

### Tuberculosis control in vulnerable groups

Jose I Figueroa-Munoz<sup>a</sup> & Pilar Ramon-Pardo<sup>b</sup>

#### Introduction

Tuberculosis (TB) remains an important public health problem in industrialized countries. The majority of cases occur in minority groups, particularly recently arrived immigrants from countries with high endemicity who often congregate in deprived communities within wealthy cities. In the United Kingdom of Great Britain and Northern Ireland, people from the Indian subcontinent and sub-Saharan Africa living in inner cities have higher rates of TB than the general population; particularly during the first years after arriving in the country. The HIV/AIDS epidemic has had a disproportionate impact among ethnic minorities in large industrialized cities.

Deprived isolated communities within wealthier environments constitute a challenge for TB control. The association between TB and poverty is mediated by overcrowding, poorly ventilated housing, malnutrition, smoking, stress, social deprivation and poor social capital. The perceptions of health and illness in many minority groups are altered resulting in a negative impact on health-seeking behaviours and access to services. Important factors include disrupted social networks, social exclusion, reduced accessibility to health care, lack of egalitarian participation in society and lack of trust, understanding or respect for the system. Women, unemployed and homeless people experience longer delays in seeking care resulting in increased suffering and expenses and higher risk of community transmission.

#### Displaced populations

Globalization has had considerable impact on refugee migration patterns.

The arrival of large groups of refugees can affect TB control in receiving countries by significantly increasing disease burden and workload. Poor living conditions and overcrowding in refugee settlements increase the risk of TB infection. Migrant and refugee communities have special health needs and experience obstacles for accessing health care such as language, stigmatization, poor cultural awareness, psychological distress, disruption of families and social networks, and economic difficulties.

#### Migrants and refugees

Asylum seekers are individuals living in the community awaiting the outcome of applications for protection visas; they are often not permitted to work and may receive small subsistence payments or food tokens. Many may require specialist care and psychosocial assistance due to the traumatic experiences or persecution suffered in their countries. They are often separated from their families and social networks and some may turn to alcohol, drugs, crime or prostitution.

The incidence of infectious diseases such as TB among asylum seekers varies and reflects that in the country of origin. Their health needs overlap with those of other excluded groups such as ethnic minorities or newly arrived immigrants. Asylum seekers experience a greater burden of ill health and are unable to afford private care. Although they should be entitled to the same health-care services as the general population, in practice many are denied access or experience barriers such as lack of cultural sensitivity, language skills, awareness of rights and services provided. They may fear discrimination or believe that their dis-

ease could jeopardize visa applications. Stigmatization of diseases such as TB, HIV/AIDS, malaria and mental distress further impede access. Asylum seekers who have been tortured may find it difficult to trust doctors since torture is often administered by them.

As long as marked economic differences prevail between industrialized countries and other countries, economic migration will remain an unavoidable event. Economic migrants tend to be skilled or semiskilled workers who emigrate with a long term perspective. Migration increases the risks of transmission of infectious diseases such as TB, particularly if migrants originated in high prevalent countries. Many countries advocate for targeted screening of immigrants according to the country of origin and enhanced surveillance for recently arrived populations. Ensuring adequate access to health care will facilitate early identification and treatment of TB.

#### Cross-border movement

Cross-border populations are low-income minorities living near a border and working in the neighbouring country, involving continuous movement across borders. Often, they are skilled temporary migrants performing services abroad without intention or right to settle or seek permanent employment in the host country. These include both legal and undocumented cross-border migrants; manual workers; internal migrants; sex workers; mobile occupational persons such as truck drivers, crop pickers or traders. Legal groups have access to health care; but more often these people are illegal workers who are excluded from services. Cross-border procurement is important as

<sup>a</sup> City and Hackney Primary Care Trust, St Leonard's Hospital, Nuttal St, London, England.

<sup>b</sup> Tuberculosis Programme, Pan-American Health Organization, Washington, DC, United States of America.

Correspondence to Jose Figueroa-Munoz (e-mail: JoseFigueroa@doctors.org.uk).

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drug availability could differ across borders. Drugs may be available over-the-counter, be more affordable or of dubious quality.

Monitoring cross-border minorities increases awareness of TB risks and their sources. Regional strategies providing support from origin to destination are useful: establishing collaborative arrangements between neighbouring National Tuberculosis Control Programmes (NTPs) facilitates continuous treatment and support, such as the Mexico-United States of America (USA) treatment card.

Besides the fundamental principles of TB control, migrant populations require additional interventions such as screening on arrival, education and surveillance. Policies vary greatly such as TB screening of asylum seekers with chest radiographs, tuberculin testing and/or bacteriological methods at entry point (Belgium, the Netherlands, Switzerland and the United Kingdom) or before arrival in the country (Canada and USA). The majority of reports on screening refugees at entry point identify difficulties with follow-up and high default rates. Asylum seekers rarely have a predetermined address in the host country and suspected individuals often disappear from the system, which hinders follow-up.<sup>1</sup> The Netherlands grants asylum status and health coverage for the duration of treatment to those who are confirmed TB cases; despite this, default remains higher than in the general population (although lower than groups such as illegal immigrants, homeless people and prisoners).

### Itinerant people

Mobile communities, gypsies, travellers and Roma populations tend to cluster in periurban areas or in pockets of deprivation in large cities, where their neighbours live in similar poverty and share the same diseases of deprivation. These communities constitute marginalized ethnic/cultural minorities that often live under poor conditions, with increased risk of TB infection, high comorbidity and poor treatment outcomes. Lack of education, overcrowding, inadequate living conditions, malnutrition, social exclusion, stigmatization, poor access to health care, low immunization rates and poor

treatment compliance are all contributing factors to high TB morbidity. The needs of these communities are poorly understood. Innovative approaches to ensure early identification of cases, reduce transmission and improve treatment outcomes are needed.

### Homeless people

Homeless populations exist in wealthy cities due to insufficient affordable housing, mental or physical illnesses, substance abuse or poor education. Homeless people are at increased risk of TB, have higher default rates and worse treatment outcomes (including mortality) than the general public. In many industrialized countries, TB rates among the homeless can be up to 20 times higher than the general population. The majority of TB cases in urban homeless populations are attributable to ongoing transmission in shelters.<sup>2</sup>

Poor compliance results in low effectiveness of isoniazid preventive (INH) therapy,<sup>3</sup> high default rates, poor treatment outcomes, high mortality often related to poor nutritional status and concomitant illness including HIV. Hospitalization rates are higher and for longer periods, resulting in higher health-care expenditure. Contact identification and tracing is challenging, particularly for individuals living on the streets at the time of diagnosis.

Cost-effective strategies to decrease TB incidence in homeless populations include increasing case detection, mandatory screening in shelters, using incentives to improve tuberculin skin testing reading compliance or treatment and prophylaxis adherence. A competent referral system is critical to coordinate efforts and ensure treatment success. Providing housing and social services may reduce hospital utilization and improve treatment completion. Supervised housing appears effective in increasing treatment compliance resulting in substantial cost savings.<sup>4</sup>

### Injecting drug users

Injecting drug users (IDUs) experience high TB prevalence due to social and demographic risk factors such as poverty, unemployment, homelessness, imprisonment, HIV infection, malnutrition and lack of access to health care. In 2003, there were 13.2 million IDUs worldwide, 78% in developing and

transitional economies, mainly in Asia and eastern Europe.

Tuberculosis rates in IDUs increase significantly with age, years of drug use, HIV infection, incomplete INH prophylaxis and positive PPD (purified protein derivative) skin test. The years of drug use are closely related to the time spent in sites where TB is easily transmitted, resulting in a cumulative TB risk that justifies continuous screening programmes. Incentives and peer counselling have shown to increase adherence to referral services.<sup>5</sup> Treatment of latent infection, after exclusion of active disease, is effective, even in individuals living with HIV. Early diagnosis and treatment and INH prophylaxis are fundamental for TB control in IDUs living with HIV/AIDS.

Integrated services for HIV/AIDS and TB facilitate treatment monitoring, early identification of side-effects and development of joint strategies to maximize adherence to both treatments. IDUs require comprehensive care services (e.g. HIV/AIDS, chemical dependency treatment, DOTS, hepatotoxicity monitoring particularly in patients with hepatitis B or C infection or alcoholism) and should be managed by experienced health teams. If comprehensive care is not possible, cooperation, constant communication and adequate referral systems between TB and HIV/AIDS programmes are pivotal. Strategies to stimulate treatment adherence should be available (adherence groups, psychological support, day-hospitals). Methadone programmes improve adherence to INH prophylaxis, thereby decreasing TB incidence. Psychosocial support should be offered to individuals with treatment adherence difficulties.

### Call for action

Economically poor and vulnerable populations, cultural/ethnic minorities, migrant populations, gypsies and travellers, homeless people and substance users are all at greater risk of TB infection and disease and are likely to have worse treatment outcomes than the general population. Their complex needs are often overlooked and they experience barriers to access routine health care.

Health-care providers should recognize the increased risk of TB in these populations and give special attention to surveillance and preventive

services. Effective TB monitoring in minority groups could provide a basic understanding of the risks and inform targeted TB control activities. A rapid assessment of the TB situation in minority groups will give NTPs sufficient information to plan services and, if performed with community involvement, could help overcome some of the resistance and distrust often encountered in these groups. Community participation increases TB awareness and sensitizes the community to TB interventions.

Raising TB awareness within staff from primary care, social services, public services, teachers, nongovernmental organizations and the general public is important. It often requires informa-

tion leaflets and educational materials in different languages and must be culturally adequate. Health services should engage professional interpreters and produce adequate education, information and communication materials for the needs of the different minority groups including information on access to services, patients' rights, costs of services and education about TB and other infectious diseases. If the prevalence of HIV/AIDS is high, NTPs should liaise with national HIV/AIDS control programmes to provide appropriate care.

To achieve equity and to reach the Millennium Development Goals, NTPs need to identify vulnerable groups

within wealthy cities, evaluate their needs, available services and barriers to access. A comprehensive TB control strategy needs to establish priorities for action based on needs, effectiveness, feasibility and resources. Targeted interventions to improve access and ensure adequate diagnosis, treatment and follow-up of TB cases building on partnerships with other service providers are needed.<sup>6</sup> Evaluation through field and operational research requires better technical support and would benefit from information exchange about best practice. ■

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