

# Russian Federation

Despite a high nominal DOTS coverage in the Russian Federation, the case detection rate under DOTS remains low, particularly for smear-positive cases. Death, defaulting and treatment failure contribute almost equally to the very low treatment success rate. Plans to provide second-line treatment to 24 000 MDR-TB patients in 2007 and in 2008 (up from 4000 in 2006) are not yet fully funded. In order to implement these plans, the NTP will need to train the appropriate staff, ensure a high-quality laboratory service and a secure supply of second-line drugs. If successfully implemented, they will make a significant contribution to improving the welfare of people with TB in the Russian Federation and in reducing the further spread of MDR-TB.

## SURVEILLANCE AND EPIDEMIOLOGY, 2006

**Population** (thousands)<sup>a</sup> 143 221

### Estimates of epidemiological burden<sup>1</sup>

Incidence (all cases/100 000 pop/yr)	107
Trend in incidence rate (%/yr, 2005–2006) <sup>2</sup>	<b>0.7</b>
Incidence (ss+/100 000 pop/yr)	48
Prevalence (all cases/100 000 pop) <sup>2</sup>	<b>125</b>
Mortality (deaths/100 000 pop/yr) <sup>2</sup>	<b>17</b>
Of new TB cases, % HIV+ <sup>b</sup>	3.8
Of new TB cases, % MDR-TB <sup>c</sup>	13
Of previously treated TB cases, % MDR-TB <sup>c</sup>	49

### Surveillance and DOTS implementation

Notification rate (new and relapse/100 000 pop/yr)	87
Notification rate (new ss+/100 000 pop/yr)	23
DOTS case detection rate (new ss+, %)	<b>44</b>
DOTS treatment success (new ss+, 2005 cohort, %)	<b>58</b>
Of new pulmonary cases notified under DOTS, % ss+	35
Of new cases notified under DOTS, % extrapulmonary	10
Of new ss+ cases notified, % in women (DOTS and non-DOTS)	26
Of sub-national reports expected, % received at next reporting level <sup>d</sup>	100

### Laboratory services<sup>3</sup>

Number of laboratories performing smear microscopy	4 953
Number of laboratories performing culture	978
Number of laboratories performing DST	302
Of laboratories performing smear microscopy, % covered by EQA	0

### Management of MDR-TB

Of new cases notified, % receiving DST at start of treatment	20
Of new cases receiving DST at start of treatment, % MDR-TB	11
Of re-treatment cases notified, % receiving DST	20
Of re-treatment cases receiving DST, % MDR-TB	23

### Collaborative TB/HIV activities

National policy of counselling and testing TB patients for HIV? (to all patients)	Yes
National surveillance system for HIV-infection in TB patients?	Yes
Of TB patients (new and re-treatment) notified, % tested for HIV	57
Of TB patients tested for HIV, % HIV+	2.3
Of HIV+ TB patients detected, % receiving CPT	–
Of HIV+ TB patients detected, % receiving ART	–

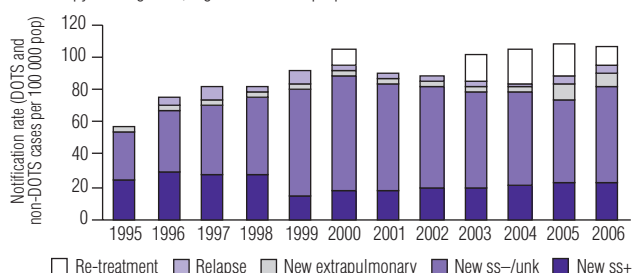
### WHO European Region (EUR)

Rank based on estimated number of incident cases (all forms) in 2006



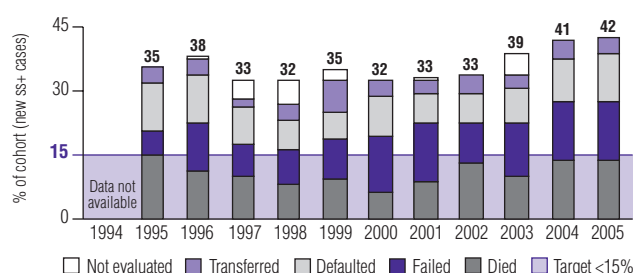
### Case notifications

Very high proportion of ss– notifications among new cases suggests under-use of microscopy for diagnosis; high and variable proportion of re-treatment cases



### Unfavourable treatment outcomes, DOTS

Death, treatment failure and default rates all continue to be high and contribute to low treatment success rate



DOTS expansion and enhancement	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DOTS coverage (%)	–	2.3	2.3	5.0	5.0	12	16	25	25	45	83	84
DOTS notification rate (new and relapse/100 000 pop)	–	0.6	1.2	1.2	2.6	7.7	9.9	12	14	24	57	72
DOTS notification rate (new ss+/100 000 pop)	–	0.2	0.4	0.5	0.9	2.5	2.8	3.5	4.4	6.9	16	21
DOTS case detection rate (all new cases, %)	–	0.7	1.2	1.1	2.3	6.4	8.3	11	13	21	50	63
DOTS case detection rate (new ss+, %)	–	0.5	1.0	1.0	1.8	4.9	5.6	7.4	9.3	15	33	44
Case detection rate within DOTS areas (new ss+, %) <sup>e</sup>	–	21	45	20	36	41	35	29	37	32	40	53
DOTS treatment success (new ss+, %)	65	62	67	68	65	68	67	67	61	59	58	–
DOTS re-treatment success (ss+, %)	58	64	–	49	45	49	48	46	45	34	31	–

**IMPLEMENTING THE STOP TB STRATEGY<sup>1</sup>****DOTS EXPANSION AND ENHANCEMENT****Political commitment, standardized treatment, and monitoring and evaluation system****Achievements**

- Ensured adequate supply of TB diagnostic equipment (microscopes, X-ray including mobile equipment disposables)
- Provided social support for TB patients in 80 out of 86 regions to improve treatment adherence, including provision of food parcels, psychological advice and legal support through Red Cross and/or regional TB services
- Produced annual report of NTP activities

**Planned activities**

- Develop national plan for TB control to reach MDGs
- Improve TB case detection through PHC services by improved training in TB detection and treatment, development of IEC material and monetary incentives for health workers and TB patients
- Increase the number of regions offering social support to TB patients, and improve the support offered in order to increase adherence to TB treatment

**Quality-assured bacteriology****Achievements**

- Provided free-of-charge diagnosis through network of 4953 smear microscopy units, 978 culture units and 302 DST units
- Supplied equipment and consumables to microscopy points and bacteriological laboratories to improve access to and quality of laboratory diagnostics, culture, identification and DST for TB diagnosis and treatment control
- Trained 345 laboratory staff trainers at federal level to provide training in their regions on microscopy and bacteriological diagnostics
- Implemented EQA in 998 laboratories (data on performance not available)

**Planned activities**

- Continue EQA for microscopy and culture
- Purchase consumables for 2700 existing microscopy centres

**Drug supply and management system****Achievements**

- Established 6-month buffer stock for first-line anti-TB drugs at all regional TB facilities
- Trained TB managers in rational management of anti-TB drugs

**Planned activities**

- Ensure regular supply of anti-TB drugs for civil and prison TB services
- Conduct quality control for anti-TB drugs procured
- Support development of new anti-TB drugs and vaccines

**TB/HIV, MDR-TB AND OTHER CHALLENGES****Collaborative TB/HIV activities****Achievements**

- Established TB/HIV Coordination Board within the Ministry of Health and Social Development
- Increased TB and HIV detection through new guidelines, improved TB/HIV recording/reporting system and appointed TB/HIV coordinators
- Implement policy of testing all new TB patients for HIV
- Initiated development of TB/HIV prevention and treatment strategies
- Expanded system for specialized medical care for TB/HIV patients and improved access to treatment
- Established TB/HIV surveillance system
- Established and equipped TB/HIV counselling and testing units
- Trained 4116 TB and HIV staff in collaborative TB/HIV activities

**Planned activities**

- Continue working towards improving accuracy of diagnosis and of reporting of HIV in TB patients
- Finalize development of TB/HIV treatment and prevention strategies
- Continue social rehabilitation and introduce psychological rehabilitation
- Improve TB case-finding among HIV patients
- Further strengthen TB/HIV surveillance system
- Continue training on clinical and managerial aspects TB/HIV
- Maintain coordination between TB and HIV control services

**Diagnosis and treatment of multidrug-resistant TB****Achievements**

- Procured second-line drugs for all 86 regions and 5 federal TB research institutes
- Trained 452 regional TB specialists on management of MDR-TB
- Began selective DRS in 11 sites
- Introduced quality control for DST
- Secured GLC approval of projects in 13 regions to treat a total of 4546 MDR-TB patients
- Applied to GLC for projects in 9 regions and 2 research TB institutes to treat a total of 1782 MDR-TB patients

**Planned activities**

- Ensure adequate supply of second-line drugs, equipment and consumables for MDR-TB management
- Set up reporting and recording system for MDR-TB
- Start new MDR-TB management projects approved by GLC
- Set up drug resistance surveillance system
- Expand and strengthen quality control system for DST
- Establish 5 centres of excellence for MDR-TB management in civilian TB services

**High-risk groups and special situations****Achievements**

- Initiated TB case-finding among high-risk groups (household contacts, migrants, homeless, prisoners and HIV patients)
- Introduced infection control measures for hospitals and outpatient clinics
- Implemented quality control measures for DST in prison laboratories
- Started selective DRS in 11 sites in prisons

**Planned activities**

- Continue TB case-finding among high-risk groups
- Establish 8 centres of excellence on MDR-TB management in prisons
- Increase stock of first-line anti-TB drugs in prisons
- Initiate treatment for at least 400 MDR-TB patients within the Global Fund TB control project in prisons

<sup>1</sup> Unless otherwise specified, achievements are for financial year 2006; planned activities are for financial year 2007.

**HEALTH SYSTEM STRENGTHENING, INCLUDING HUMAN RESOURCE DEVELOPMENT****Achievements**

- Involved broad range of partners from health and other sectors in planning for TB control
- Developed guidelines and training materials on TB control for PHC workers
- Involved PHC services in TB control at municipal level
- Trained 2146 TB and PHC staff in TB control in general management
- Trained master trainers in TB management and on TB for PHC and laboratory diagnosis

**Planned activities**

- Perform assessment/mapping of available human resources within TB services, their distribution, qualifications and duties
- Develop human resources development plan for TB control which will be linked to a sector-wide HRD plan
- Identify monetary and other incentives and motivators to attract medical doctors to work for TB control
- Further increase role of PHC in TB control
- Revise postgraduate and graduate curricula in line with revised national TB control strategy

**ENGAGING ALL CARE PROVIDERS****Achievements**

- Conducted situation analysis for TB projects supported by non-profit organizations; initiated new pilot projects; developed guidelines and scaled up PPM
- Secured endorsement of ISTC by professional organizations
- Involved NGOs and social services in TB control to support TB patients
- Improved collaboration with Ministry of Justice and Ministry of Defence for TB control

**Planned activities**

- Involve non-profit organizations in TB case-finding, treatment observation and defaulter tracing

**EMPOWERING PEOPLE WITH TB, AND COMMUNITIES****Advocacy, communication and social mobilization****Achievements**

- Implemented ACSM activities in all 386 basic TB service units
- Provided general public with information on TB control
- Organized educational, media and advocacy campaign on TB control countrywide to commemorate World TB Day
- Organized contests and training for media on TB

**Planned activities**

- Continue TB education for general public
- Evaluate population awareness of TB and assess priority sources of information
- Engage media in TB education and advocacy through contests for journalists, training and roundtable meetings on TB
- Organize educational and media/advocacy campaigns on TB

**Community participation in TB care****Achievements**

- Involved communities in TB control in 91 out of 386 TB service units
- Conducted activities with TB patients, their relatives and other people affected through system of "TB schools" that provide health education and psychological support
- Involved communities in organizing national anti-TB day

**Planned activities**

- Continue organizing activities with relatives of TB patients
- Involve communities in organizing events for World TB Day such as competitions for children, educational campaigns by volunteers, NGOs and former TB patients

**Patients' Charter****Achievements**

- Translated Patients' Charter into Russian

**Planned activities**

- Introduce and endorse the Patient's Charter

**RESEARCH, INCLUDING SPECIAL SURVEYS AND IMPACT MEASUREMENT****Achievements**

- Initiated 14 operational research projects
- Completed studies on social status of patients, MTB typing, TB mortality and new surgical methods for treatment of extrapulmonary TB

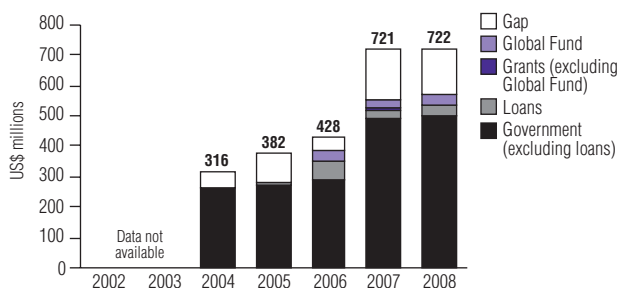
**Planned activities**

- 60 studies planned, with a focus on epidemiology, high-risk groups, social rehabilitation, psycho-socio rehabilitation and medical rehabilitation

**FINANCING THE STOP TB STRATEGY**

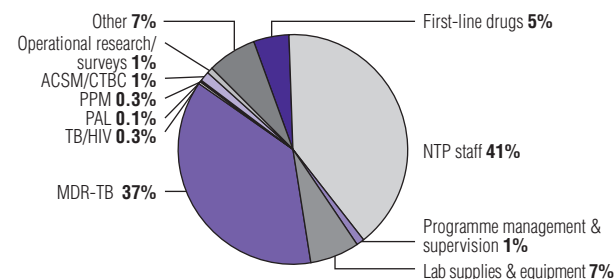
**NTP budget by source of funding**

Substantial increase in funding needs in 2007 and 2008; while funding from the government has grown, large funding gaps remain



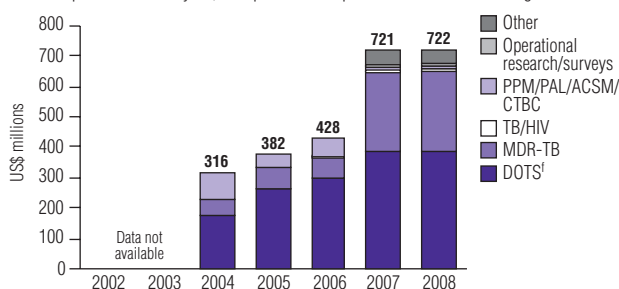
**NTP budget by line item, 2008**

The largest share of the budget is for dedicated NTP staff and MDR-TB



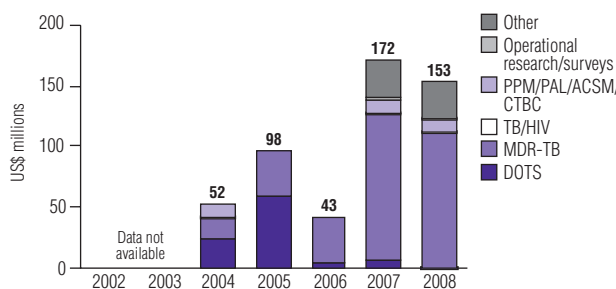
**NTP budget by line item**

Large increase in funding needs for MDR-TB 2007–2008, to cover treatment for 24 000 MDR-TB patients in each year; cost per MDR-TB patient for second-line drugs US\$ 11 000



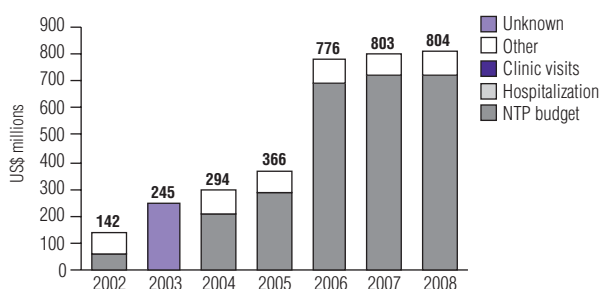
**NTP funding gap by line item**

Persistent and large funding gaps for second-line drugs since 2004



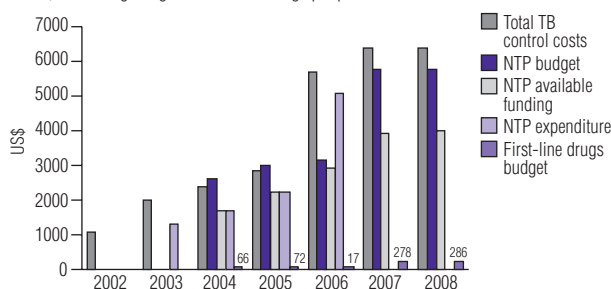
**Total TB control costs by line item<sup>4</sup>**

Hospitalization costs are for about 80 000 dedicated TB beds



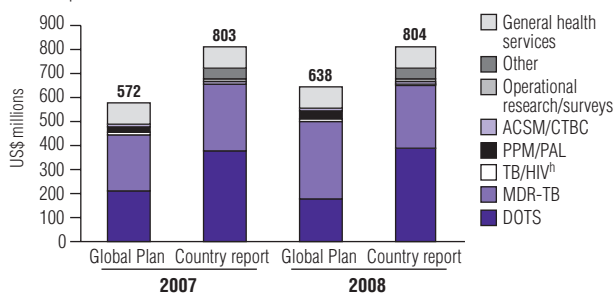
**Per patient costs, budgets and expenditures<sup>5</sup>**

Increasing cost, budget and expenditure per patient; highest costs and budget among all HBCs; increasing budget for first-line drugs per patient



**Comparison of country report and Global Plan:<sup>9</sup> total TB control costs, 2007–2008**

Cost of country report far exceeds costs estimated in Global Plan; targets for MDR-TB patients to be treated in country report, as well as costs, similar to those in Global MDR/XDR Response Plan



**NTP budget and funding gap by Stop TB Strategy component**

(US\$ millions)	2007		2008	
	BUDGET	GAP	BUDGET	GAP
DOTS expansion and enhancement	383	6.4	384	0.8
TB/HIV, MDR-TB and other challenges	269	122	269	112
Health system strengthening	1.0	0.7	1.0	0.7
Engage all care providers	2.0	1.5	2.0	1.4
People with TB, and communities	10	7.4	10	6.9
Research	5.0	2.1	5.0	1.7
Other	51	32	51	30

**Financial indicators for TB**

Government contribution to NTP budget (including loans)	72%	74%
Government contribution to total cost of TB control (including loans)	75%	77%
NTP budget funded	76%	79%
<i>Per capita health financial indicators (US\$)</i>		
NTP budget per capita	5.1	5.1
Total costs for TB control per capita	5.7	5.7
Funding gap per capita	1.2	1.1
Government health expenditure per capita (2004)		150
Total health expenditure per capita (2004)		245

**SOURCES, METHODS AND ABBREVIATIONS**

a–h Please see footnotes page 169.

- Incidence, prevalence and mortality estimates include patients infected with HIV. Incidence estimates based on the assumption that 78% of cases (new and relapse) were detected in 1995 (DOTS and non-DOTS). Moving average of notification rate (new and relapse, DOTS and non-DOTS combined) used as trend in incidence.
- MDG and STB Partnership indicators shown in bold. Targets are 70% case detection of smear-positive cases under DOTS, 85% treatment success, to ensure that the incidence rate is falling by 2015, and to reduce incidence rates and halve 1990 prevalence and mortality rates by 2015. Estimates for 1990 are prevalence 82/100 000 pop and mortality 10/100 000 pop/yr.
- For routine diagnosis, there should be at least one laboratory providing smear microscopy per 100 000 population. To provide culture for diagnosis of paediatric, extrapulmonary and ss-/HIV+ TB, as well as DST for re-treatment and failure cases, there should be at least one culture facility and one DST facility in each of the 88 oblasts and equivalent administrative regions.
- Total TB control costs for 2002–2006 are based on expenditure, whereas those for 2007–2008 are based on budgets. Estimates of the costs of clinic visits and hospitalization are WHO estimates based on data provided by the NTP and from other sources. See Methods for further details.
- NTP available funding for 2004–2006 is based on the amount of funding actually received, using retrospective data; available funding for 2002–2003 and 2007–2008 is based on prospectively reported budget data, and estimated as the total budget minus any reported funding gap.
- indicates not available; pop, population; ss+, sputum smear-positive; ss–, sputum smear-negative pulmonary; unk, pulmonary – sputum smear not done or result unknown; yr, year.