

7.4 Eastern European Region: summary of planned activities, impact and costs

Achievements

The rapid increase in case notification rates in the Eastern European Region after the collapse of the Soviet Union – reaching nearly 15% per year – appears to have been halted. Case notification rates peaked in 2001, since when they have started slowly to decline. DOTS coverage increased from 30% in 2000 to 39% in 2003 and is expected to reach 46% in 2005. The case detection rate was only 22% in 2003 but is expected to reach 40% in 2005. However, this progress has to be seen against a 2005 global target of 70%. The treatment success rate in DOTS programmes reached 76% in the 2002 cohort, with a target of 85% for 2005. Improved treatment success rates can be attributed to improved implementation of DOTS, sometimes as a result of the introduction of incentives and enablers targeting socially vulnerable TB patients and health workers involved in TB control. Special risk groups – minorities, refugees and asylum seekers – have been targeted in some places, but the interventions are limited to the project areas, in spite of the good results achieved.

With assistance from the Green Light Committee and several partners, sound MDR-TB control based on WHO recommendations has been implemented countrywide in Estonia and Latvia, and pilot-testing has started in Azerbaijan and Georgia (in prison projects), Kyrgyzstan, the Republic of Moldova, Romania, the Russian Federation and Uzbekistan. A number of countries are planning to set up pilot projects and scale up DOTS-Plus, with funding mainly from the GFATM. Pilot projects of collaborative TB/HIV activities to address HIV-related TB have commenced or are planned in most of the countries with a high burden of TB/HIV coinfection.

Challenges

The Eastern European Region has the lowest level of DOTS coverage and DOTS case detection of all regions. The regional treatment success rate is second-lowest, only slightly higher than that in the high HIV prevalence African Region. The expansion of high quality TB diagnostic and treatment services in the Eastern European Region is severely limited by lack of political will, weak public health infrastructure (particularly a lack of laboratory capacity to perform high quality bacteriological investigations), the vertical organization of TB control programmes, limited involvement of important health care providers, and, perhaps most importantly, inadequately trained human resources.

The majority of TB patients in the Region belong to socially vulnerable groups, such as the homeless, the unemployed, migrants, alcohol-dependent people, and ex-prisoners. With measures to alleviate poverty and improve living standards in these countries, public health efforts to control TB will have only limited impact.

The wide extent of drug resistance (including MDR-TB) in Eastern Europe represents a critical challenge to TB control, as reflected in low treatment success rates. MDR-TB patients managed outside DOTS-Plus projects are treated according to

the availability of drugs and the ability of patients to purchase drugs, with a high risk of inadequate treatment and continuing amplification of drug resistance. Three reports on global anti-TB drug resistance surveillance have confirmed the serious scale and spread of drug resistance in Eastern Europe, especially in the former Soviet Union countries. In addition, drug resistance patterns are more severe than in other regions, with TB strains often resistant to all first-line drugs and also to some second-line drugs.

Prisons in the former Soviet Union have been highlighted as a breeding ground for TB, and especially MDR-TB, which spreads easily as a result of overcrowding, inadequate ventilation, malnutrition and poor hygiene. The incidence of TB is approximately 50 times higher, and the mortality rate approximately 28 times higher, among prisoners than among the civilian population in these countries. Drug shortages and weak laboratory services resulting in late diagnosis and inadequate treatment have led to a high burden of MDR-TB in the penal system. In addition, TB control in prisons is poorly integrated with civilian TB control programmes.

HIV has spread rapidly in the Eastern European Region since the late 1990s, particularly among intravenous drug users. An estimated 50–90% of HIV infections in Eastern Europe and Central Asia are caused by injecting drug use. The lack of coordination between TB and HIV/AIDS control programmes in these countries and the absence of a clear strategy to address HIV in intravenous drug users – in conjunction with the general constraints in TB control described above – are likely to result in a large epidemic of HIV-related TB among intravenous drug users in the Region, with the worrying possibility of overlap between HIV and MDR-TB.

Priority activities 2006–2015

Mobilizing political support is crucial to implement the priority activities. An important priority is to complete DOTS coverage, while increasing the involvement of all relevant health care providers, especially the public primary health care sector, in identifying suspects, and carrying out primary diagnosis and follow-up treatment of TB patients. Special attention is needed to link prison health services (and other non-Ministry of Health services) with national TB programmes. Incentive schemes need to be scaled up. The current role of the private sector in TB care should be studied and the potential for collaboration explored. The quality of training activities to develop and sustain a competent workforce for TB control must be assured.

It is essential to improve the laboratory network to meet international standards and provide reliable services for diagnosing TB and MDR-TB. Drug resistance surveillance will be expanded. Quality-assured culture and drug susceptibility testing should be available to cover 90% of all TB cases in 2010 and 100% in 2015 respectively. A massive effort is needed to scale-up DOTS-Plus implementation beyond the pilot phase and as an integrated component of TB control services. Population coverage of DOTS-Plus should expand to 70% in 2010 and 100% in 2015.

Coordination for TB/HIV should be launched in countries to establish surveillance of HIV among TB patients and to implement collaborative TB/HIV activities, especially targeted at injecting drug users. All the countries with a high burden of HIV-related TB will be implementing collaborative TB/HIV activities, including HIV surveillance among TB patients, by 2010.

Expected effects and costs

Through intensified efforts, DOTS is expected to reach 100% population coverage by 2010. Case detection is expected to increase to 72% in 2010 and then accelerate to 97% in 2015. The treatment success rate is expected to reach 85% by 2010.

About 2.2 million people will be treated in DOTS programmes from 2006 to 2015, and more than 410 000 in DOTS-Plus. In addition, about 31 000 TB patients will be enrolled on antiretroviral therapy. The combined effect of all interventions will be to prevent about 218 000 deaths, in comparison with a situation in which no DOTS programmes are implemented, or about 155 000 deaths in comparison with a situation in which TB control efforts are sustained at 2005 levels. With the implementation of sound TB control, it is also expected that the estimated proportion of re-treatment cases will decrease from 42% in 2005 to 18% in 2015.

The MDG target to have halted and begun to reverse the incidence of TB by 2015 will be met. The Partnership's additional 2015 targets to halve prevalence and death rates from the 1990 baseline will be achieved later than 2015 in Eastern Europe. This is because of the rapid increase in these parameters during the 1990s, and the additional serious constraints described above. The estimated total cost of DOTS expansion, DOTS-Plus and TB/HIV control activities in the Eastern European region from 2006 to 2015 is US\$8.9 billion.

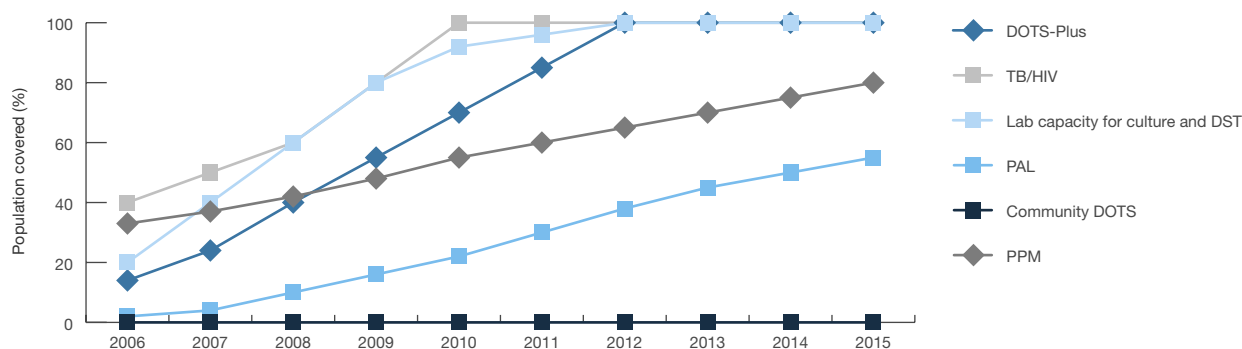
TABLE 12: COST OF PLANNED TB CONTROL ACTIVITIES, EASTERN EUROPEAN REGION 2006–2015

Planned activities	US\$ millions
DOTS expansion and quality	4,809 (54%)
DOTS-Plus	3,928 (44%)
TB/HIV collaborative activities	186 (2%)
TOTAL	8,923 (100%)

SUMMARY CHARTS FOR EASTERN EUROPEAN REGION

FIGURE 25: PLANNED SCALE UP OF ACTIVITIES 2006-2015

Eastern European Region



N.B. Population coverage is the percentage of the population that lives in an area where the activity is implemented. For TB/HIV collaborative activities the percentage refers to the proportion of the eligible population, i.e. the population living in areas with an HIV prevalence above 1%. For DOTS-Plus, it is the percentage of detected MDR-TB cases that are enrolled in DOTS-Plus programmes.

TABLE 13: MILESTONES RELATED TO IMPLEMENTATION OF DOTS EXPANSION, DOTS-PLUS AND TB/HIV ACTIVITIES (a)

Eastern European Region	2006 (b)	2010 (b)	2015 (b)
DOTS EXPANSION			
DOTS coverage	56%	100%	100%
Total number of new ss+ patients treated in DOTS programmes (thousands)	73 (158)	110 (151)	111 (113)
Case detection rate new ss+ (%)	46%	73%	98%
Treatment success rate new ss+ (%)	77%	85%	85%
Total number of new ss-/extra-pulmonary patients treated in DOTS programmes (thousands)	88 (198)	108 (194)	137 (149)
Percentage of new ss-/extra-pulmonary patients treated in DOTS programmes	44%	56%	92%
DOTS-Plus			
Total number of detected MDR-TB patients treated in DOTS-Plus programmes (thousands)	14 (78)	50 (71)	45 (45)
Percentage of detected MDR-TB cases treated in DOTS-Plus programmes	18%	70%	100%
MDR-TB treatment success rate (%)	73%	76%	80%
Percentage of culture positive cases that are re-treatment cases	39%	30%	18%
TB/HIV			
Total number of PLWHA attending HIV services screened for TB (thousands)	82 (171)	745 (745)	1,143 (1,143)
Percentage of PLWHA attending HIV services screened for TB (c)	48%	100%	100%
Total number of newly diagnosed and eligible PLWHA offered IPT (thousands)	21 (714)	141 (1,582)	203 (2,468)
Percentage of PLWHA offered IPT	3%	9%	8%
Total number of TB patients in DOTS programmes HIV tested and counselled (thousands)	18 (54)	111 (131)	126 (149)
Percentage of TB patients treated in DOTS programmes HIV tested and counselled	34%	85%	85%
Total number of TB patients (HIV positive and eligible) in DOTS programmes enrolled on ART (thousands)	0.5 (1.1)	3.1 (5.3)	5.1 (9.2)
Percentage of TB patients (HIV positive and eligible) in DOTS programmes enrolled on ART	45%	57%	59%

(a) The percentages are not always exactly the numerator divided by the denominator due to rounding errors.

(b) Numbers in parentheses indicate the denominator. For DOTS Expansion it is new TB cases.

For DOTS-Plus it is the total number of detected MDR-TB cases.

For PLWHA screened for TB it is the total number of PLWHA attending HIV services. For PLWHA offered IPT it is the total number of PLWHA.

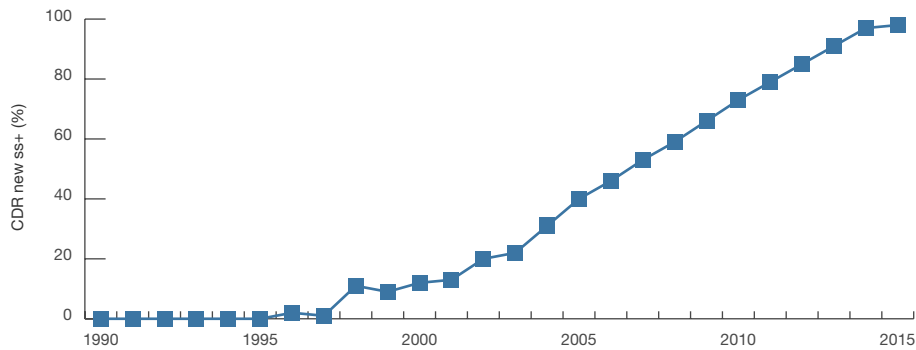
For TB patients HIV tested and counselled it is the total number of TB patients treated under DOTS in areas covered by TB/HIV collaborative activities.

For TB patients enrolled on ART it is the total number of HIV positive TB patients in DOTS programmes that are eligible for ART in areas covered by TB/HIV collaborative activities.

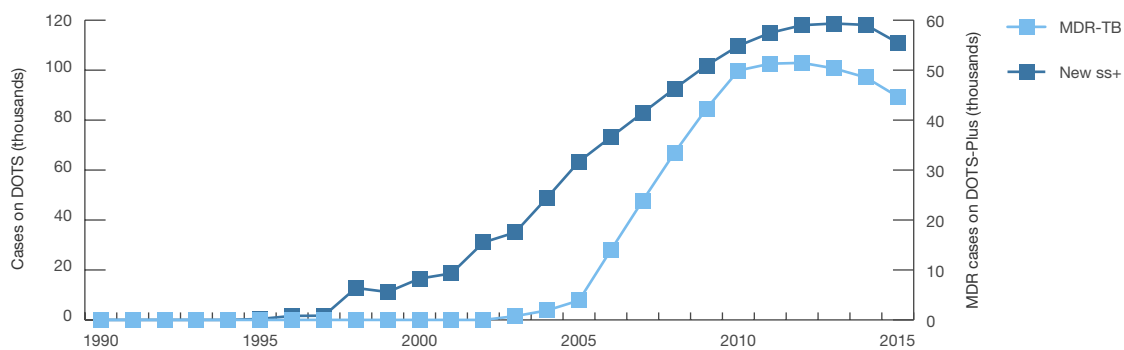
(c) HIV services include testing and counselling and HIV treatment and care services.

FIGURE 26: ESTIMATED IMPACT AND COSTS OF PLANNED INTENSIFIED ACTIVITIES 2006–2015

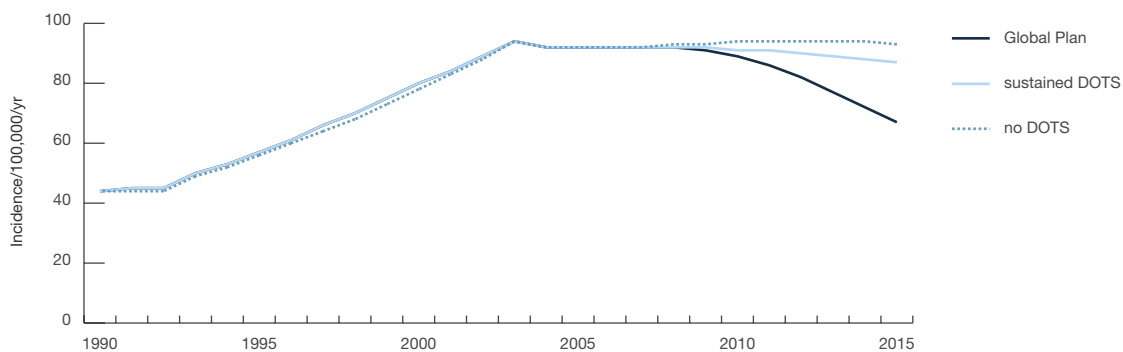
Eastern European Region: Case detection rate, new ss+ cases



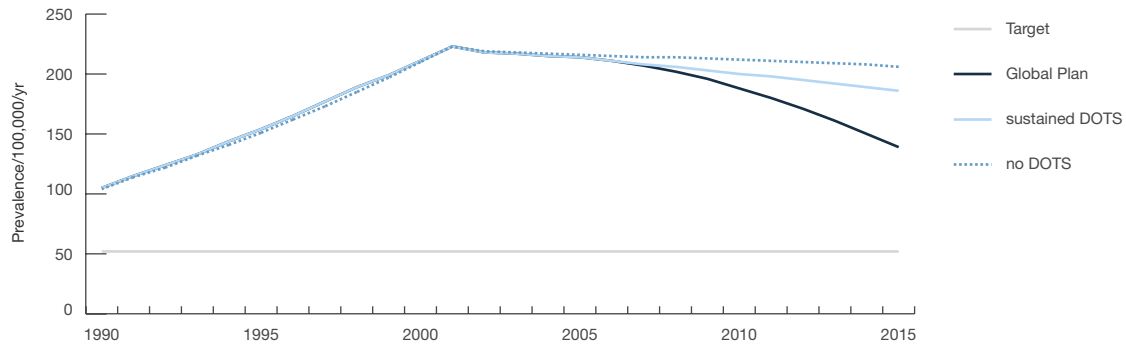
Eastern European Region: Number of cases treated under DOTS/DOTS-Plus



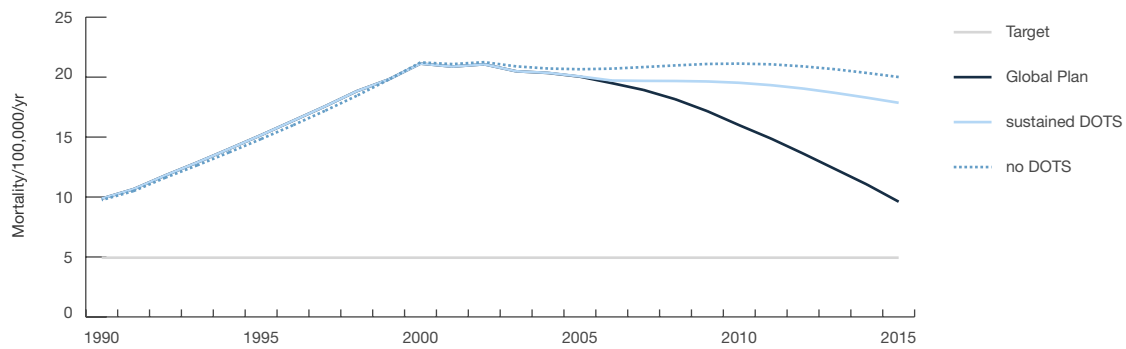
Eastern European Region: Incidence



Eastern European Region: Prevalence



Eastern European Region: Mortality



Eastern European Region: Total costs

