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109 Meeting of the International
Task Force for Disease
Eradication, January 2010 –
Tuberculosis: review and
recommendations

109 Réunion du Groupe spécial
international pour l'éradication
des maladies, janvier 2010 –
Tuberculose: examen
et recommandations

East Asia (34%), Africa (31%) and Western Pacific (20%), with the remainder in the Eastern Mediterranean (7%), European (5%) and American (3%) Regions. Cases of MDR-TB are especially numerous in China, India and the nations of the former Soviet Union; 80% of cases of TB associated with HIV are found in Africa, especially in southern and south-eastern Africa.

The DOTS strategy, launched by WHO in 1995, calls for government commitment to TB control, bacteriological diagnosis of cases detected among symptomatic patients, a standard short-course chemotherapy regimen to be used under supervision for all patients, assurance of a regular supply of drugs, and a system for the surveillance and monitoring of the programme's performance. Specific targets were set by the World Health Assembly in 1991: to detect $\geq 70\%$ of estimated cases and cure $\geq 85\%$ of those detected. The Stop TB Strategy, launched by WHO in 2006, calls for enhancing the DOTS strategy to address new challenges and to expand access to diagnosis and care to the most vulnerable populations. The strategy aims to reach TB-related Millennium Development Goal 6, target 6c: "to have halted by 2015 and begun to reverse the incidence of tuberculosis." Other elements of the Stop TB Strategy require addressing TB associated with HIV, MDR-TB and the needs of poor and vulnerable people; strengthening health systems; engaging all health-care providers in efforts to control TB; empowering people with TB and their communities; and promoting research. The Stop TB Partnership, established in 2001 and hosted by WHO, defined as goals the reduction of overall prevalence of, and deaths due to, TB by 50% by 2015 (compared with rates in 1990) and elimination (defined as an incidence of < 1 case/1 000 000 population) by 2050 (the global incidence was estimated at about 1400/1 000 000 population in 2008).

stantial compared with funding needs estimated by the Global Plan to Stop TB.

Overall, about 61% (5.5 million) of the estimated number of incident cases and 7% of estimated cases of MC1y the

toms and signs for predicting likely TB in HIV-positive people is night sweats lasting for ≥ 3 weeks, or cough or fever of any duration. Patients who lack any of these symptoms are unlikely to have TB. If indicated, isoniazid preventive therapy can be safely started in most cases. Patients who do have ≥ 1 of these symptoms require diagnostic evaluation (including sputum smears, chest radiography and CD4 testing). Most patients with negative sputum smears will require liquid culture of sputum specimens to accurately diagnose TB.

Implementing the preferred diagnostic procedures would require scaling up laboratory capacity to conduct liquid cultures for TB, especially in the African countries where concern is greatest. It is important to start antiretroviral therapy as early as possible in patients coinfected with HIV and TB because it can substantially reduce mortality. In people with HIV who do not yet have active TB, antiretroviral therapy may reduce the incidence of active disease by about 50%. Isoniazid preventive therapy may also reduce the incidence of active TB in coinfected people whose tuberculin skin test is positive. There have been examples in which behavioural changes brought about a significant reduction in the prevalence of HIV infection.^{3,4}

1 TB has had a long association with poverty and low socioeconomic status throughout history, and deaths from the disease began declining sharply in wealthier countries long before the advent of antituberculosis drugs. Since the Second World War, documented surges in TB incidence have been associated with adverse economic developments in several countries, reflecting complex and inadequately understood interactions among people, their environment, health services, and tubercle bacilli. Some studies have found an inverse correlation between the risk of TB and the number and kind of material goods possessed by individuals or their families.^{5,6} Those who are poorer suffer not only because they have less access to proper health care and spend a higher proportion of their income on care, but in numerous other poorly understood ways. Other studies

chronique qui est couramment utilisée pour dépister la tuberculose est un test peu sensible chez les personnes infectées par le VIH et ne devrait pas être le seul critère utilisé pour traquer la tuberculose dans ce groupe. Il ressort de cette étude que la meilleure combinaison de symptômes et de signes pour mettre en évidence une probable tuberculose chez les sujets positifs pour le VIH est la présence de sueurs nocturnes pendant 3 semaines, ou celle d'une toux ou d'une fièvre quelle qu'en soit la durée. Les patients qui ne présentent aucun de ces symptômes sont peu susceptibles d'avoir la tuberculose. S'il est indiqué, un traitement préventif par l'isoniazide peut sans problème être mis en route dans la plupart des cas. Les patients qui présentent 1 de ces symptômes ont besoin d'une évaluation diagnostique (y compris l'examen de frottis d'expectorations, une radiographie pulmonaire et une recherche des CD4). Pour la plupart des patients à frottis négatif, il sera en outre nécessaire de mettre les prélèvements en culture en milieu liquide pour diagnostiquer la tuberculose avec certitude.

La mise en œuvre des méthodes diagnostiques les plus performantes nécessiterait un renforcement des capacités de laboratoire pour pouvoir effectuer des cultures en milieu liquide, en particulier dans les pays africains où la situation est la plus préoccupante. Il est important de commencer le plus vite possible un traitement par les antirétroviraux chez les patients co-infectés par le VIH et le bacille tuberculeux, car celui-ci permet de réduire notablement la mortalité. Chez les personnes VIH positives qui n'ont pas encore contracté la tuberculose, le traitement par les antirétroviraux permet de réduire l'incidence de la tuberculose évolutive d'environ 50%. Le traitement préventif par l'isoniazide peut aussi permettre de réduire l'incidence de la tuberculose évolutive chez les sujets co-infectés dont le test tuberculique est positif. Il existe plusieurs exemples dans lesquels une modification des comportements a permis d'obtenir une réduction notable de la prévalence de l'infection à VIH.^{3,4}

La tuberculose a été, tout au long de l'histoire, associée à la pauvreté et à un faible niveau socio-économique, et la mortalité due à cette maladie a commencé à reculer fortement dans les pays les plus riches bien avant l'apparition des antituberculeux. Depuis la Seconde Guerre mondiale, les poussées de tuberculose qui ont été e(n)24.4(v&9(onomiq5 84 g pe)-3a110.2(n)2)-14.1(a)vt9.1(r ft)7(oy) P w

suggest⁷ there is a significant population-attributable fraction of risk associated with malnutrition, indoor air pollution, cigarette smoking, HIV infection, alcohol abuse and diabetes. Education is an important determinant of risk in addition to level of income. Some factors (for example, HIV and diabetes) associated with increased risk must be addressed by other health programmes (for example, HIV/AIDS programmes or primary care services); other determinants (for example, overcrowding, indoor air pollution, malnutrition) must be addressed by agencies outside the health sector.

Mathematical modelling of TB transmission highlights the overwhelming importance of latent infections in foreign-born residents as the major source of new disease in the United States. Immigrants from a few countries account for a large share of emerging cases. If control measures are sustained, the most important determinant of whether transmission in the United States can be stopped will be whether latent TB can be prevented from developing into active disease. New tools for prevention and diagnosis, as well as shorter and safer treatment, provided particularly to foreign-born people with latent infection, will be required to eliminate TB from the United States in this century.

Members of the task force noted the urgent importance of improving the quality of interventions and extending their coverage to all populations at risk for TB to make better use of existing tools and to help reduce the spread of TB, MDR-TB, XDR-TB, as well as to reduce the incidence of HIV-associated tuberculosis. TB and HIV/AIDS programmes need to work together for their mutual benefit to ensure that patients with either disease are screened or tested promptly for the other disease and that appropriate treatment is started immediately if indicated. Preventing and treating HIV infections is a powerful means for preventing TB. In this and other areas, TB programmes should actively seek synergies with other appropriate programmes, including those outside the health sector, by emphasizing the benefit of an additional impact on TB. Given the multiple and disparate risk factors for TB, a multidimensional approach will be required to control and possibly eliminate the disease. In addition to the core interventions to prevent TB that are part of the Stop TB Strategy, there is a need for bold policies to be implemented across the health system, and for intensified research into, and action to be taken on, the risk factors and determinants of the disease.

Vigorous advocacy on behalf of TB programmes is needed to engage other relevant health programmes as

études semblent indiquer⁷ que la fraction de risque attribuable dans une population donnée est liée à la malnutrition, à la pollution de l'air à l'intérieur des habitations, au tabagisme, à l'infection à VIH, à l'abus d'alcool et au diabète. L'éducation est, avec le niveau de revenu, un déterminant important du risque. Certains

well as potential allies outside the health sector. TB programmes cannot bear the entire burden of such advocacy but should solicit help from members of their government, including the minister of health, and through the minister of health, other ministers, the head of government and the head of state, where necessary. As ammunition to recruit allies, TB programmes should have in hand cogent data on the burden of TB, the progress and effectiveness of interventions, and the costs of not intervening. During the discussion it was mentioned that a study by the World Bank estimated that investing US\$ 1 in tuberculosis control yields an average of about US\$ 10 in benefits.⁸ The need to develop and publicize more such data, including the potential number of disability-adjusted life years (DALYS) that could be saved by TB interventions, was also emphasized. Controlling the disease may be presented as a way to combat poverty and to drive for improvements in services provided to vulnerable, deprived and marginalized groups. More can be accomplished using the tools that are already available to combat TB.

Research.

community health workers have proven effective in some programmes, as has the “kinship strategy”;⁹ these approaches might be useful in extending the reach of interventions and may make it easier to detect the disease and follow up during the 6 months of treatment.

Surveillance. The need for better surveillance and reporting of cases and for focusing on a limited set of key indicators of coverage (process) and impact (outcome) of TB programmes was discussed. The value of using the absolute number of cases reported instead of
