centre *(Promotes STI and HIV prevention and treatment, is home to a nurse-run STI clinic that offers a range of sexual health services, and has a map of STI/HIV testing services in Manitoba.)*
AIDS/STI Info Line and Speaker's Bureau
Tel: (204) 945-2437; Toll-free: 1-800-782-2437/1-888-305-8647
Website: http://www.ninecircles.ca/

Nor'West Co-op Community Health Centre Inc. *(Teen Clinic is a place for Winnipeg teens 21 years and under [from anywhere in the city] to come for free, confidential, and non-judgmental health services [including STI and HIV testing] with doctors, nurse practitioners, and/or nurses.)*
Tel: (204) 940-2020
Website: http://www.norwestcoop.ca/your-health/teen-clinics/

Sexual Health Info Line *(Free and confidential support for many diverse communities)*
Toll-free: 1-800-782-2437
Website: http://www.ninecircles.ca/services/aids-sti-info-line.html

Sexual Health Program (Brandon) *(Offers free and confidential services* on birth control, condoms, pregnancy testing, emergency contraception, and STI testing and treatment, including education and support about safe sex and pregnancy to women and men of any age.)
Confidential Tel: (204) 578-2513
Website: http://www.brandonrha.mb.ca/en/Public_Health/Sexual_Health_Program/

Sexuality Education Resource Centre (SERC)
(Sex education basics, Hep C and STI education, outreach, resource provision, and research)
Tel: (204) 982-7800
Website: http://www.serc.mb.ca/

Women's Health Clinic (*Hosts a Teen Drop-In Clinic for young people between the ages of 13 and 19, where they can access STI testing and treatment, in addition to a number of other sexual health services)*
Tel: (204) 947-1517
Website: http://www.women'shealthclinic.org/

Youville – Community Health Resource Centre – St. Vital *(A nurse provides information on STI testing, treatment, and education)*
Tel: (204) 255-4840
Website: http://www.youville.ca/healthservices/askanurse

5.2 Tuberculosis

Communicable Disease Control (CDC) *(Answers general enquiries on TB)*
Public Health
Manitoba Health
Tel: (204) 788-6737
Website: http://www.gov.mb.ca/health/publichealth/cdc/protocol/tb.html

TB: For Public Health (*Treatment and prevention services*)
TB Public Health switchboard: (204) 940-2274
Website: http://www.wrha.mb.ca/community/publichealth/services-tuberculosis.php

WRHA Integrated Tuberculosis Services (*Organizational structure through which the various key stakeholders manage and deliver TB health services so that clients receive a continuum of preventive and curative services.)*
Website: http://www.wrha.mb.ca/prog/tuberculosis/index.php

8.0 Glossary of Terms and Abbreviations

AIDS: Acquired Immunodeficiency Syndrome that is caused by the Human Immunodeficiency Virus (HIV).

Chlamydia: is an infection due to the bacterium *Chlamydia Trachomatis*.

Co-infection: is when a person is infected with two or more disease-causing organisms at the same time.

Contagious: infectious.

DOTS: Directly Observed Treatment Short-Course.

FSW: female sex worker.

Gonorrhea: is an infection caused by the bacterium *Neisseria Gonorrhoea*.

Harm-reduction: According to the Centre for Addiction and Mental Health, harm-reduction is "any policy or program designed to reduce drug-related harm without requiring the cessation of drug use. Interventions may be targeted at the individual, family, community, or society."

High-risk behaviour: refers to any behaviour that can put someone at risk of contracting a disease (e.g., injection drug use, unprotected sex, binge drinking, etc.).

Human Immunodeficiency Virus (HIV): is a virus that causes Acquired Immunodeficiency Syndrome (AIDS).

Human Papillomavirus (HPV): is a virus that causes genital warts. Some sub-types lead to cervical cancer in women.

Incubation period: is the time elapsed between exposure to the pathogenic organism and when signs and symptoms first appear.

IDUs: injection drug users.

Infectious: transmittable.

Mono-infection: is when a person is infected with one disease-causing organism.

MSM: men who have sex with men.

NACO: National AIDS Control Organization.

Notifiable disease (e.g., TB): means that all private doctors, caregivers, and clinics treating a TB patient are required to report every case of TB to the government immediately.

Opportunistic infection: is an infection caused by a bacterium or virus that normally does not cause disease but becomes harmful when the body's immune system is impaired and unable to fight off infection.

Safe sex: refers to sexual activities that do not involve fluid from one person getting into another person's body. Safe sex activities include hugging, touching, etc.

Safer sex: refers to a range of sexual activities with little risk of HIV infection or STIs. Safer sex means using a barrier such as latex condoms or dental dam, each time you have sex.

Seroprevalence: is the overall occurrence of a disease within a defined population at one time, as measured by blood tests.

Sexually Transmitted Infections (STIs): are infections which are passed from one person to another through sexual contact, including vaginal, anal, and oral sex.

Surveillance: is the systematic collection, analysis, and interpretation of deaths, injuries, and illnesses which enables public health to track and identify any adverse health effects in the community.

Syphilis: is an infection caused by the bacteria, *Treponema Pallidum*.

Tuberculosis (TB): is an infectious disease caused by a bacterium (germ) called *Mycobacterium Tuberculosis.*

Viral load: is the amount of virus that someone has in their blood.

Western Pacific Region (WPR): is one of the six regions of the World Health Organization. There are 37 countries and areas in the Western Pacific Region. China, the Philippines, and Vietnam are included in the WPR.