

Diagnosis and treatment of tuberculosis in undocumented migrants in low- or intermediate-incidence countries

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SUMMARY

SETTING: Countries with low or intermediate tuberculosis (TB) incidence.

OBJECTIVES: 1) To gather information on individuals and TB patients who are undocumented migrants and their access to TB diagnostic and treatment services; 2) to discuss interventions to strengthen diagnosis and treatment and 3) to formulate recommendations on how to ensure adequate TB prevention and control.

DESIGN: Questionnaires sent to members of the Working Group (WG) on Transborder Migration and TB, managers of national TB programmes and EuroTB correspondents; literature research and development of a paper by a writing committee through consultation.

RESULTS: Undocumented migrants represent 5–30% of immigrants and 5–10% of TB cases. Most countries reported full access to diagnosis and treatment, but in practice there were limitations. Most countries also reported that they could and did deport cases who were on

TB treatment. A variety of activities to ensure access were reported from different countries.

CONCLUSION: The WG recommends that 1) health authorities and/or health staff should ensure easy access to low-threshold facilities where undocumented migrants who are TB suspects can be diagnosed and treated without giving their names and without fear of being reported to the police or migration officials. Health authorities should remind health staff that they have an obligation of confidentiality; 2) each country should ensure that undocumented migrants with TB are not deported until completion of treatment; and 3) authorities and non-governmental sectors should raise awareness among undocumented migrants about TB, emphasising that diagnosis and treatment should be free of charge and wholly independent of migratory status.

KEY WORDS: tuberculosis; illegal migrants; recommendations

MIGRATION has occurred throughout history. Most of the world's immigrants (in this paper defined as foreign-born) live in Europe (64 million), followed by Asia (53 million) and Northern America (45 million), while 4 million live in Australia.¹ In several countries with low tuberculosis (TB) incidence, the number of TB cases among persons born in the country of reporting has declined, while the number of cases in immigrants has stabilised or increased. The proportion of TB cases in immigrants (in some countries data are provided on persons with foreign citizenship) has consequently increased, and is over 50% in several countries.^{2,3} Immigrants have a higher risk of TB than nationals. This risk is especially high in immigrants from countries with a high prevalence of TB and who have

recently settled in the host country.⁴⁻⁶ This increased risk of TB in immigrants is mainly due to the higher risk of exposure in their countries of origin. Other factors may impact on the higher risk of TB in immigrants, such as the conditions of migration⁷ and the living conditions in the host country. A high prevalence of human immunodeficiency virus (HIV) infection in some countries of origin increases the risk of TB.⁸ Immigrants are more likely to have drug-resistant TB,² owing mainly to their origin from areas with a high prevalence of drug-resistant TB. However, they seem less likely to have pulmonary TB.⁹⁻¹¹ Immigrants are a heterogeneous group composed of people whose origins, reasons for migration and legal and economic status vary.

Undocumented migrants are a group about which little is known regarding demography and TB epidemiology. A few countries, however, record the patient's legal status. For example, in the Netherlands, in 2002

Report and recommendations from the Working Group on Transborder Migration and TB of the Tuberculosis Section of the International Union Against Tuberculosis and Lung Disease.

and 2003, 7% of TB patients were reported to be undocumented migrants.¹² The risk of TB may be higher in undocumented migrants than in other migrants, as their entry and TB infection is often more recent and their migration and living conditions worse.

Undocumented migrants and TB control

Early diagnosis and adequate treatment of TB for undocumented migrants is important for the following reasons:

- TB is not restrained by borders.
- Health staff have an ethical and humanitarian obligation to provide diagnosis and treatment for sick individuals, regardless of their legal status.
- Early diagnosis and adequate treatment of all TB patients, wherever they occur, is the core strategy of global TB control, aiming at breaking the chain of transmission.
- Irregular and/or inadequate treatment in the country where the immigrant has arrived may lead to anti-tuberculosis drug resistance, prolong the period of infectiousness and increase the pool of resistant TB cases.
- Patients deported while on treatment may acquire drug-resistant TB due to non-adherence to treatment, spread the infection further after they have been deported and later import the infection back to the country from which the migrant was deported.

The Global Plan to Stop TB 2006–2015¹³ aims at reaching the Millennium Development Goals through the new Stop TB Strategy, which refers to immigrants as a group in need of special attention.^{14,15} The recently described extensively drug-resistant (XDR) TB has further emphasised the need to ensure proper diagnosis and treatment of all TB patients to prevent the development of TB drug resistance.^{16–19}

Task forces set up in Europe by the World Health Organization (WHO), the International Union Against Tuberculosis and Lung Disease (The Union) and partners, have developed recommendations for TB prevention and control among immigrants: guidelines on TB control and international migration in 1994,²⁰ guidelines for TB management in 1999,²¹ and the 'European framework for TB Control and Elimination in Countries with a Low Incidence' in 2002.²² These recommendations also addressed TB in undocumented migrants, including the need to find ways for entitlement to treatment without fear of persecution and free access to diagnostic and treatment services for all patients.

Several countries with a low prevalence of TB have recently introduced, or will introduce, stricter border controls on entry, including the deportation of undocumented immigrants as soon as they are identified.^{23,24} This may result in adverse effects on TB control by reducing dialogue and trust between patients and health staff; such fear may discourage patients

from presenting to health authorities at an early stage.²⁵ It may also lead to an increase in treatment interruption and thus increase transmission of TB and the development of resistant TB. In some countries and settings, different policies and practices have been established to reduce barriers to early diagnosis and treatment in this group. This has been done in a way that is acceptable to migration authorities as well as to health staff and patients.^{26–28}

The objectives of this study were 1) to gather information on the number of individuals and TB patients in settings with low or intermediate TB incidence who are undocumented migrants and their access to TB diagnostic and treatment services; 2) to discuss interventions that have been implemented in various countries to strengthen diagnosis and treatment; and 3) to formulate recommendations on how to ensure adequate TB prevention and control in this group.

METHODS

A symposium on 'TB in mobile populations and persons with undocumented residence status' was held during the 35th Union World Conference on Lung Health in Paris in 2004 to exchange experience and viewpoints of TB experts working in countries where TB is reported in undocumented migrants. In preparation for this symposium, a questionnaire (containing the first four questions in Table 1) was sent to countries whose representatives were participating in the Working Group (WG) on Transborder Migration and TB of the TB Section of The Union. Replies were received from six countries in Western Europe and the United States, Canada and Australia.

A writing committee was established which sent out a revised questionnaire (Table 1) in January 2007 to all members of the WG, as well as to national TB programme (NTP) managers and correspondents of EuroTB (the TB surveillance network covering the 53 countries of the WHO European Region) in countries with low and intermediate TB incidence (all EU countries were included, even if they had a higher incidence), and to correspondents in Australia, Canada, Japan and the United States.

Table 1 Questions included in the revised questionnaire

- 1 Do you have solid data or estimates of how many of the TB cases in your country are found among those with undocumented residence status? Where do they come from?
- 2 Do you have solid data or estimates of how many persons live in your country with undocumented residence status? Where do they mainly come from?
- 3 To what extent do these persons have access to diagnosis and treatment of TB—legally and in practice?
- 4 Can TB patients be expelled/deported while on treatment—legally and in practice?
- 5 Do you have other information that might be relevant in this respect?

TB = tuberculosis.

The writing committee conducted a literature research using PubMed to identify literature published up to May 2007. The keywords used were TB and undocumented/illegal/alien. References cited in relevant articles were screened for possible inclusion. A recent doctoral thesis on TB and international migration in Western Europe was another key source of references.²⁹ Documents produced by international organisations and articles in the mass media encountered by the writing committee members were also used as references.

Definitions

Although low-incidence countries are usually defined as countries with an incidence of TB below 20 per 100 000 population,²² low and intermediate TB incidence countries in this paper are defined as countries with fewer than 50 TB cases/100 000, according to WHO 2005 estimates, which includes all Western and most Central European countries (including 22 of the 27 EU countries), USA, Canada, Australia, New Zealand, Japan, Singapore and Israel.³⁰

We defined immigrants according to United Nations recommendations³¹ as 'persons who change their country of usual residence. A person's country of usual residence is that in which the person lives, that is to say, the country in which the person has a place to live where he or she normally spends the daily period of rest'.

Different terminologies are used to describe undocumented migrants: illegal immigrants, undocumented immigrants, illegal aliens and illegal resident population. In this paper, 'undocumented migrants' is used to describe migrants who are in an irregular situation regarding their residence status. This term describes two groups: 1) persons who entered the country legally, but subsequently fell into illegal status because their permit expired ('overstayed' or because they received a negative decision on their application for asylum); or 2) persons who entered a country illegally, having no residence permit and who remained illegally in the country.

RESULTS

Completed questionnaires were received from 24 of 40 (60%) countries contacted in the WHO European Region and from all four countries contacted outside the region (Australia, Canada, Japan and USA). Most of the 28 respondents were from the institution responsible for TB surveillance in the country (Tables 2 and 3). Additional information found from literature research conducted through PubMed and other public sources is provided for the references in Table 2.

The number of undocumented migrants

Nineteen of the 28 (68%) respondents provided data. Seventeen provided information on the number of un-

documented immigrants at a certain point in time, while two respondents (Austria and Estonia) gave the number of entries during a specific year. The figures for undocumented migrants in Table 2 are based on various sources, including national population censuses and ad hoc surveys, or are based on amnesty campaigns.

The United States had the largest absolute number of undocumented immigrants, estimated at 10.3 million in 2005³⁹ and 11.6 million in January 2006,⁴⁰ representing about 30% of its total foreign-born population. Approximately 500 000 undocumented migrants arrived in the US annually.⁴⁰ In Europe, there were an estimated 5–8 million undocumented migrants, most of them in Western and Southern Europe.^{41,42} Respondents gave estimates of over 100 000 undocumented migrants for Italy, France, the Czech Republic, the Netherlands, Switzerland, Germany and Japan.

The number of TB patients among undocumented migrants

Respondents provided data for 17 countries: reported data in eight countries, estimates in five countries (Austria, Italy, Israel, Romania and Japan), surveys from previous years in three countries (Germany, The Netherlands and Switzerland) and local data from Canada.

TB in undocumented migrants was estimated to represent 5% of all TB cases in Belgium, 7% in the Netherlands and >10% in Austria. Some countries in Southern Europe reported higher numbers or estimates: Malta 90% and Italy 12–25%. Spain estimated the number as much lower, as there have been changes in immigrant status in recent years due to several amnesty campaigns.

Access to TB diagnostic and treatment services

Most of the 28 respondents indicated full access to services. As the question was open-ended, most answers could not be aggregated; specific responses are provided in Table 4. Some qualified their responses to indicate that access was available mainly for diagnosis, and others did not specify whether access was available for diagnosis or treatment. Some responses included the following statements: 'In theory no, but in practice yes' (France), 'Theoretically free of charge' (Italy), 'Yes, but with a threshold for access to diagnosis' (Netherlands), 'More difficult access' (Switzerland), 'No access to diagnosis or treatment. In practice many will be treated' (United Kingdom), 'Limited access because of anticipated cost. Cost of treatment is covered by government' (Japan).

Risk of being deported during diagnosis or treatment

As the question about the risk of being deported during diagnosis or treatment was also open-ended, responses

Table 2 Undocumented migrants: total number and tuberculosis cases (data provided by respondents unless otherwise stated)

Country	Population of undocumented migrants (year)	Reference	TB cases among undocumented migrants	Reference
Albania	No data provided		Few	
Australia	Very few; fishermen		Very few	
Austria	39 450 entered illegally in 2006		>10% of 981 cases in 2005	
Belgium	80 000–120 000 (50 000 in Brussels)		5% (53 in 2003 = 5%, 76 in 2004 = 6%, 42 in 2005 = 4%)	
Canada	50 000 point prevalence (estimated by Immigration Canada)		Few cases: 1–2% of the TB cases in Montreal	
Czech Republic	27 391 officially in 2004, estimated 100 000–250 000*	www.migraceonline.cz	13 cases in 2006 in those screened for TB in alien detention centres	
Denmark	Probably not a lot		Very few, if any	
Estonia	100 per year		Three cases 1997–2006	
France	>150 000 (1997)	32	No data	
Germany	No exact data available; estimates range from 100 000 to 1 000 000	33	2% of all cases (5% of foreign-born), according to a multi-centre study covering 15% of cases in Germany in 2001–2003	34
Greece	No exact data		No exact data	
Israel	Estimated 70 000		7–10%	
Italy	>500 000		500–1000? (12–25% of cases?)	
Japan	193 745 (beginning of 2006) 250 000	35	Could be estimated at more than 200 per year†	
Latvia	No data		None 2000–2006	
Malta	2004: 1388 2005: 1861 2006: 1780		43 cases 2002–2006 (total 48 TB cases notified 2002–2006; this means 90% of TB patients are undocumented)	
Montenegro	No data		1 case in 2005 (from Romania)	
Netherlands	100 000–140 000		7% of all TB cases in 2002 and 2003	12
Norway	5000–15 000	‡	Very few	
Poland	No data		20	
Portugal	No data		No data	
Romania	No data		No data (less than 10 of all TB cases are foreign-born)	
Slovakia	(10 000–50 000 Roma people)		11 in 2006	
Spain	800 000 (2005). The number now is probably quite low	36	Unknown, probably high incidence	
Sweden	At least 8000 (2005)	‡	No data	
Switzerland	120 000 (50 000–300 000), 10 000–20 000 in Geneva	37	National data: 11/629 (1.7%) in 2000; Geneva: 12/160 (7.5%) in 2000	
United Kingdom	310 000–570 000	38		
United States	~500 000 (per year)		No data	

* Official data from the Ministry of the Interior of the Czech Republic Alien and Border Police Service.

† Personal communication, Ikushi Onozaki and Hitoshi Hoshino.

‡ Norwegian newspaper *Dagens næringsliv* Aug 19–20, 2006, giving as source the research foundation Fafo, referring to persons who left reception centres for asylum seekers without giving a new address in the previous 5.5 years.

TB = tuberculosis.

could not be aggregated and are specified in Table 4. TB patients can legally be deported, and are deported while on treatment, in 18 of the 23 countries that provided a clear answer, while two countries in practice deport patients, although legally they are not supposed to. Three countries state that they do not deport TB patients.

Interventions in different countries

Several respondents described country-specific interventions to ensure early diagnosis and successful treatment in undocumented migrants, as listed in Table 3.

DISCUSSION

The number of undocumented migrants reported by the participating countries seems to be consistent with other sources.^{43,44} The data provided do not show consistency in the extent of undocumented migration across countries, ranging from an estimated 5% to 30% of the total immigrant population. The data source was often not given by the respondents, as in most cases it was based on estimates. Stricter border controls, for example through the Schengen Agreement,* more

* http://en.wikipedia.org/wiki/Schengen_Agreement.

Table 3 Examples of interventions to ensure early diagnosis and successful treatment in undocumented migrants

- The authorities provide free medical examination and treatment, even if the person does not have social security in Belgium; in Canada, as soon as they are refugee claimants; in Israel and Spain, a health card is provided if the migrant is registered in municipal census as living with a friend
- Free TB treatment is provided by district centres for tuberculosis control (France)
- Authorities ensure that TB patients will not be deported until treatment has been completed (Netherlands, Norway)
- Authorities ensure that TB patients among asylum seekers stay in the asylum process until treatment completion. The asylum process guarantees basic health care, including any costs related to TB. However, there is no provision for undocumented migrants (Switzerland)
- Authorities legalise undocumented migrants through massive amnesties (Spain)
- Local authorities employ 'health agents' as cultural messengers and go-betweens (Barcelona, Spain)
- The authorities provide tuberculosis screening, case detection and treatment in migrants detained pending deportation (United States, Australia)
- TB patients are deported, but only after arranging a referral and reception in another country (United States, Australia)
- Deportation of contagious patients is usually delayed until the patient has a negative smear and is determined to be non-contagious (United States, Australia, Japan)

TB = tuberculosis.

rejection of asylum requests and the widening of socio-economic differences globally may lead to an increase in the number of undocumented migrants, although currently available data do not document this.⁴⁴

The number of TB cases among all immigrants is well documented. In 2005, 93 129 TB cases were reported in Western Europe and EU countries: 71 492 (77%) were native/national citizens, 18 475 (20%) foreign-born citizens and 3162 (3%) with unknown status.² In the US, 7693 of 14 097 (55%) TB cases in 2005 were among foreign-born individuals.³ Although notification of TB is mandatory in most countries, and information on origin (based on birth or citizenship) is collected, the residence status of the patient is usually not registered. Data on TB cases reported from among undocumented migrants are usually based upon limited studies and may therefore provide uncertain estimates. The estimates may be too low if undocumented migrants are not diagnosed or reported.

In most countries with available information, 5–10% of TB cases were found among undocumented migrants. This proportion is reported to be higher in Italy and especially Malta, one of the main entry routes for undocumented migrants to Europe.

Most participating countries have reported possible limitations to access to diagnosis for undocumented migrants. Dutch surveillance data for 2005 show that undocumented migrants were diagnosed with TB at a later stage of their disease, with a higher proportion with positive smear and culture than other risk groups.^{12,45} Reasons for delayed diagnosis include fear of being arrested and deported,^{25,46} inability to pay for medical examinations due to lack of so-

cial security benefits and lack of knowledge about TB and the health care system. In a recent survey in programmes by Médecins du Monde and partner organisation in seven Western European countries, one third of undocumented migrants were unaware of their right to health coverage.⁴⁷

The importance of undocumented migrants in TB control may be greater than the estimated numbers indicate. As for all other immigrants, those who come from countries with high TB incidence have an increased risk of prior infection.⁴⁸ Undocumented migrants may also have an increased risk of becoming infected in overcrowded travel, housing and working conditions, both during migration and after arrival in the country of relocation.⁷ Reduced access to health services for TB diagnosis and treatment may further increase the risk of transmission of infection. The risk of developing TB disease amongst those infected may also be increased by inadequate nutrition and stressful living conditions.⁴⁹

There is therefore good reason for concern that a high rate of transmission and outbreaks may occur within this group itself and to others in the community, if early diagnosis and effective treatment are not ensured. According to restriction fragment length polymorphism studies, outbreaks in the immigrant population have so far occurred rarely in Norway⁵⁰ and Denmark,⁵¹ but more frequently in the Netherlands.⁵²

Although some countries (such as Belgium, Canada, Israel and Spain) have introduced interventions to ensure early diagnosis, and most countries reported free access to treatment, in reality there are many barriers to accessing health services. In some countries, limitations in access to health care or fear of deportation have led to some local or individual strategies. Health facilities may not charge fees, but cover the cost themselves or rely on private funds or charities; if not, relatives of the migrant often pay (Switzerland). To avoid providing personal identification, the name of a friend with legal status for treatment may be used, or the health staff may not report the case. Most countries reported that a TB patient could be deported while on treatment, although in most countries this rarely happens. Often the process of deportation is so slow that there is enough time to complete the treatment.

A number of countries (such as Belgium, Canada, France, Israel, Italy and Spain) had or have recently introduced interventions to ensure successful treatment. In Israel, directly observed treatment (DOT) is provided for undocumented migrants and some receive treatment for latent infection.⁵³ In Italy, undocumented migrants have also received treatment for latent TB infection, although with a low completion rate.⁵⁴ However, non-adherence to anti-tuberculosis treatment is a challenge, as the undocumented migrant runs the risk of deportation and may frequently change address and/or name, so that it is difficult for health staff to ensure follow-up.

Table 4 Access of undocumented migrants to diagnosis and treatment (data provided by respondents)

Country	Access to diagnosis and treatment—legally and in practice?	Can TB patients be expelled/deported while on treatment—legally and in practice?
Albania	No legal regulation for undocumented residence	No legal regulation
Australia	Yes, in prison	Sometimes
Austria	Full access to diagnosis and treatment	Theoretically yes, but cannot remember a single case being expelled
Belgium	Yes to treatment, diagnosis	In some rare cases, if proven that treatment is available in country of origin
Canada	Legally are required to pay for health services, but TB treatment (once diagnosed) is free. In reality, most get free emergency care, reasonable access	Yes, but rarely—only once treated and no longer infectious
Czech Republic	Yes	Usually only when non-infectious
Denmark	Same as others, but treatment not possible without registration with the authorities	Yes, but normally allowed to finish treatment before expulsion
Estonia	Good access, free of charge	Yes, 1 non-infectious case in 2003
France	Theoretically full access and treatment free of charge	In theory no, but in practice yes
Germany	Theoretically yes	Rarely
Greece	Yes	Infectious cases are not expelled until end of treatment
Israel	Full access to diagnosis and treatment free of charge	In theory yes, in practice generally no
Italy	Theoretically free of charge	In theory no, usually does not happen
Japan	Access limited because of anticipated cost. Cost of treatment is covered by government	Yes, but infectious cases can stay until they are non-infectious. Medical facilities rarely report to police or concerned office
Latvia	No such patients	No such patients
Malta	Full access to diagnosis and treatment free of charge	No, never happens
Montenegro	Access, but remain only up to 7 days	Ministry of Internal Affairs is informed and takes further care of the patient
Netherlands	Yes, but with threshold for access to diagnosis	Yes, but not often
Norway	Free of charge	Yes, but rarely
Poland	Full access free of charge	Can be expelled/deported, but not because of tuberculosis
Portugal	Full access	Legally yes, but not done until the end of treatment, if doctors explain to the immigration services
Romania	Full access	No reply
Slovakia	Free of charge	No
Spain	Free of charge	Rarely. If the immigrant has a disease, they are less likely to be deported
Sweden	Sometimes	No reply
Switzerland	More difficult access (no insurance coverage), but local initiatives to facilitate access to care	Yes, unless a local authority (MD, NGO, health authority) fights for the case to stay
United Kingdom	No access to diagnosis or treatment. In practice many will be treated	Yes
United States	All persons have access to diagnosis and treatment of TB at public health clinics; state and local public health TB clinics do not ask documented status	If they are undergoing immigration proceedings when TB is diagnosed or while they are on treatment, they may be deported. But having TB is not the reason for deportation. Deportation decisions are unrelated to health status

TB = tuberculosis; MD = treating physician, NGO = non-governmental organisation.

A study in a French hospital showed the same success rate for TB treatment in socially deprived patients without primary health coverage (including patients with illegal status) as in other patients; this finding was explained by a 1994 law ensuring free access to health care for these patients.²⁶ A study in Japan found that rates of successful TB treatment in foreigners who overstayed their visas increased during the period 1990–1998 when a set of interventions was provided that included economic support and better information.²⁷ In Switzerland, high treatment success rates were achieved with DOT in a setting where 70% of the patients were asylum seekers and undocumented migrants.²⁸

Deportation of a TB patient who is still on treatment is problematic for several reasons:

- It is very difficult to ensure that adequate treatment will be completed in the country to which the person is deported. If the migration authorities ask the health authorities in the country to which the person is being deported about continuation of treatment, the probability that they will admit to having a substandard tuberculosis programme is low. Deported persons may not have access to adequate treatment in the country to which they are deported, even in well-functioning TB programmes,

because of high costs, ethnic problems or other factors restricting access to free treatment. The patient may also soon move to a third country where the TB programme may be inadequate.

- TB drugs for a period of time will be sent with the patient, but will usually have to be taken without supervision, with no guarantee that the treatment is adequate and complete.
- Confidentiality laws may prohibit the sharing of confidential medical information across national borders.
- Travel may have to be delayed, as air transport of infectious cases is in violation of international recommendations:

Boarding can and should be denied to individuals with an infectious form of TB. When a physician is aware that a person with an infectious form of TB is planning to travel on a commercial carrier, he or she should inform the public health authority, who in turn should inform the airline concerned.⁵⁵

- Many of those who are deported will return illegally to the same country later, perhaps still with TB, and perhaps with a more resistant form of TB because of inadequate treatment.⁵⁶

In the US^{56–58} and Australia, TB patients are deported, but only after arranging a referral and reception in the receiving country once the patient has been determined to be non-contagious and when immigration officials have been informed that the person to be deported has TB. During the 1990s, undocumented migrants in the Netherlands had an increased risk of default from TB treatment.⁵⁹ In recent years, authorities in the Netherlands have introduced regulations giving the migrant the right of temporary stay for the duration of tuberculosis treatment. In Norway, asylum seekers with tuberculosis will not be deported until the end of treatment if the migration authorities are informed about their disease.⁶⁰ The justification is that the risk of relapse is high if treatment is not completed. These measures also include non-infectious cases, as a non-infectious case may develop infectious disease if treatment is not completed. Some ministries responsible for migration are concerned that this policy will attract TB cases from other countries and that diagnoses could be falsified by health staff. However, experience in the Netherlands and Norway does not indicate that there has been an increase in undocumented migrants with TB seeking treatment following the change in regulations. Staff working in the police, the migration authorities and others in contact with undocumented migrants have been found to be very supportive of the policy to ensure rapid diagnosis and an early start and completion of treatment, as it also reduces their risk of being infected.

Among all TB patients, undocumented migrants represent a modest burden on the health services, al-

though patients with TB-HIV co-infection and multi-drug-resistant TB are more resource demanding and may cluster in some local settings, creating a significant excess burden on resources.

The strength of the present study is that it is to our knowledge the first systematic description of TB in undocumented migrants with wide geographical coverage. The paper both summarises available information (including legal issues) and proposes recommendations based upon a wide process of consultation among specialists from 28 different countries. The weaknesses of the study include incomplete coverage, as it depended upon voluntary contributions from the countries. However, although only 60% of the countries responded, those countries that responded in Western Europe reported 90% of the TB cases there in 2005.² The response rate was lower in the Balkans. Another limitation is that the study is based upon a combination of estimates and exact numbers and on a combination of qualitative and quantitative data. These limitations reflect the difficulties faced by countries in relating to—and ensuring basic health services for—a population group that officially does not exist.

Access to health care for all individuals, regardless of their resident status, has been addressed from a human rights perspective in various international conventions, including the 1948 Universal Declaration on Human Rights of the United Nations⁶¹ and the 'Declaration of the human rights of individuals who are not nationals of the country in which they live', adopted by the United Nations in 1985.⁶² In 1990 the 'International convention on the protection of the rights of all migrant workers and members of their families' included an article on the right to be treated irrespective of the residence situation.⁶³ The Human Rights Court in Strasbourg uses the Convention for the Protection of Human Rights and Fundamental Freedoms of the Council of Europe, which in Article 3 states that 'No one shall be subjected to torture or to inhuman or degrading treatment or punishment'.⁶⁴ This convention has gradually extended the application of the article to include considerations regarding an individual's physical and mental health. The Court will examine whether there is a real risk that the applicant's removal would be contrary to the standards of Article 3 in view of his/her present medical condition. The rulings of the court are binding on all Member States of the European Convention on Human Rights, which applies to most countries in Europe. Apparently, there has not yet been any verdict in a case of TB, but in 1997 the Court judged for the first time that expulsion would amount to inhuman treatment in violation of Article 3, taking into account the medical condition of the alien. The applicant, from St. Kitts, had advanced acquired immune-deficiency syndrome.⁶⁵ The International Standards for TB Care provide the technical elements necessary to develop a patient-centred approach to TB care.⁶⁶

From a patient rights perspective, the recent Patients' Charter for TB Care states: 'the right (of TB patients) to free and equitable access to TB care, from diagnosis to completion of treatment, regardless of (. . .) legal status (. . .)'.⁶⁷

Based on the current experience, the existing recommendations on TB control and several international statements on human rights and access to health care, there is a strong public health rationale for ensuring early detection and effective treatment of TB until completion in undocumented immigrants. Although the present report refers to settings with low and intermediate incidence of TB, the following recommendations should have global relevance:

RECOMMENDATIONS

- 1 Health authorities and/or health staff should ensure easy access to low-threshold facilities where undocumented migrants who are TB suspects can be diagnosed and treated without giving their names and without fear of being reported to the police or migration officials. Health authorities should remind health staff that they have an obligation of confidentiality.
- 2 Each country should ensure that undocumented migrants with TB are not deported until completion of treatment.
- 3 Authorities and non-governmental sectors should raise awareness among undocumented migrants about TB, emphasising that diagnosis and treatment should be free of charge and wholly independent of migratory status.

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List of respondents by country

Albania: H Hafizi (University Hospital of Lung Diseases Tirana), *Australia:* V Krause (Centre for Disease Control), *Austria:* B Schmidgruber (City of Vienna), *Belgium:* M Wanlin (Belgian Lung and Tuberculosis Association), *Canada:* D Menzies (McGill University), *Czech Republic:* J Wallenfels (University Hospital Bulovka), *Denmark:* P Andersen (Statens Serum Institute), *Estonia:* V Hallo (Kivimae Hospital), *France:* D Antoine, D Che (Institut de Veille Sanitaire), *Germany:* B Hauer (German Central Committee Against Tuberculosis), R Lodenkemper (German Central Committee Against Tuberculosis), *Greece:* O Aldrami (Ministry of Health), *Italy:* L R Codecasa (Niguarda Hospital), G B Migliori (WHO Collaborating Centre for TB and Lung Diseases), *Israel:* D Chemtob (Ministry of Health), *Japan:* N Ishikawa, I Onozaki (Japanese Anti-Tuberculosis Association), *Latvia:* J Leimans (State Centre of Tuberculosis and Lung Diseases), *Malta:* A Pace-Asciak (Department of Public Health Qormi), *Montenegro:* O Bojovic (Hospital for Pulmonary Diseases and TB Niksic), *Netherlands:* J V Kuyvenhoven (KNCV Tuberculosis Foundation), *Norway:* E Heldal, B Winje

(National Public Health Institute), *Poland:* M Korzeniewska-Kosela (National Tuberculosis and Lung Diseases Institute), *Portugal:* A Fonseca Antunes (Ministry of Health), *Romania:* E Ibraim (Institute of Pneumophthisiology Marius Nasta), *Slovakia:* I Solovic (Vysny Hagi Institute), *Spain:* J Caylá (Tuberculosis Investigation Unit of Barcelona), *Sweden:* V Romanus (Swedish Institute for Infectious Disease Control), *Switzerland:* P Helbling (Federal Office of Public Health), J-P Zellweger (University Medical Policlinic Lausanne), *United Kingdom:* I Abubakar (Health Protection Agency), *United States of America:* D Schneider (US Department of Health and Human Services, Health Resources and Services Administration, Division of Immigration Health Services).

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R É S U M É

CONTEXTE : Pays où l'incidence de la tuberculose (TB) est faible ou intermédiaire.

OBJECTIFS : 1) Rassembler les informations sur des individus et des patients tuberculeux qui sont des migrants non-documentés et sur leur accès aux services de diagnostic et de traitement de la TB ; 2) discuter des interventions visant à renforcer le diagnostic et le traitement ; et 3) formuler des recommandations sur les manières d'assurer une prévention et une maîtrise adéquates de la TB.

SCHÉMA : Des questionnaires envoyés aux membres du Groupe de Travail (WG) sur la Migration Transfrontalière et la TB, aux directeurs des programmes nationaux de TB et aux correspondants d'EuroTB, une recherche dans la littérature et l'élaboration d'un article par un comité de rédaction grâce à des consultations.

RÉSULTATS : Les migrants non-documentés représentent de 5% à 30% des immigrants et 5% à 10% des cas de TB. La plupart des pays signalent une accessibilité totale au diagnostic et au traitement, mais des limitations existent dans la pratique. La plupart des pays ont signalé

également qu'ils pouvaient expulser—et qu'ils expulsaient effectivement—des cas sous traitement pour TB. Des activités diverses assurant l'accès ont été signalés par différents pays.

CONCLUSION : Le WG recommande que 1) les autorités de santé et/ou le personnel de santé devraient assurer un accès facile à des services aisément consultables où le diagnostic peut être porté et le traitement assuré chez les migrants non-documentés qui sont suspects de TB de façon anonyme et sans les signaler à la police ou aux agents officiels de migration. Les autorités de la santé devraient rappeler aux personnels de santé qu'ils ont une obligation de confidentialité ; 2) chaque pays devrait veiller à ce que les migrants non-documentés atteints de TB ne soient pas expulsés avant l'achèvement du traitement ; et 3) les autorités et les secteurs non-gouvernementaux devraient faire prendre conscience de la TB aux migrants non-documentés en insistant sur le fait que son diagnostic et son traitement devraient être gratuits et totalement indépendants du statut de migrants.

R E S U M E N

MARCO DE REFERENCIA : Países con una incidencia baja o intermedia de tuberculosis (TB).

OBJETIVOS : 1) Recopilar información sobre los individuos y los pacientes con TB que son inmigrantes no documentados y sobre su acceso a los servicios de diag-

nóstico y tratamiento de la TB ; 2) estudiar intervenciones que fortalezcan el diagnóstico y el tratamiento ; y 3) formular recomendaciones sobre la manera de alcanzar prevención y control adecuados de la TB.

MÉTODO : Se envió un cuestionario a los miembros del

grupo de trabajo (WG) y luego a los administradores de los programas nacionales de TB y a los corresponsales de EuroTB sobre migración transfronteriza y TB ; el comité editorial realizó una revisión de las publicaciones científicas y preparó un documento.

RESULTADOS : Los inmigrantes indocumentados representan de 5% a 30% de los inmigrantes y 5% a 10% de los casos de TB. La mayoría de los países informaron la accesibilidad total al diagnóstico y al tratamiento, pero en la práctica se observaron limitaciones. Asimismo, la mayoría de países comunicó que era posible deportar los casos en tratamiento antituberculoso y que esto se realizaba. Diversos países comunicaron una variedad de actividades dirigidas a ofrecer el acceso a los servicios.

CONCLUSIÓN : El WG recomienda que : 1) las autori-

dades sanitarias o el personal de salud deben procurar un acceso cómodo a establecimientos con pocas exigencias, donde los inmigrantes indocumentados con presunción clínica de TB puedan obtener diagnóstico y tratamiento sin comunicar sus nombres y sin el temor de deportación por parte de la policía o de los funcionarios de inmigración. Las autoridades de salud deben recordar al personal sanitario su obligación de confidencialidad ; 2) cada país debe procurar que los inmigrantes indocumentados con TB no sean deportados antes de completar su tratamiento ; y 3) las autoridades y los sectores no gubernamentales deben dar a conocer la TB a los inmigrantes indocumentados, haciendo énfasis en que el diagnóstico y el tratamiento deben ser gratuitos y totalmente independientes de la condición de inmigración de las personas.
