

**RECOMMENDATIONS TO IMPROVE  
TUBERCULOSIS PREVENTION AND CONTROL  
IN IMMIGRATION AND REFUGEE RESIDENTS**

**A Report of the Immigration and Refugee Working Group  
Of the Tuberculosis (TB) Subcommittee of the Board of Health**

**Rosana Pellizzari,  
Chair, Tuberculosis (TB) Subcommittee**

**May 29, 2003**

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To: Board of Health  
From: Rosana Pellizzari, Chair, TB Sub-Committee  
Subject: Report of the Immigration and Refugee Working Group

Purpose:

To provide the Board of Health with recommendations to improve TB Prevention & Control in immigrant and refugee residents.

Financial Implications and Impact Statement:

There are no financial implications.

Recommendations:

It is recommended that:

- (1) the Board of Health advocate with the Ontario Ministry of Health and Long-Term Care (MOHLTC) and Citizenship and Immigration Canada to implement a national data system shared between federal, provincial and local partners to enable the monitoring of persons on immigration medical surveillance. The database should include the capacity to record results of medical investigations and consultations and should facilitate short term and long term follow-up of persons on immigration medical surveillance as currently recommended in the Canadian Tuberculosis Standards;
- (2) the Board of Health request that Citizenship and Immigration Canada provide provincial Ministries of Health (and through them, local jurisdictions) with annual reports on the outcomes of medical surveillance for the purposes of program planning and prioritization of services;
- (3) the Board of Health request the Canadian Tuberculosis Committee (CTC) extend representation on the Immigration Subcommittee of the CTC to include local public health representatives from urban centres (e.g., Vancouver, Montreal, and Toronto) with significant levels of immigration and active cases of tuberculosis (TB);
- (4) the Board of Health request that the Ontario Minister of Health and Long-term Care report back to the Board on the implementation of the Toronto District Health Council's

(TDHC) recommendations contained in the “Report of the TDHC Tuberculosis Advisory Group: Tuberculosis: Enhancing a Coordinated Continuum of Care (July 2000)”;

- (5) the Board of Health advocate with the MOHLTC to provide dedicated provincial funding for expanding the existing TB clinic capacity in Toronto as recommended by the Toronto District Health Council in it’s report “Tuberculosis: Enhancing a Coordinated Continuum of Care”, July 2000;
- (6) the Board of Health advocate with MOHLTC to provide dedicated provincial funding to Community Health Centres to provide medical assessment of all persons on immigration medical surveillance for TB in Toronto. This would reduce financial barriers to accessing TB-related medical care;
- (7) the Board of Health request the Medical Officer of Health to report back to the board on the feasibility and resource implications of implementing: (1) targeted outreach and TB screening in recent immigrant communities from TB-endemic countries; (2) more comprehensive follow up of persons on medical surveillance for TB as recommended in the Canadian Tuberculosis Standards;
- (8) Toronto Public Health collaborate with Shelter, Housing and Support and other agencies working with refugees to facilitate screening for refugees with symptoms consistent with active TB disease prior to referral to the shelter system;
- (9) Toronto Public Health advocate with MOHLTC to implement the proposed TB-UP program immediately; and
- (10) the appropriate City Officials be authorized and directed to take the necessary action to give effect thereto.

#### Background:

The Government of Canada recently set an immigration target of 1% of the population (about 300,000 people) per year. In 2000, the year of the most current statistics, there were more than 90,000 immigration landings in Toronto (40% of all new immigrants arriving in Canada that year).(1) In 2001, Toronto Public Health had 369 new cases of TB. This represented 22% of all Canadian cases in 2001. Some 87% of the Toronto cases occurred in persons who were born outside of Canada (2) (See Fig.1).

#### Comments:

Tuberculosis – A Global Problem:

In 1993, the World Health Organization declared TB to be a “global emergency”. Approximately one-third of the World’s population is infected with Mycobacterium tuberculosis. Each year

there are more than 8 million new cases and 2 million deaths.(3) The developing world is the worst affected. The Tuberculosis in Canada (2000) report identified that the proportion of TB cases in Canada occurring among the foreign-born increased from 18% in 1970 to 65% in 2000.(4)

The Stop TB Partnership, based at the World Health Organization, has set as its target, the reduction of TB by 50% by the year 2010. Stop TB Canada, inaugurated in February of 2001, participates in strategies which support a worldwide effort to provide funding and technical support to developing countries in their fight against TB. As long as TB continues to be prevalent in developing countries, it will continue to pose a challenge to low-incidence countries like Canada. The control of TB in Toronto requires a global perspective with an ongoing commitment to assist countries where TB is endemic to fight both poverty and this disease.

In 2001, worldwide, less than 30% of patients with active TB received effective diagnosis, treatment and monitoring.(5) Rapid expansion of effective TB Control is urgently required to avert the continued high burden of morbidity and mortality for TB in low-income nations, especially in countries with a high prevalence of HIV infection. The World Health Organization (WHO) recommends Directly Observed Treatment, Short-course (DOTS) as the most effective treatment strategy available for controlling TB. Its five critical elements are:

- (i) Government commitment to sustained TB control.
- (ii) Detection of infectious cases using sputum-smear microscopy.
- (iii) Standardized, short-course chemotherapy of 6 to 8 months with direct observation of treatment.
- (iv) Reliable supply of high quality drugs.
- (v) Information systems for monitoring and recording of treatment outcomes.

#### Multi-Drug Resistant Tuberculosis:

Although TB is an infectious disease that is preventable, treatable and curable, the emergence of drug resistant strains poses a challenge to everyone involved in TB care. In fact, multi-drug resistant TB (MDR-TB) (TB that is resistant to the 2 most effective anti-tuberculosis drugs) could set the world back 50 years to the preantibiotic era. The cost of treating a case of MDR-TB is much greater than the cost of treating a case of fully sensitive TB. For example, in New York City it has been estimated that the cost of treating each case of fully sensitive TB is about \$25,000 US while the cost of treating an MDR-TB case is about \$250,000 – 375,000 US.(6)

People with MDR-TB pose a risk to the community while they are infectious and they will remain infectious for much longer than someone whose TB is sensitive to all drugs. Because of this, prolonged hospitalization is usually required. Patients with MDR-TB also require daily treatment for a minimum of 2 years with special medication (2<sup>nd</sup> line drugs). These drugs are very costly and can be highly toxic to the patient.

Toronto has a rate of drug resistant TB that is twice the Canadian average and rate of MDR-TB that is 2 – 3 times higher than the Canadian average. A review of the 54 cases of MDR-TB that

have occurred in Toronto between 1995 - 2002 indicates that all but one of these cases occurred in persons who were foreign born.(7)

#### The Immigration Process & Medical Follow-up:

A medical examination in the country of origin is part of the process of admission to Canada.(8) (See Appendix A.) A chest x-ray is a mandatory part of this examination for potential immigrants who are 11 years of age or over. If the results of the x-ray indicate active TB the person must complete a course of TB treatment prior to entry into Canada. However, if the x-ray does not indicate active TB disease, but an abnormality consistent with latent TB infection or previous TB disease, the person is placed on medical surveillance. (Immigrants may arrive with Chest X-rays that were done up to 12 months prior to departure.) Upon arrival in Canada, the province of destination is notified of the person's surveillance status. The expectation is that persons on medical surveillance will be medically assessed for active TB disease and receive appropriate follow-up medical care once in Canada. The Canadian Tuberculosis Standards (CTS) recommends that: "all individuals referred for medical surveillance should receive at least one complete medical evaluation by, or together with, a physician experienced in the diagnosis and management of TB".(9) The CTS also recommends that persons continue to be followed for 3 – 5 years depending on their risk of relapse or reactivation of latent TB infection.

The goal of the immigration medical surveillance system is to flag, for comprehensive medical follow-up, recent immigrants with chest x-ray findings indicating latent TB infection or medical histories suggestive of previous TB disease. Such persons are at increased risk of developing active TB disease in the future. Medical assessment to rule out active TB disease and timely treatment of their latent TB infection reduces their risk of subsequently developing active TB disease.

Medical surveillance for TB represents an opportunity to prevent future cases of the disease. It has been shown that 50% of immigrants and refugees who develop active disease do so within 5 years of arrival. Targeted interventions during this 5-year time period should be an effective way to prevent active disease in new immigrants and protect public safety.

#### Medical Surveillance of Immigrants in Toronto:

In 2002, Toronto received 3400 referrals from Citizenship and Immigration Canada (CIC)(10) for medical surveillance. The follow-up of immigrants arriving in Toronto on medical surveillance therefore consumes extensive resources.

Toronto Public Health receives inadequate notification from Citizenship and Immigration Canada about who or how many newcomers to expect. Although Toronto Public Health staff attempt to call back, within 24 hours, all newcomers who self-report for surveillance, the reality is that this preliminary contact may take several days. Because of lack of health insurance, cultural and linguistic barriers and unfamiliarity with the city, referral and follow-up may take several weeks. In addition, arranging for prompt medical care for newcomers in need of medical surveillance who lack OHIP coverage, drains a lot of time and effort. Staff must find and

negotiate with physicians and clinics to obtain timely appointments for persons who are unable to pay for health services.

Currently, immigrants arriving in Toronto who self-report for medical surveillance are being interviewed over the telephone, with interpreters, if necessary, to triage persons who have symptoms of active TB requiring immediate assessment. Those who do not have any symptoms of TB are deemed to be at low risk and are told they can wait three months until they are eligible for OHIP coverage before having a medical assessment. (See Appendix B.)

There is no integrated system for the tracking or follow-up of people on medical surveillance. Citizenship and Immigration Canada have a database, which is designed to collect comprehensive information for all applicants. The information contained in this database is not available to provincial or municipal health authorities. There are no immediate consequences for failure to report to a local health unit within the stipulated 30 days. In fact, newcomers who fear deportation or the costs associated with obtaining a health assessment, may delay or even fail to comply with medical surveillance. Such individuals may not come to the attention of the health care system until they apply for Canadian citizenship. If they develop active pulmonary tuberculosis in the interim, they may already have infected many others.

Feedback of information to those with a need to know (users of the system data) is an important part of a surveillance system. Currently, there is no reporting to provincial or local health authorities on the effectiveness or outcomes of medical surveillance. The number of people placed on medical surveillance each year, where within Canada they go, how many develop active disease and within what time frame; none of these important facts are published. It is not possible for health units to plan an effective intervention in the area of medical surveillance when so many key factors are unknown to them.

#### Challenges of Identification of Latent Tuberculosis Infection:

The majority of people with TB cannot be identified through history, physical examination or chest x-ray. These people have relatively few TB bacteria lying in a dormant state in their bodies. An intact immune system will keep the dormant bacteria from growing and spreading. This condition is termed "latent TB infection (LTBI)".(11) In 1990 an estimated 1.7 billion people, one third of the World's population, had LTBI (12). Many reside in countries from which Canada receives new immigrants.(13) About 1 in 10 of these latently infected people will develop active TB disease over their lifetime.(14) Preventive treatment of LTBI dramatically protects against the reactivation of dormant TB.(15)

Identification of LTBI requires tuberculin skin testing of persons at risk.(16) However, skin testing is not currently part of Canada's immigration medical requirements. Children from TB endemic countries are also at higher risk for developing active disease and should be screened with the tuberculin skin test.(17)

Strategies are urgently needed to enhance screening of new immigrants at risk for LTBI and to ensure successful treatment of those with positive skin tests. In the long term such measures may play an essential part in controlling tuberculosis in Toronto.

## Tuberculosis in Refugee Claimants:

Persons who make a refugee claim at one of the Canadian borders or entry points are issued a document, "IMM 1442", which grants them access to the Interim Federal Health Benefits program for 12 months. The IFHB covers only essential and emergency medical services. However, the program also covers the immigration-related medical examination and any diagnostic testing deemed necessary. In Canada, only physicians designated by CIC can do these examinations. Claimants are instructed to complete their examination within 60 days of making their refugee claim. However, the proportion of claimants not adhering to this timeline has become a concern. A recent pilot project in Quebec where a multifaceted strategy was employed, including giving printed instructions in multiple languages, resulted in medical examinations being conducted within 7 working days in the majority of cases.(18)

Unlike immigrants, refugee claimants usually enter Canada without any prior medical assessment. In addition, refugees often lack financial resources and social supports and, as a consequence, may end up staying in the city's shelter system upon arrival in Toronto. According to shelter staff, Toronto currently has about 450 refugee claimants staying in shelters at any one time. Although shelters currently provide necessary housing for homeless persons, there is the potential for TB transmission in these settings, especially in the winter when shelters are likely to be more crowded and when ventilation from the outside may be diminished. When refugees enter one of the city's shelters with symptoms of active respiratory TB disease there is the potential for transmission of TB infection to other shelter residents – persons who, if infected with TB, are at heightened risk of progression to active TB disease.

## Evaluating Effectiveness in Tuberculosis Prevention:

Tuberculosis in the foreign born in New York City has been attributed largely to the importation of LTBI with subsequent progression to active TB disease.(19) Screening for, and treating LTBI in adult immigrants from high incidence countries has been identified as a critical and cost-saving strategy to prevent TB disease in the United States of America.(20)

The effectiveness of the immigration medical surveillance program that existed in Ontario in 1994-1995 was evaluated.(21) These investigators found the program was not effective in identifying the majority of immigrants who later developed active TB disease, nor did it appear to facilitate persons with latent TB infection getting preventive treatment.

This same study identified that, in Ontario in 1994-1995, approximately 81% of active TB cases were in foreign-born persons. Of these foreign-born persons, only about 15% had been placed on immigration medical surveillance (i.e., 86% of the active TB cases that occurred in foreign-born persons were in persons NOT identified as needing immigration medical surveillance). Of persons placed on immigration medical surveillance, only about 20% complied with the required medical assessment (and only half of these persons complied within the required 30 days of arrival). Of the persons complying with immigration medical surveillance, 24% were found to have active TB disease at the time of first assessment. Of the remaining persons, only 6% began treatment for latent TB infection. Citizenship and Immigration Canada have made

improvements to the Immigration Medical Surveillance system since the years covered in this study; however, the current performance of the system has not been evaluated

#### What Toronto Needs to Prevent and Control Tuberculosis:

In 2000, The Toronto District Health Council (TDHC) produced a comprehensive report on the needs for TB Prevention and Control in Toronto.<sup>(22)</sup> In particular, with respect to immigrants and refugee groups, the report recommended that Toronto needed a minimum of 6 dedicated TB Clinics. The TDHC identified Scarborough and North-West Etobicoke as areas of the city where services are badly needed. (See map of Recent Immigrants attached as Appendix C.) Dedicated TB clinics make sense for several reasons: referral is facilitated; the expertise of health care providers with broad experience in TB improves diagnosis and treatment of active disease; testing and follow-up is efficient and can often be organized for the same day; follow-up and compliance can be improved; co-ordination of care is facilitated; information sharing and good communication is much easier to achieve and the facility can be made safe for providers and patients alike by features such as negative pressure ventilation.

In Toronto there are currently four TB Clinic locations. These translate into approximately 25 hours per week of access for adults and 7.5 hours per week for children. Figure 2 identifies current TB clinic locations in Toronto. Appendix D shows the location of these clinics & hours of operation.

Funding for TB services for the uninsured (out-patient services only) was announced by the provincial government in the Throne Speech in 2000. This fund was to be available to pay for medical services for uninsured newcomers who are at high risk for TB, have active TB, or who are contacts of a known case of active TB while they are in the 3-month waiting period for Ontario Health Insurance Program (OHIP) coverage. The program (TB-UP) has been in development but an implementation date has not yet been announced. Health units will be expected to act as brokers, registering patients and then facilitating access to billing for service providers.

In order to optimize adherence to the recommended medical surveillance of newcomers to Canada, Toronto needs, as a world class city facing a world class killer like Tuberculosis, an integrated network of TB clinics providing front line care to newcomers and the uninsured. Such an integrated network should include key front line care providers. Community Health Centres who provide primary care to significant numbers of immigrants and refugees could be key partners in a TB network.

The Working Group has considered three options and recommends options 2 & 3, (as option 1 is not seen as adequate response to managing TB in Toronto).

- (1) Status Quo: This option would maintain the current number of TB clinics. Public Health will continue its liaison with the hospital-based clinics. Hours of operation may be insufficient to meet the growing demand for services.

- (2) Expansion of TB Clinics: The report by the Toronto District Health Council recommended an expansion of clinics to improve capacity for early identification and intervention and also to enhance access for persons living in the west and east ends of the city. This recommendation is particularly relevant with the immigrant settlement patterns in Toronto. (see Appendix C) Also, hospitals in the East and West parts of the city are seeing significant numbers of patients with TB. A Toronto TB Network would be useful to the patient, to the hospitals and to those responsible for surveillance. It is acknowledged that there will be some costs involved with the establishment of these clinics in the hospitals. Costs for physician services however would be an OHIP payment or potentially covered under the TB-Up program funding.
- (3) Expansion of the role the of CHCs: Community Health Centres in Toronto play a key role in providing health care to high risk populations, and also to many new immigrants. CHCs are well positioned to play a more formalized role in the identification and management of clients with TB. (see Figure 3) A system whereby CHCs were linked with a specific TB clinic in their area would be optimal. Public health TB case managers would play an integrative role in the management of these patients across hospital and community settings. In such a model, TB care would be coordinated, efficient and cost-effective.

#### Conclusions:

Toronto is an international city. TB is not “over there”. It is here. The good news is that TB is treatable, curable and preventable. However, to do so requires the right tools, policies and resources to ensure that the problem of TB is kept under control in our city. Commitment to excellence and the capacity to explore new and innovative strategies are key ingredients that will help us achieve that goal.

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List of Attachments:

- Figure 1: Origin of TB Cases in Toronto, 2001
- Figure 2: Hospitals with TB Clinics in Toronto, April 2003
- Figure 3: Community Health Centres in Toronto, 2002
- Appendix A: Medical Surveillance Summary
- Appendix B: Medical Surveillance Flow Chart
- Appendix C: Proportion of Recent Immigrants in Toronto, 2001
- Appendix D: TB Clinics – Hours/Days of Operation

## REFERENCES

1. Source: Citizenship and Immigration Data; Immigration and Settlement Unit, Ontario Ministry of Citizenship; Prepared by: Health Planning, Toronto Public Health/June 6, 2001.
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Figure 1

Origin of TB Cases in Toronto, 2001

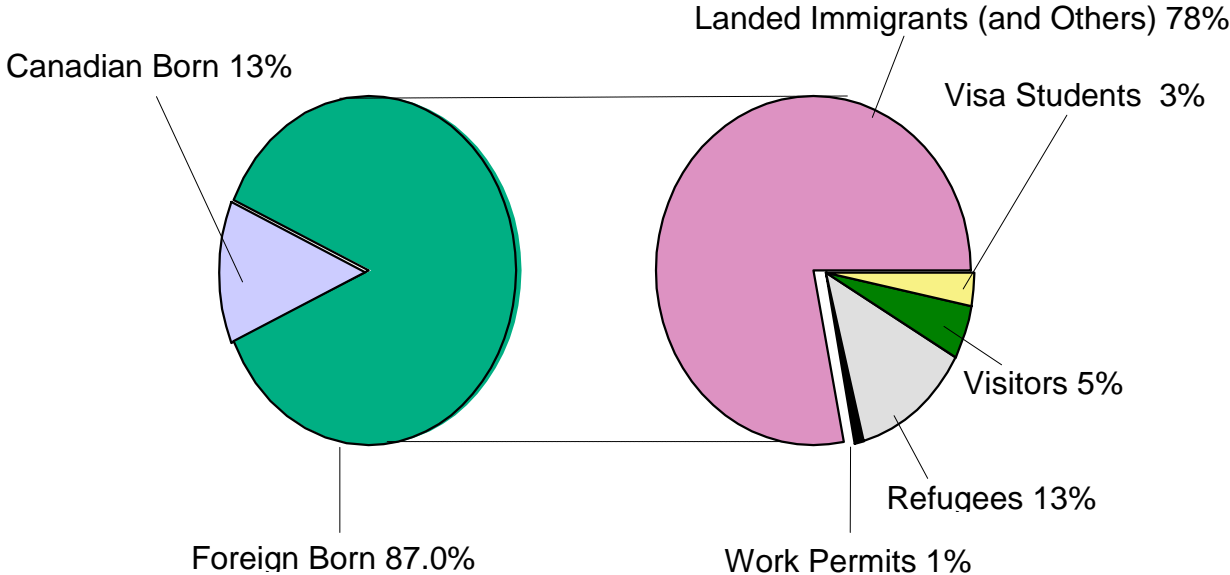


Figure 2

**Hospitals with TB Clinics  
in Toronto, April 2003**

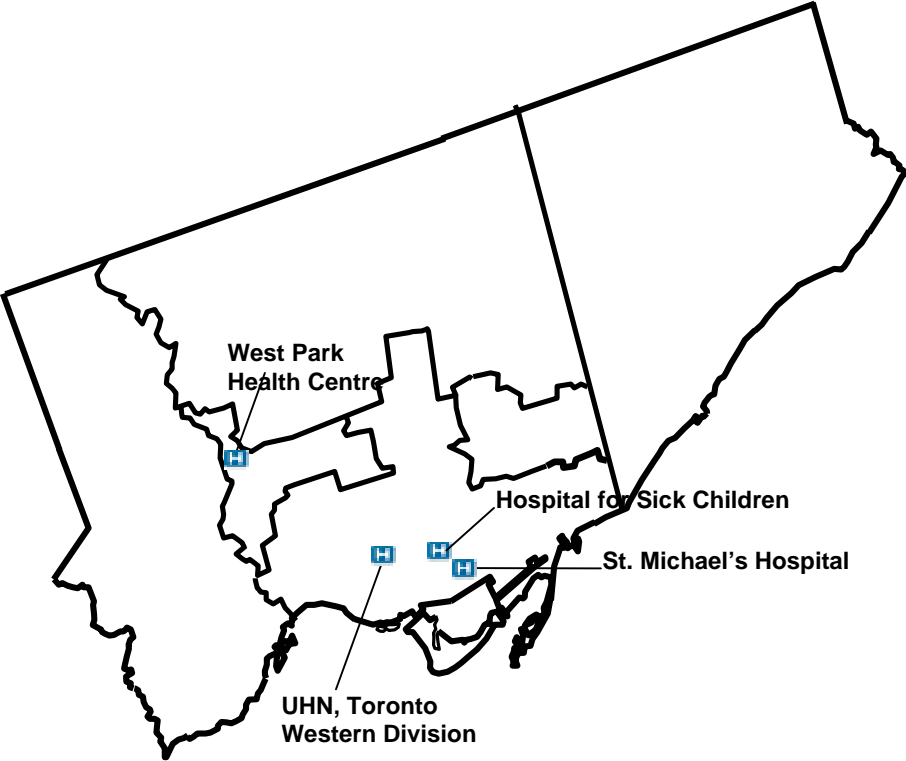
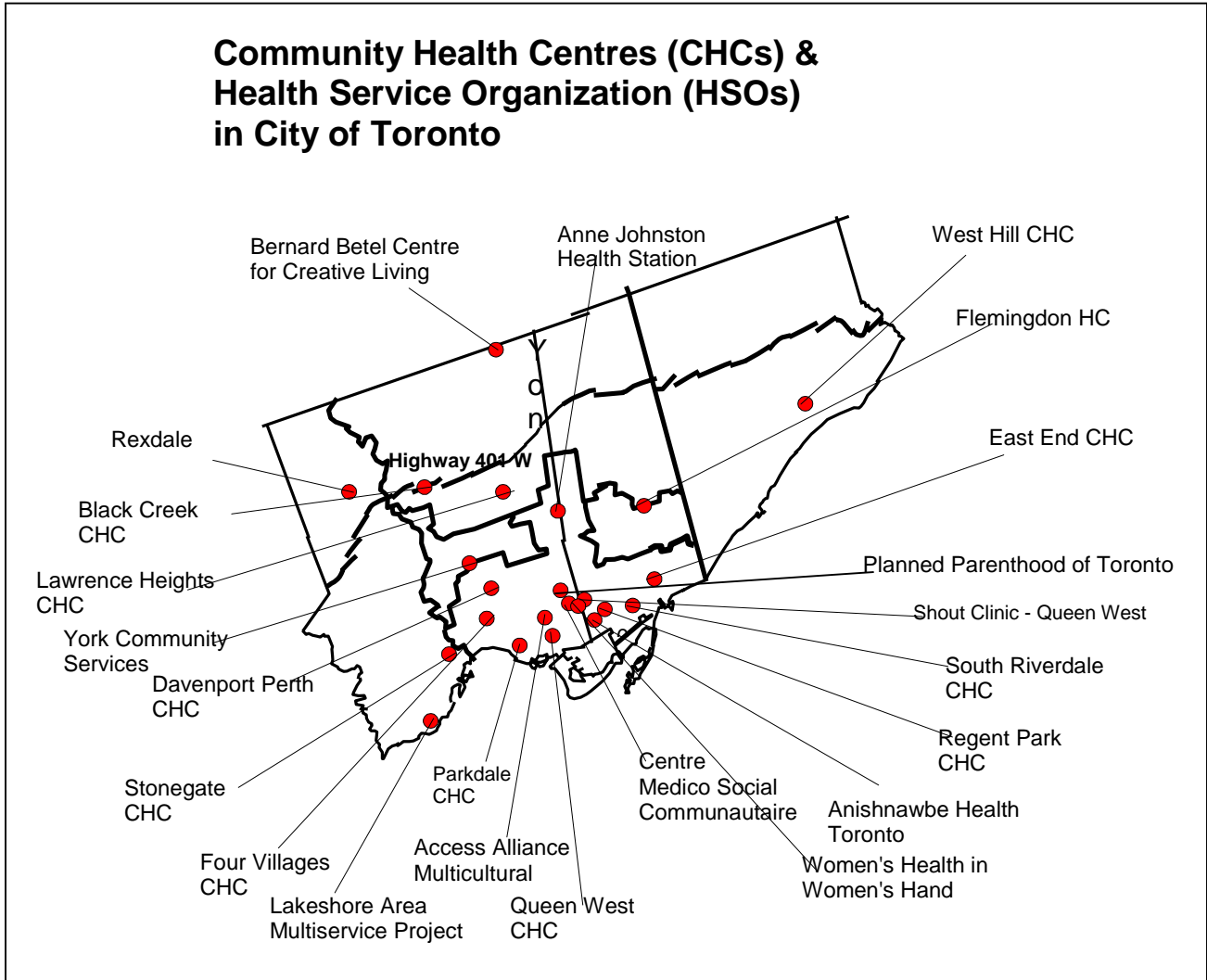


Figure 3

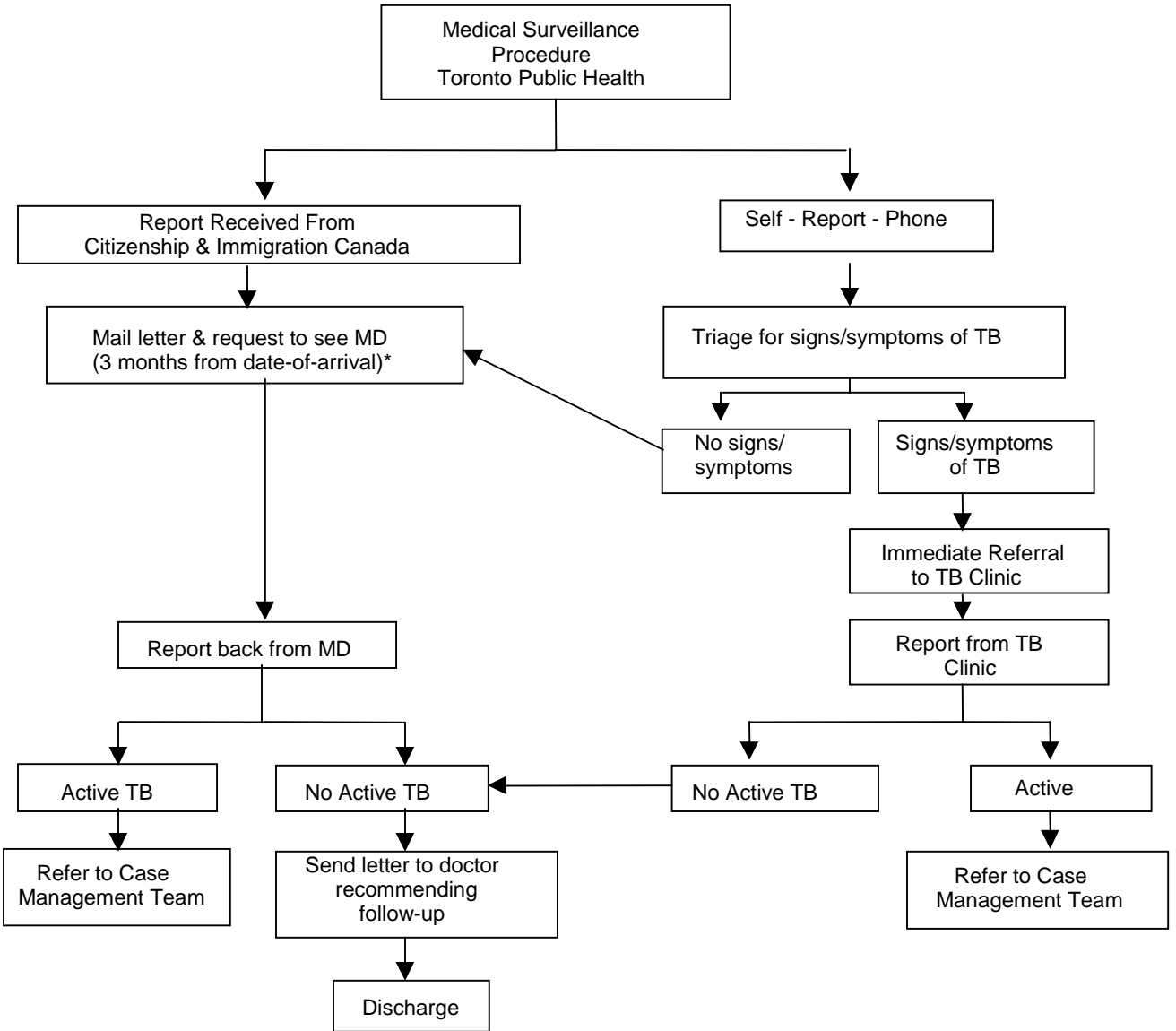


## Appendix A

### MEDICAL SURVEILLANCE

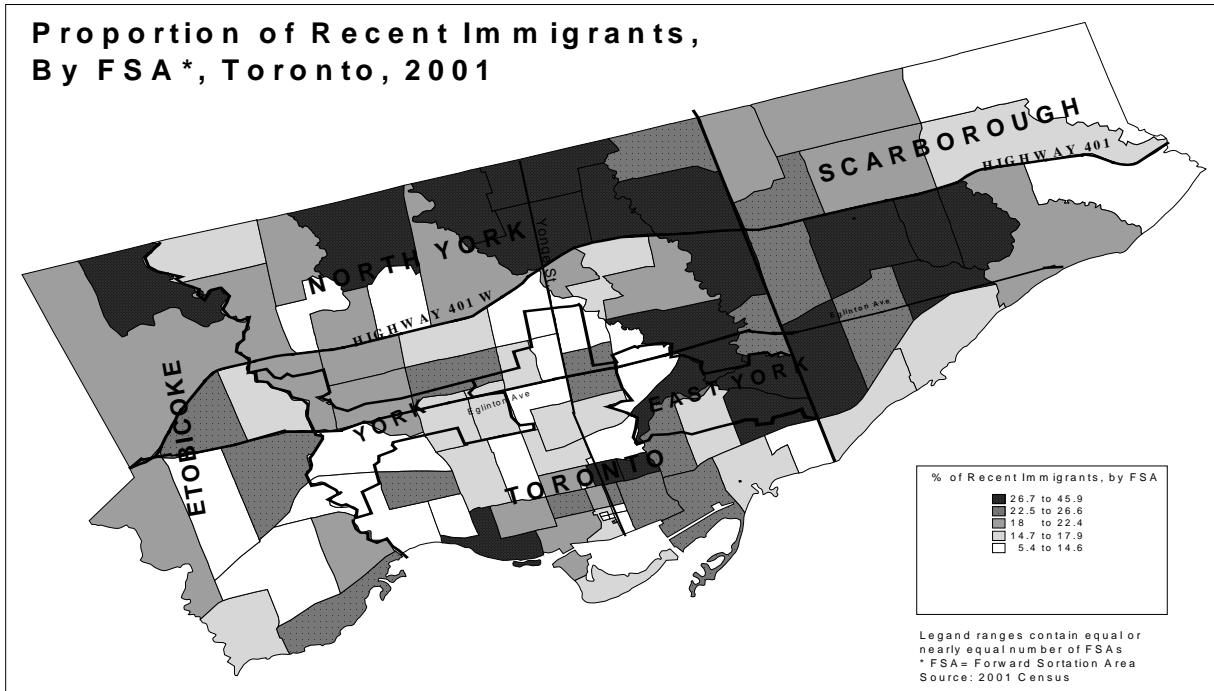
1. All immigrants, refugees and some visitors must have an immigration medical examination. Applicants 11 years and older must also undergo a chest x-ray.
2. Applicants who apply from outside of Canada must have the immigration medical examination within 12 months of arrival.
3. If an applicant, from outside of Canada, is determined to have active TB they are not permitted to enter Canada until they have received a full course of treatment.
4. Applicants who are identified with inactive TB on x-ray or who present with a past history of active TB or a positive TB skin test, regardless of whether they are applying from within Canada or from abroad, are placed under medical surveillance.
5. Applicants who arrive from abroad must sign a medical surveillance undertaking at the port of entry. As a condition of the medical surveillance undertaking they must report to the local public health unit within 30 days arrival.
6. A copy of the medical surveillance undertaking is forwarded to Citizenship and Immigration (CIC) in Ottawa.
7. CIC forwards a notification of medical surveillance to the appropriate province or territory for follow-up as determined by the local public health authority.

## Appendix B



## Appendix C

**Proportion of Recent Immigrants,  
By FSA\*, Toronto, 2001**



## Appendix D

<b>TORONTO TB CLINICS</b>				
<b>Name of Hospital</b>	<b>Phone No.</b>	<b>Days Clinic Operate</b>	<b>Hours of Operation</b>	<b>Number of Visits per Clinic – 2002</b>
Toronto Western Hospital TB Clinic	416-603-5853	Tuesday Thursday	8:30 a.m.– 12:00 Noon	879
Hospital for Sick Kids TB Clinic	416-813-6609	Wednesday Thursday	10:00 a.m. – 1:00 p.m.	437
St. Michael's Hospital TB Clinic	416-864-6060 x 132	Monday Friday	8:15 a.m. – Noon	1,563
West Park Healthcare Centre TB Clinic	416-243-3600 x 2180	Monday Tuesday	1:00 p.m. – 4:30 p.m.	1,597
			<b>31.5 Total Clinic Hours</b>	<b>Total Visits 4,476</b>