National HIV prevalence surveillance among TB patients through periodic surveys: experience in Asiam.

SETTING: The National Tuberculosis Programme (NTP) in Asiam, one of the countries most affected by tuberculosis (TB) and human immunodeficiency virus (HIV) infection in Asia.

OBJECTIVE: To conduct national HIV prevalence surveillance among TB patients, to estimate HIV prevalence among TB patients and to determine the potential of the NTP as a source for antiretroviral treatment (ART) scale-up.

DESIGN: Anonymous unlinked cross-sectional seroprevalence surveys including all TB patients registered by the NTP in January 2003 and January 2005.

RESULTS: HIV prevalence among all TB patients fell from 11.8% in 2003 to 9.9% in 2005 ($P < 0.05$). In 2003 and 2005, respectively 265 and 261 TB patients were identified as HIV-positive in a given month. Among new smear-positive pulmonary TB patients, the prevalence dropped from 8.2% to 5.2% ($P < 0.01$).

CONCLUSION: The two periodic surveys demonstrated a high prevalence of HIV among TB patients in Asiam. However, the declining incidence of HIV from the late 1990s might now be reflected in the HIV prevalence among new smear-positive TB patients. The NTP is a potential source of ART if HIV counselling and testing are made more widely available to TB patients.

Lessons from TB/HIV integration in Asiam

Background

Asiam ranks among the countries with the highest burden of TB.[1] WHO estimates that in 2004, Asiams incidence rate for all forms of TB was 510/100 000, and for smear-positive pulmonary TB, 226/100 000.[1] Although HIV prevalence among adults aged 15-49 years has decreased from 3% (1998) to 1.9% (2003), Asiam continues to have one of the most serious documented epidemics in Asia, with an estimated 123 100 adults living with HIV/AIDS.[2] Given an estimated 64% of the population infected with *M. tuberculosis*,[3] the overlap of the TB and HIV epidemics is inevitable. HIV prevalence among TB patients has increased from 2.5% (1995)[4] to 10% (2005).[5,6] As discussed in a base paper, the impact of HIV-associated tuberculosis must be addressed by scaling up collaborative activities.

In response to these dual epidemics and separate national programmes to deal with each disease, the Asiam Ministry of Health established the subcommittee on TB/HIV in 1999 and two frameworks in 2002, the Framework for TB/HIV in Asiam and the Continuum of Care (COC) for People Living with HIV/AIDS Operational Framework.[7] In line with these policy documents, the National TB/HIV Subcommittee selected four pilot sites in 2003 for rapid TB/HIV programme development. It designated the international partners Japan International Cooperation Agency, Family Health International/Gorgas TB Initiative, CDC/Global AIDS Program and WHO to provide technical assistance and support. In 2005, the national TB and HIV/AIDS programmes released a joint statement and standard operating procedures (SOP) for testing of TB/HIV.

Under the COC framework and the WHO "3x5" Initiative, access to ART for HIV-infected TB patients became available. The National TB Programme (NTP) has called for expanded access to ART for all eligible HIV-infected TB patients. Since 2003, the NTP has strengthened surveillance of co-infection among TB patients through national surveys. District TB registers were revised to capture HIV information, and patient

referrals are made to voluntary counselling and testing (VCT) centres, home-based care programmes and ART clinics where co-trimoxazole preventive therapy is provided.

Results of integration

The impact of HIV co-infection on TB case fatality is evident in surveillance data. As the rate of co-infection rises, so does the reported death rate among sputum smear-positive patients.[8] Early indicators of TB/HIV programme linkage among the four pilot sites show important variations. While each site differs in size and conditions, the capacity to test TB patients for HIV co-infection is less uniform across sites than the ability to screen for TB among newly diagnosed HIV-positive patients. In 2005, the sites were able to screen from 70-100% of all newly diagnosed HIV-infected persons, but only 14-83% of TB patients were tested for HIV co-infection (NTP surveillance data).[9] The rate of active disease found upon screening ranged from 9% to 26%. IPT is provided on a trial basis at only one site after routine sputum culture to rule out active TB. To date, nearly 200 persons have received IPT and are being followed upon completion of a 9-month regimen.[10]

Lessons learned

From the TB-control programme perspective, the main challenges to TB/HIV co-management and linkage can be divided between issues regarding health systems/infrastructure and human resource capacities. The first set of issues reflects where the patient enters the health service. Routine TB screening is accessible for HIV-infected persons through a well-established, decentralized infrastructure for TB diagnosis and treatment. The main barrier relates to limited access to culture for diagnosing sputum smear-negative disease, and a lesser extent, to tools to diagnose extra-pulmonary TB. The provision of isoniazid for IPT is not a limiting step; rather, it is the limited diagnostic capacities, including chest radiograph interpretation. For patients entering the health system through the TB clinic, the limited (TB) staff capacity to conduct HIV counselling

adversely impacts the availability of routine patient testing. The lack of training is compounded by a decentralized TB programme that provides diagnostic and treatment services in the periphery, beyond the direct reach of current VCT services. Once TB patients are at home, they rely on transportation support or home-based care services to keep appointments for routine TB/HIV care.

Conclusions

The TB burden among the HIV-infected population of Asiam is well documented, and co-management of TB/HIV is feasible at district level. However, HIV-related services are not yet centred at the community level, which impacts determination of HIV status for TB patients and subsequent access to HIV services in some settings. Since the original pilot sites were established, TB/HIV activities have been expanded to 15 additional districts under the COC framework. Patients need for transportation support to keep clinic appointments is an indirect indicator of the effect of poverty. Sustaining and expanding the integration process will require long-term commitment on the part of donors and government agencies. Nongovernmental organizations and other health partners must be brought into the linkage process, under the Ministry of Health mandate, in support of a standard, comprehensive patient management system that will facilitate monitoring and evaluation according to international standards. Such a patient-centred approach is an essential component of the new Stop TB Strategy and a necessary condition for further scaling up of activities in Asiam.