

COUNTRY PROFILE

Nigeria

Among African countries, Nigeria has the highest estimated number of new TB cases annually. Following the Abuja Declaration¹ in 2001, the DOTS strategy was adopted nationally and is now being applied in all states. There has been rapid progress in DOTS expansion in 2003, with relatively high treatment success. Unfortunately, political commitment has not yet been translated into strong support for the health system, and much of the approved government funding for health care has not been released for use in health programmes. This situation has discouraged a number of external donors, including the GFATM, who are reluctant to provide additional funds while government funding is very limited. Although Nigeria has an extensive national health infrastructure, it lacks the resources needed to function effectively. Nigeria is now decentralizing its health system and clarifying the responsibilities and services at each level, which should result in better management and

coordination. The spread of HIV infection is adding to the burden of TB; more than a quarter of adults with TB are coinfecting with HIV. Notwithstanding the hesitation of some external donors, Nigeria now has an excellent opportunity to develop a programme of collaborative TB/HIV activities with the help of an award from the President's Emergency Plan for AIDS Relief.

System of TB control

Although the NTP was launched in 1991, the nationwide adoption and expansion of the DOTS strategy began only recently, following the Abuja Declaration to Stop TB in October 2001. Previously, only half of the states in Nigeria were supported by international NGOs (mainly dealing with leprosy) that were able to provide TB diagnosis and treatment; these did not include Lagos or the Federal Capital Territory (FCT), Abuja. All 37 states have at least one local government area (LGA) that is implementing DOTS.

The public health sector accounts for less than half of the health services provided in Nigeria, the rest being met by NGOs and the private sector, including hospitals, clinics and pharmacies. Health sector reform is under way in order to clearly establish the roles and responsibilities for health service provision at each level, and a Health Act will define the decentralization of functions. Tertiary care is provided and health regulations and technical guidelines developed at the federal level. States are responsible for secondary care and specialized services, while the LGAs are responsible for providing primary health care. The basic unit of health care is the ward. Each ward has 10 000–20 000 people and there are an average of 10 wards per LGA. Ward staff utilize community resources to help deliver the minimum package of care. Public health services will be decentralized from the LGA to the ward, and TB and leprosy control will be included in the minimum package of health services.

The NTP is organized at the federal, state and LGA levels. There is a central unit at the federal level led by a national coordinator. Each of the 37 state programmes is run by a state TB and leprosy control officer. The LGA is the main operational level of the programme, and most LGAs have a TB/leprosy control supervisor. The LGA TB/leprosy control supervisor is, in most cases, a community health officer or nurse who oversees activities in the health facilities.

The NRL in the National Institute for Medical Research in Lagos is responsible for overall supervision and quality assurance of the laboratory network. Six zonal reference laboratories supervise peripheral laboratories. The peripheral laboratories in PHC facilities, NGOs and private facilities all do direct smear microscopy.

PROGRESS IN TB CONTROL IN NIGERIA

Indicators

DOTS treatment success, 2002 cohort	79%
DOTS case detection rate, 2003	18%
NTP budget available, 2004	73%
Government contribution to NTP budget, including loans, 2004	37%
Government contribution to total TB control costs, including loans, 2004	66%
Government health spending used for TB control, 2004	4%

Major achievements

- Establishment of DOTS services in three more LGAs in each of 17 states, including training of general health workers and laboratory technicians, and purchase and distribution of laboratory materials
- Approval of a second year of funding from the GDF for anti-TB drugs and distribution of current anti-TB drugs to DOTS facilities throughout the country
- Appointment of a focal point for collaborative TB/HIV activities by the National AIDS and STD Control Programme
- Referral of TB patients with HIV/AIDS for HIV care and support, including ART in 25 pilot sites

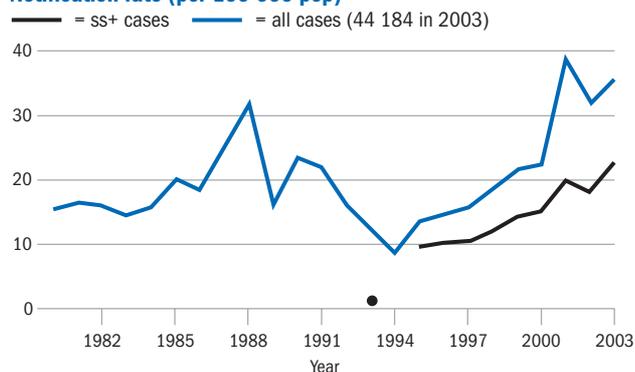
Major planned activities

- Assess HR needs and strengthen capacity of general PHC and hospital staff in integrated TB control activities
- Establish at least one microscopy centre in each of the remaining LGAs, and strengthen collaboration between the microscopy centres and the NRL
- Establish a standardized quality assurance system for the entire country in 2005

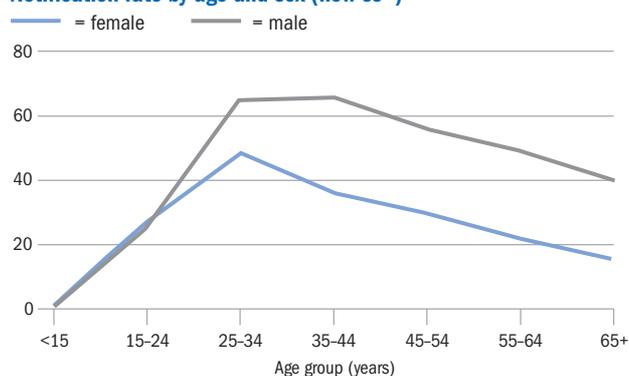
¹ Abuja declaration on HIV/AIDS, tuberculosis and other related infectious diseases. Addis Ababa, The Economic Commission for Africa, 2001.

LATEST ESTIMATES ^a		TRENDS	2000	2001	2002	2003
Population	124 009 171	DOTS coverage (%)	47	55	55	60
Global rank (by est. number of cases)	4	Notification rate (all cases/100 000 pop)	23	39	32	36
Incidence (all cases/100 000 pop/year)	293	Notification rate (new ss+/100 000 pop)	15	20	18	23
Incidence (new ss+/100 000 pop/year)	126	Detection of all cases (%)	8.9	15	11	12
Prevalence (all cases/100 000 pop)	546	Case detection rate (new ss+, %)	14	17	15	18
TB mortality (all cases/100 000 pop/year)	85	DOTS case detection rate (new ss+, %)	14	14	13	18
TB cases HIV+ (adults aged 15-49, %)	27	DOTS case detection rate (new ss+)/coverage (%)	30	25	24	30
New cases multidrug resistant (%)	1.7	DOTS treatment success (new ss+, %)	79	79	79	-

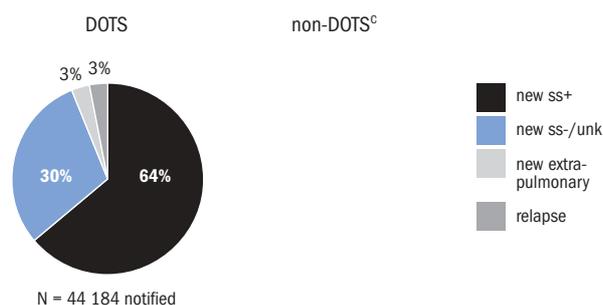
Notification rate (per 100 000 pop)



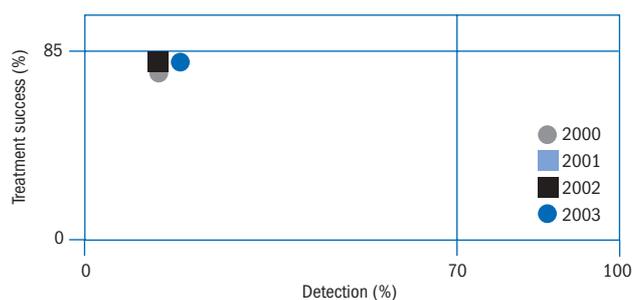
Notification rate by age and sex (new ss+)^b



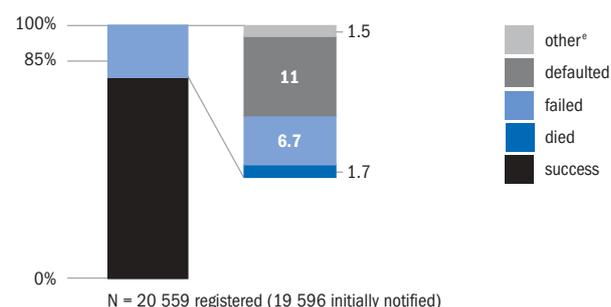
Case types notified



DOTS progress towards targets^d



DOTS treatment outcomes (new ss+)



Non-DOTS treatment outcomes (new ss+)



Notes

ss+ indicates smear-positive; ss-, smear-negative; pop, population; unk, unknown.

Absence of a graph indicates that the data were not available or applicable.

^a See Methods for data sources. Prevalence and mortality estimates include patients with HIV.

^b The sum of cases notified by age and sex is less than the number of new smear-positive cases notified for some countries.

^c Non-DOTS is blank for countries which are 100% DOTS, or where no non-DOTS data were reported.

^d DOTS case detection rate for given year, DOTS treatment success rate for cohort registered in previous year.

^e "Other" includes transfer out and not evaluated, still on treatment, and other unknown.

Surveillance and monitoring

Among African countries, Nigeria has the highest estimated number of new TB cases each year. An estimated 6% of all adults, and 27% of adult TB patients, are infected with HIV. The increase in case notifications since 1994 is almost certainly due to a rise in TB incidence associated with the spread of HIV, rather than to improvements in case detection. DOTS coverage has changed little over the nine years for which data have been submitted to WHO (1995–2003), although there was a small increase between 2002 (55%) and 2003 (60%). The proportion of cases that were smear-positive fell between 1995 and 2003. While this could be due in part to increases in TB among HIV-infected people, the reasons for the observed trend need to be investigated further. Although the DOTS case detection rate has increased, the estimate for 2003 remains low at 18%. The treatment success rate was 79% in the 2002 DOTS cohort, with a high default rate (11%). Treatment success has increased only slightly since 1997. Nigeria has not yet taken steps to evaluate the impact of DOTS in reducing transmission, incidence, prevalence or deaths.

Improving programme performance

A major constraint for PHC and the TB control programme is the failure of the government to release funds that have been budgeted and allocated for health and TB control services at all levels. This reflects a low level of political commitment and results in reliance on external funding for TB control operations, mostly from CIDA, DFB, GLRA, NLR and USAID. CIDA funding from mid-2002 to the end of 2003 has made it possible to expand DOTS to the remaining 16 non-DOTS states and FCT Abuja (thus expanding DOTS to all the 36 states of the Federation, including FCT Abuja), to strengthen the central unit's infrastructure and coordination and to establish three zonal TB coordination and control offices. A TBCTA/USAID grant has provided funds for some TB control activities in 2004, including the expansion of the TB laboratory network, providing

supervision and monitoring activities at the central and zonal levels, and training staff and developing human resources for collaborative TB/HIV activities.

Another challenge facing the NTP in Nigeria is the lack of professional health staff in the LGAs. The PHC facilities are staffed mainly by nurses and community health workers, and the physician to population ratio is between 1:160 000 and 1:400 000. Although the TB programme trains supervisors and other senior staff, very few general PHC and hospital staff have been trained in integrated TB control activities. HR needs are being assessed with a view to revising the HRD plan. Currently, states are responsible for training their own staff, while the federal government supports training programmes for TB control in collaboration with research institutions and universities. The National TB and Leprosy Training Centre in Zaria, established in 1991, is responsible for providing the necessary staff training at the LGA and health facility levels. The centre provides a three-month course for LGA TB control supervisors and a two-week course for laboratory technicians.

The supply of anti-TB drugs is adequate, and an application to the GDF for a second year of support has been approved. However, the country's drug policy dates from 1990 and is currently under revision. The federal government is responsible for legislation concerning drugs, while the management and procurement of drugs are decentralized to individual facilities. There is no system of drug control at national or provincial levels once drugs have been approved. There are no drug resistance data for the country.

Diagnostic and laboratory services

The number of TB laboratories is increasing, and smear microscopy is now available in 504 out of 774 LGAs. However, few of these laboratories are covered by a quality assurance system. Nigeria plans to establish a standardized quality assurance system for the whole country in 2005. Stocks of laboratory reagents are low because of the lack of government funding. Most laboratories receive reagents

from the NTP (funded by WHO) or from NGOs, and some are charging patients. In 2005, the NTP plans to establish at least one microscopy centre in each of the remaining LGAs and to strengthen collaboration between the microscopy centres and the NRL.

TB/HIV coordination

The National AIDS and STD Control Programme has appointed a staff member to act as the focal point for collaborative TB/HIV activities. An NPO will be recruited to support these activities using funds provided by the Norwegian government. Many DOTS and ART centres are now starting collaborative TB/HIV activities. In 25 sites, TB patients with HIV/AIDS will have access to comprehensive HIV/AIDS care and support, including the provision of ART.

At the central level, a proposal to develop a strategy document for collaborative TB/HIV activities has been finalized and preparations for a high-level mission are being made in relation to the "3 by 5" initiative. Collaborative TB/HIV activities are constrained by the shortage and high cost of HIV test kits and the shortage of antiretrovirals and drugs for opportunistic infections at both HIV and TB treatment centres. Following a recent award from the President's Emergency Plan for AIDS Relief, collaborative TB/HIV activities will be expanded in 2005.

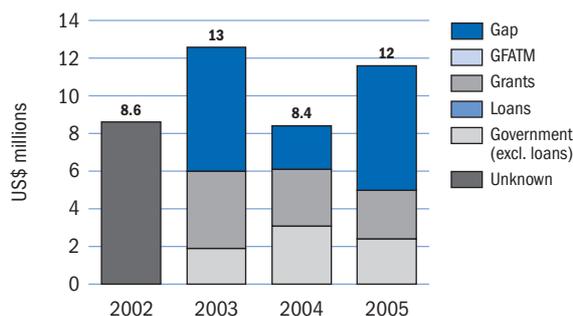
Links with other health-care providers

The NTP has successfully pilot tested the involvement of private clinics in the delivery of DOTS services; this initiative is being expanded to six states with financial support from FIDELIS. Several NGOs are already involved, with efforts being made to strengthen collaboration with general hospitals, specialist TB clinics, medical colleges and prison health services.

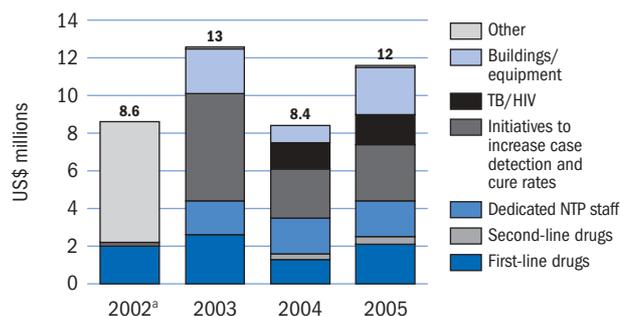
Partnerships

Major technical partners include DFB, DFID, GLRA, IUATLD, Netherlands Leprosy Relief and WHO. CIDA and USAID (TBCTA) are the main funding partners. The GDF provides anti-TB drugs and will start to provide laboratory test kits

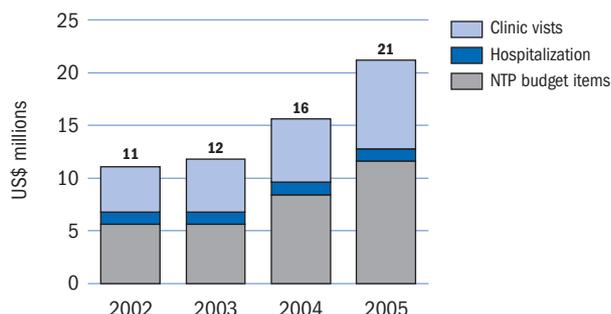
(a) NTP budget by source of funding



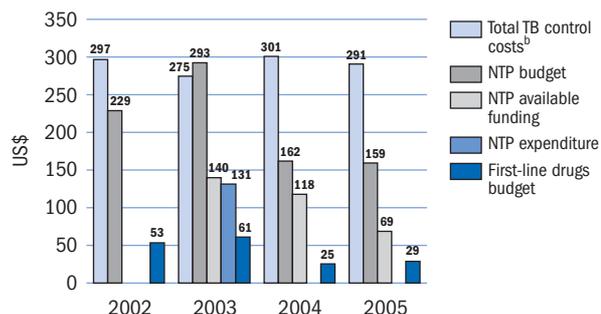
(b) NTP budget by line item



(c) Total TB control costs by line item^b



(d) Per patient costs, budgets, available funding and expenditures



^a In the 2002 budget, the costs of dedicated staff and of building and equipment were not evaluated.

^b Total TB control costs for 2002 and 2003 are based on expenditures, whereas those for 2004 and 2005 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.

in 2005. International leprosy organizations have provided technical assistance for TB control for more than a decade.

Budgets and expenditures

The NTP budget increased from US\$ 8.6 million in 2002 to US\$ 12 million in 2005. However, funding from both the government and donors has been declining since 2003, and in 2005 the funding gap is expected to be around US\$ 7 million, equivalent to 57% of the budget. There are two main reasons for persistent funding gaps. One is that, while a GFATM grant was approved in January 2003, this

was subsequently revoked because of lack of counterpart funds from the government. In 2003, a second reason was that funding from the government was planned at US\$ 3.9 million but reached only US\$ 1.9 million. The largest budget line item each year between 2003 and 2005 is for expansion of DOTS to new LGAs (included in the line item "initiatives to increase case detection and cure rates"). Dedicated TB staff, first-line drugs and buildings and equipment are also relatively large budget items. The budget per patient treated has ranged from US\$ 160 to US\$ 300. Actual expenditures in 2003 were US\$ 5.6 million

(equivalent to US\$ 131 per patient treated), slightly lower than the available funding of US\$ 6.0 million.

Total TB control costs, including visits to health clinics and spending on dedicated TB hospital beds as well as items covered by the NTP budget, are estimated at US\$ 12 million in 2003 (about US\$ 300 per patient treated). If the budget gap for 2005 is filled and the number of patients treated increased to nearly 73 000 as projected, then total TB control costs would reach about US\$ 20 million in 2005 (also about US\$ 300 per patient treated).