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The role of private health sector engagement in TB control in India

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Citation

Lal, S. S. (2019, May 2). *The role of private health sector engagement in TB control in India*. Retrieved from <https://hdl.handle.net/1887/72200>

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Title: The role of private health sector engagement in TB control in India

Issue Date: 2019-05-02

CHAPTER 7*

Global Fund Financing of Tuberculosis Services Delivery in Prisons

*Lee, D., Lal, S. S., Komatsu, R., Zumla, A. & Atun, R.
Global fund financing of tuberculosis services delivery in
prisons. *J Infect Dis* 205 Suppl 2, S274-283, (2012).

7.1 Introduction

In the last 2 decades there have been concerted global efforts to scale up tuberculosis control. Efforts began with the introduction of the directly observed treatment, short-course (DOTS) strategy in the early 1990s, followed by the World Health Organization (WHO) Stop TB Strategy 2006, and in 2010 the Global Plan to Stop TB 2011–2015. These efforts have coincided with large amounts of new external financing, predominantly from the Global Fund to Fight AIDS, Tuberculosis and Malaria. However, despite these efforts and increased external financing, in 2009 there were >9 million new tuberculosis cases¹⁴⁰. Although just over half of the 22 countries with a high burden of tuberculosis were on track to achieving the Millennium Development Goal 6 of halting and reversing tuberculosis incidence by 2015, less than half were on target to halving tuberculosis deaths by the same year¹⁴⁰. Multidrug-resistant (MDR) tuberculosis poses a major threat for all countries, yet case notification was 30 000 globally in 2009, just over one-tenth of global estimates¹⁴⁰.

Although the Global Plan to Stop TB 2011–2015¹³⁴ calls for early detection and treatment of all tuberculosis cases and intensifying screening for the most-at-risk populations, including people in confinement, tuberculosis continues to be a social issue affecting the world's most marginalized and disadvantaged communities. Prisoners are an especially vulnerable population, with increased risk

of ill health, high levels of mental disorders, risk of self-harm, and high rates of infectious diseases such as tuberculosis and human immunodeficiency virus (HIV)¹⁴⁷. Prisoners often come from the lowest socioeconomic groups in societies and, in many cases, from minority or migrant groups, all of which are marginalized groups that have a higher incidence of tuberculosis and MDR tuberculosis compared with the general population¹⁴⁸.

7.2 Tuberculosis in prisons

The latest available estimates suggest that as many as 10 million people worldwide are held in penal institutions. This prison population is expected to increase in the near future. Compared with estimates from 2007, by 2009 prison populations had increased in 71% of all countries, by 64% in African countries, by 76% in Asia, and by 68% in Europe¹⁴⁹. Among this prison population, tuberculosis is a major cause of illness and death¹⁵⁰. Globally, there is limited reliable information on the prevalence and incidence of tuberculosis within correctional facilities such as prisons and other types of detention centers. Furthermore, the contribution of tuberculosis rates in prisons to the transmission rates of new *Mycobacterium tuberculosis* infections in the general population is unclear^{151,152}. However, available estimates suggest that tuberculosis prevalence rates within penitentiary settings are between 5 and 50 times higher than the rates observed in the general population¹⁵³.

In countries with a high prevalence of tuberculosis, the annual case notification rate of all forms of tuberculosis in prisons can be as high

as 7200 per 100 000 population¹⁵⁴. In the countries of the former Soviet Union, prisons and other correction facilities, such as pre-detention centers, have some of the highest MDR tuberculosis rates reported globally. For example, the percentage of MDR tuberculosis in prison populations, as revealed by studies in Russia, has ranged from 12% to 55% in previously treated patients^{155,156}. African countries such as Zambia and Botswana have drug-sensitive tuberculosis rates that are close to 4000 per 100 000 prison population¹⁵⁷, and in Tanzania up to 41% of prisoners had active tuberculosis¹⁵⁸. In the context of Africa and the former Soviet Union, these very high rates of tuberculosis are particularly alarming given the potential for comorbidities of tuberculosis and HIV, the high HIV prevalence in sub-Saharan African countries¹⁵⁹⁻¹⁶², and high HIV levels in the injection drug user population in the countries of the former Soviet Union - a marginalized group that has disproportionately high levels of incarceration¹⁵⁰.

7.3 Prisons as breeding grounds for tuberculosis

The physical environment found in penitentiary settings provides an ideal breeding ground for tuberculosis. Overcrowding, inadequate ventilation, and lack of quarantine facilities all encourage efficient transmission of tuberculosis¹⁵⁰, and the lack of importance accorded to prisoners' health often results in inadequate financial and human resources to provide health services for treatment and prevention of infectious diseases. This is further exacerbated by factors that increase the risk of tuberculosis, including poor nutrition¹⁶³, personal

hygiene, drug addiction, and high-risk behaviors and practices, such as needle sharing and unsafe sex^{154,164}. The structural environment under which prisons are managed and operated also creates challenges to tuberculosis prevention, control, treatment, and care, including the low priority placed on funding for healthcare services for prisoners, lack of control measures, lack of proper training in standard tuberculosis treatment and care practices, and lack of testing facilities and/or quarantine services for isolation¹⁶⁴. There are often no linkages between the ministries of health that manage national tuberculosis programs (NTPs) and the ministries of interior or justice that manage prisons and the penal systems. As a result, prison settings often have both poor case and program management, as reflected by the high rates of drug-resistant tuberculosis and comorbidities such as HIV/AIDS/tuberculosis in prison settings¹⁵³.

The Stop TB Strategy envisions involvement of all public, voluntary, corporate, and private healthcare providers through public–private mix (PPM) DOTS approaches¹⁶⁵. The strategy expands and enhances the basic components of DOTS and includes tuberculosis control strategies to effectively cater to marginalized populations such as prisoners. Expansion of DOTS services to prisons helps strengthen active case-finding activities among prisoners. The Global Plan to Stop TB 2011–2015 targets a case detection rate of 84% (for all cases and smear-positive cases specifically) and treatment of about 1 million confirmed MDR tuberculosis cases according to international guidelines by 2015. The Global Plan also pays special attention to the

protection of populations vulnerable to tuberculosis and drug-resistant tuberculosis to achieve its goals Drobniewski.

Despite the efforts spearheaded by WHO and supported by many international technical agencies and donors to expand PPM DOTS approaches, these novel approaches have had very limited uptake globally, with substantial variation across regions. Between 2003 and 2010, there was a sharp rise in NTPs engaging in prison health services, predominantly in Eastern European countries. Links with prison health services are increasingly evident in regions of Eastern Europe and Central Asia (EECA), Latin America and the Caribbean (LAC), and West and Central Africa (WCA)¹⁶⁶.

7.4 Neglect of tuberculosis prison health services

Prisons, considered to be a major stakeholder in the PPM DOTS concept, are not yet covered by the general public health services in many countries, especially when there is a separate healthcare system for the penal sector. Consequently, services under the NTPs, which are normally managed under the auspices of the public health services, do not cover prisons. This creates parallel systems for tuberculosis case management in prisons. Wherever the penitentiary sector is not covered by an NTP, there is a high likelihood of nonstandard diagnosis and care for tuberculosis patients. Even in settings where an NTP has established linkages with the penitentiary sector, tuberculosis patients may receive care, as defined by international guidelines, only during the period of confinement.

Those released from prisons when still under treatment for tuberculosis are more likely to discontinue treatment due to lack of follow-up once in the community. In many settings, mechanisms to follow up on such patients by placing them in another basic management unit of an NTP through “transfer out,” as envisaged in the DOTS strategy, may be difficult to organize owing to poor working relationships between prison authorities and community health providers¹⁶⁷.

7.5 Financing of tuberculosis services in prisons

Financing the diagnosis, treatment, and care for tuberculosis patients in penitentiary systems is an additional problem that needs to be addressed. Of the \$47 billion needed for implementation of the Global Plan 2011–2015, the cost of DOTS implementation is \$22.6 billion and the cost for interventions to manage drug-resistant tuberculosis is \$7.1 billion. Although acknowledged as an important problem in global tuberculosis control, there are no estimates of the funding requirements for effective control of tuberculosis in prison settings. Similarly, to date, no studies have estimated the financing needed for tuberculosis control activities in prisons. Despite the evidence of higher rates of tuberculosis in prisons and the potential public health implications for the general population, available information indicates that the funding for tuberculosis control activities in prisons is disproportionately low¹⁶⁶.

The Global Fund, which has emerged as the largest international financier of tuberculosis control globally, is estimated to have

provided more than four-fifths of all external finances for tuberculosis in 2011. The financing went to support low- and middle-income countries with treatment; care and support; and advocacy, communication, and social mobilization interventions, including management of marginalized groups. By 2010, approximately \$2 billion was invested for tuberculosis control in low- and middle-income countries¹⁶⁸. The Global Fund's Framework document¹⁶⁹ underpins the principles that guide its operations. This document emphasizes country ownership in the allocation of Global Fund investments for programs to provide additional funding to support AIDS, tuberculosis, and malaria programs in order to reach the populations with the greatest need for treatment, care, and prevention services. Table 1 provides a brief summary of the Global Fund funding processes for country grant applications.

The Global Fund is also a major investor in tuberculosis control in prisons¹⁶⁶, although the extent and distribution of this investment has not been previously quantified. Therefore, we conducted a study to explore investments by the Global Fund for tuberculosis control in prisons and the services delivered for prisoners through Global Fund-financed grants between 2003 and 2010.

7.6 Search strategy, methods, and analysis

The Global Fund grants database, with an aggregate approved investment of \$21.7 billion in 150 countries, was reviewed. We identified and analyzed 230 tuberculosis and HIV/tuberculosis grants

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for which a grant agreement had been signed with the recipient country. We reviewed in the performance frameworks of 230 tuberculosis grants which had activities benefiting prisoners all grant output indicators (n 5 4031). We determined that a grant supported such an activity if the indicator referred to a target population as “prisoners” or “incarcerated population” or if the service was delivered in a prison setting. Our search included prison population–specific tuberculosis detection and treatment; care and support; screening and monitoring; and advocacy, communication, and social mobilization. It also included activities aimed at strengthening policy and the structural environment in order to facilitate better tuberculosis programs within prisons, for example, activities related to capacity strengthening of prison health staff to deliver and manage tuberculosis programs. Two multicountry grants in the Global Fund’s East Asia and Pacific region were excluded because there was limited information based on the performance frameworks regarding the geographic locations of the services delivered through the programs supported by these grants. We also limited the scope of this exercise by excluding HIV grants, which would have delivered activities such as harm reduction for prisoners.

We mapped the extent of tuberculosis services provided by Global Fund–supported programs in prison settings by examining the trend and evolution of tuberculosis prison support by region from 2002 to 2010, the distribution of such activities by status of high tuberculosis and MDR tuberculosis burden¹⁴⁰, and the regional median prison

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population rate per 100 000 national population by Global Fund region. In our mapping exercise, we used the country-level prison population rates for December 2008 obtained from the International Centre for Prison Studies¹⁴⁹ and excluded countries and territories not financed by the Global Fund–supported tuberculosis programs and those not eligible for funding due to high income status.

We also mapped services delivered by type of principal recipients, which include primary contract holders with the Global Fund that implement programs financed by the Global Fund. This was done to understand the extent of public–private partnership in tuberculosis program delivery in each setting and the nature of the various services provided to gain an overview of the comprehensiveness of an overall package of services delivered for tuberculosis care in prisons. Also, we analyzed the performance of tuberculosis grants that include tuberculosis services and those that do not include these services by comparing performance at grant and indicator levels. The Global Fund funds grants in 2 phases: phase 1, comprising 2 years of funding, and phase 2, comprising 3 years of funding. Grants are assessed for performance at the end of phase 1 to determine the amount of funding that will be provided in phase 2.

Grant performance is rated at 4 levels of performance: A1, B1, B2, and C, where A1 is the highest level and C is unacceptable. We compared the percentages of well-performing (A/B1) and poorly performing (B2/C) grants that included a tuberculosis service delivery component in prisons with those that did not.

Table 1. Summary of Global Fund Processes for Grants

<p>Proposals are submitted by eligible countries, reviewed for soundness by the independent technical review panel, and recommended for approval by the Global Fund Board.</p>
<p>Potential principal recipients are nominated by the country coordinating mechanisms and assessed for implementation capacities, including financial and program management, monitoring, and evaluation, by the local fund agent, which is contracted by the Global Fund in each country. Weaknesses and gaps are identified and addressed before grants begin operation.</p>
<p>The local fund agent also provides grant oversight during the grant's life cycle.</p>
<p>For routine data reporting to the Global Fund, countries are encouraged to adopt a set of core output indicators that are agreed upon and defined in conjunction with international partners in the Monitoring and Evaluation Toolkit,¹⁷⁰ available at www.theglobalfund.org.</p>
<p>For each grant, countries select a set of indicators, with targets and reporting periods negotiated and agreed upon between the principal recipients and Global Fund in grant performance frameworks.</p>
<p>For disbursement requests, principal recipients are required to submit progress updates on results achieved for indicators in performance frameworks; this is usually done quarterly or semiannually.</p>
<p>Prior to submission to the Global Fund Secretariat, reports are verified by the local fund agent for content and accuracy.</p>
<p>Data verification processes include onsite data verifications on selected programmatic indicators and data quality audits on selected grant samples.</p>

7.7 Results

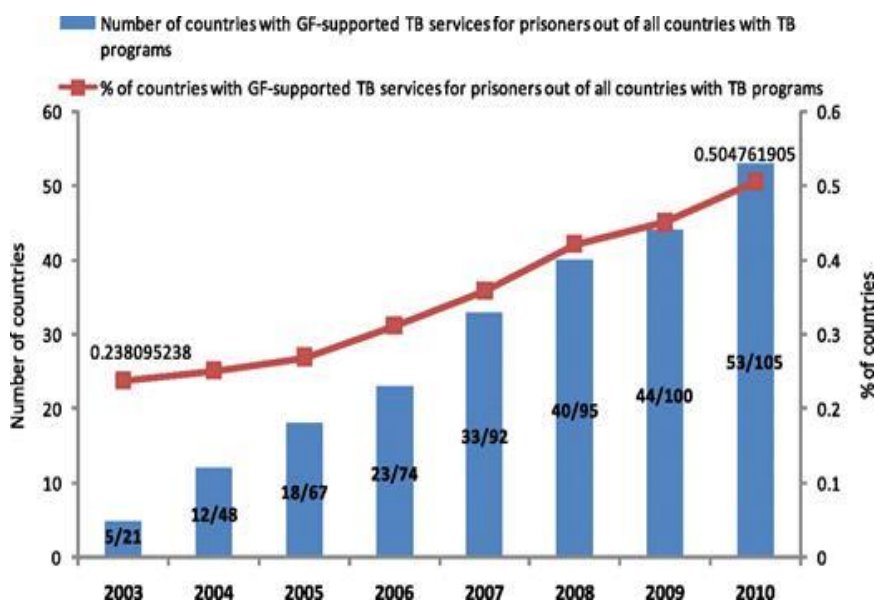
By December 2010, 53 of the 105 countries (50%) with Global Fund–supported tuberculosis programs delivered services within prison settings. The funding allocated to tuberculosis grants, which included tuberculosis service delivery in prison settings, consisted of \$558 million, accounting for almost 28% of the \$2 billion invested in all tuberculosis programs benefiting from Global Fund support. Of the \$558 million disbursed for grants that included tuberculosis service delivery in prisons, \$304 million (54%) went to nongovernmental principal recipients from civil society organizations, the private sector, and development partners. Based on reported expenditures from principal recipients by the end of 2010, an estimated \$56 million was spent on PPM approaches (10% of \$558 million), which would have included various services delivered in prison settings. However, no systematically captured data were available that would enable quantification of direct funding allocated in tuberculosis care and delivery within penitentiary settings.

Figure 1 shows the number and proportion of countries/territories that included tuberculosis service delivery in prison settings, by year. In terms of overall global support in these countries, there was a steady increase between 2003 and 2010, as the number of countries implementing tuberculosis service delivery in prison settings increased from 5 countries in 2003 to 53 by 2010. This increase was in tandem with the rise in overall number of countries receiving

Global Fund financing for all tuberculosis program support, which rose from 21 countries in 2003 to 105 countries by 2010.

Figure 1.

Number and proportion of countries/territories that included tuberculosis service delivery in prison settings, by year



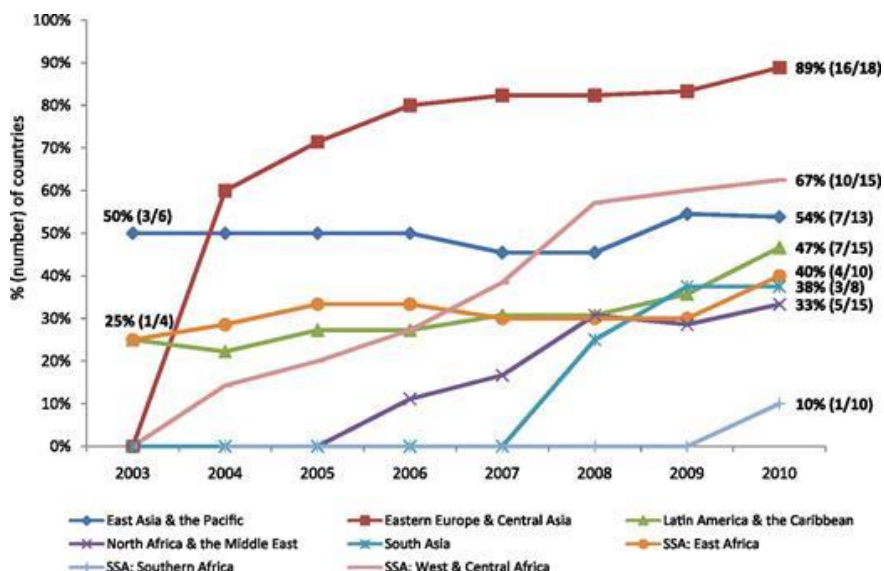
(Number of countries/territories with tuberculosis service delivery within prison settings number of all countries/territories with tuberculosis service delivery supported by the Global Fund).

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Figure 2 shows that there is great regional variation in tuberculosis services delivered. Nearly 90% of all countries and territories (16 of 18) in the EECA region with tuberculosis grants included tuberculosis activities for prisoners. Approximately two-thirds (10 of 15) of countries in the WCA region with Global Fund–supported tuberculosis programs included tuberculosis services for prison populations. Between 2003 and 2010 in the WCA region and the Middle East and North Africa region, the number of tuberculosis grants providing tuberculosis services to prison populations substantially increased. This contrasts with the other 2 African regions of East Africa and Southern Africa, where many countries have high and rising HIV-tuberculosis coinfection rates and have few countries delivering Global Fund–financed tuberculosis services in prisons, with only 1 (Swaziland) of 10 countries in the Southern Africa region and 4 of 10 countries in the East Africa region providing such services.

Figure 2.

Number and proportion of countries that included tuberculosis service delivery in prison settings, by region and year

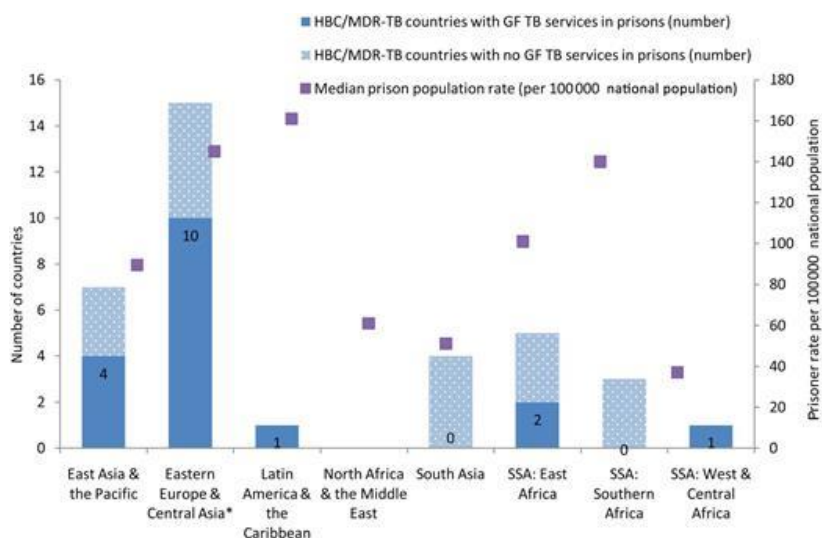


(Number of countries/territories with tuberculosis service delivery within prison settings/number of all countries or territories with tuberculosis service delivery supported by the Global Fund)

Figure 3 shows the distribution of tuberculosis service delivery in prisons in the WHO 22 high tuberculosis burden countries and the WHO 27 high MDR tuberculosis burden countries.

Figure 3.

Distribution of tuberculosis service delivery in prison settings by region and status of tuberculosis burden (High tuberculosis burden [HBC] or high multidrug-resistant [MDR] tuberculosis burden).



*The Eastern Europe and Central Asia region includes the high MDR tuberculosis burden countries Estonia, Latvia, and Lithuania, which are not eligible for Global Fund support.

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Global Fund–supported tuberculosis programs were delivering services in prison settings in 18 of the 36 (50%) countries with either high tuberculosis or high MDR tuberculosis burden or both. The EECA region had the greatest number of tuberculosis/MDR tuberculosis burden countries receiving Global Fund–supported tuberculosis services in prison settings (n = 10). Although the EECA region had the highest number of MDR tuberculosis countries worldwide and the second highest median prison population rate (145 per 100 000 national population), 5 countries in the region did not deliver tuberculosis services within prisons through Global Fund–supported programs. Of these 5 countries, 3 are ineligible to receive Global Fund financing due to their income status (Estonia, Latvia, and Lithuania).

In the Southwest Asia region, 4 countries have both high tuberculosis and high MDR tuberculosis status, namely, India, Afghanistan, Bangladesh, and Pakistan. None of these high tuberculosis/MDR tuberculosis countries were implementing Global Fund–supported tuberculosis services in prisons. Similarly, in the Southern Africa region, not a single high-burden country (Mozambique, South Africa, and Zimbabwe) was providing any tuberculosis service in prisons, although this region has the third highest median rate for incarcerated population (140 per 100 000), as well as a high prevalence of HIV/AIDS and tuberculosis comorbidities. The East Africa region of Ethiopia, Kenya, and Tanzania had considerably higher prison populations both in terms of rates per 100 000 national population

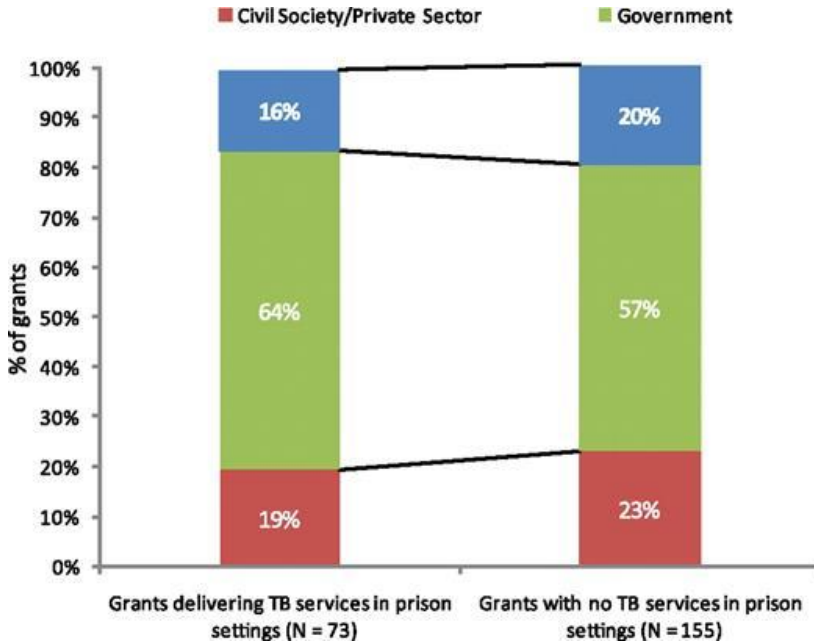
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and absolute total prison population compared with countries such as the Democratic Republic of Congo (DRC), Madagascar, and Uganda. These countries were providing tuberculosis care for prisoners using Global Fund finances. By contrast, DRC, Madagascar, and Uganda had programs providing tuberculosis services for prisoners through Global Fund–supported programs. Also of note is the WCA region, where 9 countries were delivering tuberculosis prison services through Global Fund–supported programs, although the region has 1 high-burden country (Nigeria) and the lowest median prison population rate (37 per 100 000) compared with the other 7 Global Fund regions.

Figure 4 depicts the comparison of service delivery by principal recipient types between tuberculosis grants delivering tuberculosis care in prison settings and grants without such delivery. Of the 228 grants examined, 73 (32%) delivered interventions in prison settings, while 155 did not specify similar services in their performance frameworks. A higher proportion of grants (146 of 228; 64%) delivering tuberculosis services in prisons were managed and implemented by governmental principal recipients (eg, ministries of health) compared with 130 of 228 (57%) grants with no mention of tuberculosis services provided for prisoners. However, this difference is not statistically significant ($P > .05$), with more than one-third of grants providing tuberculosis care in prison implemented by civil society, the private sector, and development partners.

Figure 4.

Comparison of service delivery by principal recipient type between tuberculosis grants delivering tuberculosis care in prison settings and grants without such delivery.



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We examined the nature and types of services delivered to the incarcerated populations to ascertain the extent and scope of the package of services delivered as tuberculosis care in prisons in 6 areas: (1) tuberculosis detection and treatment, including diagnosis and treatment of smear-positive tuberculosis cases; (2) screening and monitoring, that is, screening of tuberculosis by chest radiograph, tuberculin skin test, etc, and monitoring, such as drug susceptibility testing, smear conversion, and treatment default; (3) advocacy and communication; (4) care and support, such as the provision of good nutrition, incentives, or enablers and psychosocial support to facilitate adherence; (5) treatment for MDR tuberculosis due to higher rates of MDR tuberculosis found within confined settings; and (6) strengthening of prison tuberculosis service delivery, such as monitoring policy and structural aspects of tuberculosis control to ensure an enabling environment conducive to effective service delivery in prisons (eg, prisons with tuberculosis control programs, prisons equipped with quarantine and isolation facilities, training of prison staff in tuberculosis referral and care, and doctors trained in infection control in prison settings).

Figure 5 shows the distribution of tuberculosis services delivered in prisons through Global Fund–supported grants. Nearly half (36 of 73; 49%) of the 73 grants delivering tuberculosis services in prisons focused on the provision of diagnosis and treatment of tuberculosis cases, while 27% (20 of 73) provided screening and monitoring services. More than half of the grants financed activities aimed at

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strengthening tuberculosis service delivery capacity and providing an environment that could facilitate better program management and delivery within a penitentiary setting. By contrast, only 7% of grants (5 of 73) delivered MDR tuberculosis services in prisons, where drug-resistant tuberculosis is a major issue, especially among those who are confined. Similarly, in terms of the different types of services offered, the majority (50 of 73; 69%) of grants supported by the Global Fund offered only 1 type of service, with less than one-fifth delivering 2 types of services.

Figure 6 depicts the distribution of the different tuberculosis services delivered in prisons through Global Fund–supported grants, by region. There were regional differences in the extent of services delivered. Although countries outside the EECA region had predominantly 1 type of service delivered, countries within the EECA region had, by comparison, the highest number of services delivered, ranging from 2 to 3 areas of service.

Figure 5.

Comparison of services delivered in prisons through Global Fund–supported grants. ACSM, advocacy, communication, and social mobilization activities; MDR, multidrug-resistant.

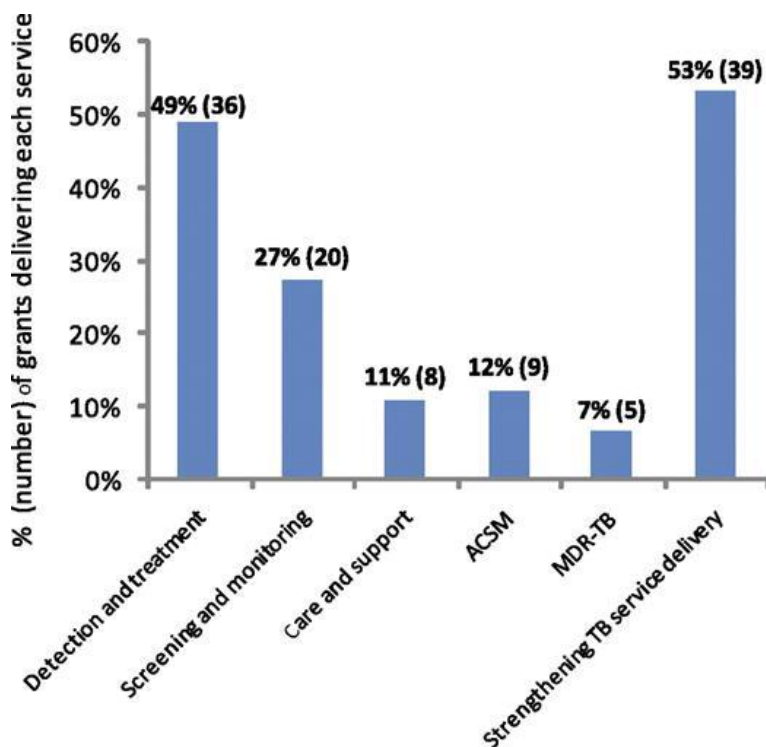


Figure 6.

Distribution of number of different tuberculosis services delivered in prisons through Global Fund–supported grants, by region.

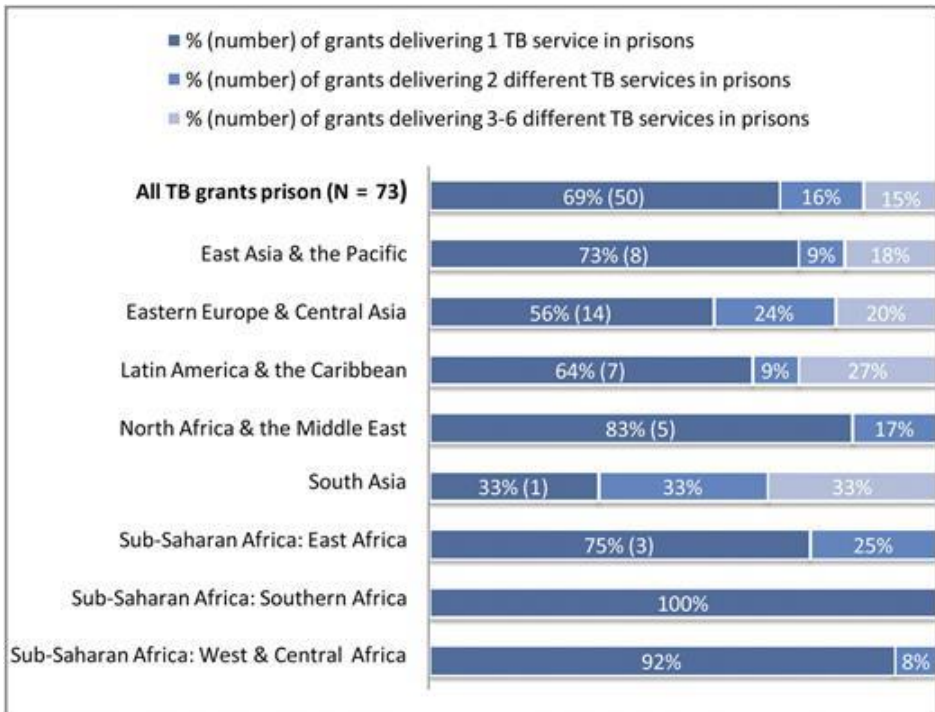
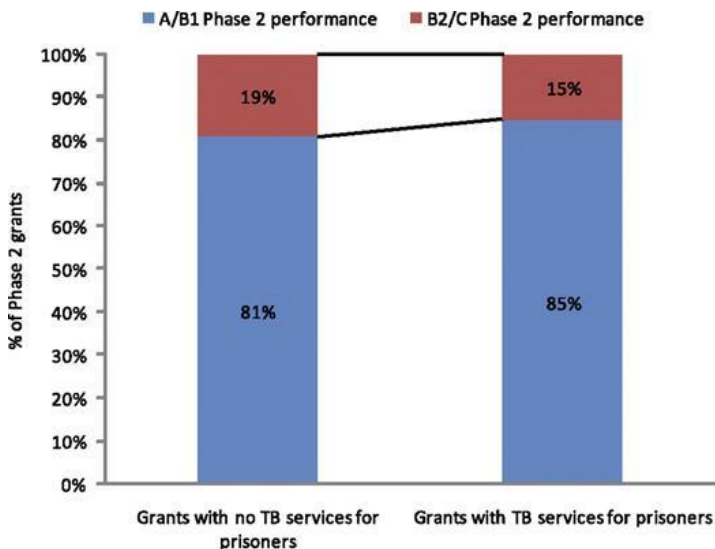


Figure 7 compares the performance of grants with tuberculosis service delivery in prisons. It shows that those with service delivery performed better compared with those without service delivery ($P > .05$). Comparison of performance of the tuberculosis grants shows that grants with tuberculosis service delivery in prisons had a slightly higher percentage of grants in the A/B1 category (85%) compared with grants without prison services (81%), although this difference is not statistically significant.

Figure 7.

Grants with tuberculosis service delivery in prisons perform equally well as those without ($P > .05$).



7.8 Discussion

Tuberculosis morbidity and mortality among populations incarcerated in penal institutions are often many times higher than within the general population, posing an increased risk of tuberculosis for inmates of these institutions as well as the general society^{159-161,164}. The physical environment of prisons concentrates and disseminates tuberculosis through overcrowding, poor ventilation, poor personal hygiene, and risky behaviors. In addition, the structural deficiencies of prison healthcare management, such as lack of funding for healthcare and inadequate infrastructure, staff resources, and expertise, adversely affect the quality of tuberculosis treatment and care. The all-too-frequent absence of linkages between the ministries of health and the ministries of justice and the limited interaction of the latter with NTPs, civil society, and the affected communities further exacerbate problems faced by inmates during their tenure and following discharge. Follow-up and referrals of tuberculosis patients in penal institutions during incarceration and upon discharge are not systematically tracked, and NTPs are not always notified of new cases, leading to an inadequate estimation of the size of the problem. Consequently, prison settings often have poor tuberculosis case and program management, resulting in high levels of drug-resistant tuberculosis and other comorbidities.

Incarcerated populations also have higher HIV prevalence compared with the general population¹⁴⁷, with prevalence levels.10% within prison settings in 20 countries¹⁷¹. This is, in part, exacerbated by high-

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risk behaviors such as drug injection that lead to comorbidities beyond HIV such as high levels of hepatitis B and C. As the largest financier of international funding for tuberculosis, the Global Fund provides financing to tuberculosis programs to meet the needs of disadvantaged groups, especially the most vulnerable populations. Our study examined the scope and extent of Global Fund financing for tuberculosis service delivery in prison settings to gain an understanding of the current status of financing for this high-risk group by global region, the types of service delivered to prisoners, and the performance of these programs.

Our analysis shows that an increasing number of countries are benefiting from Global Fund support that funds the delivery of tuberculosis services in prisons. Although in many of these cases governments were the principal recipients of such grants, a significant proportion of these services were managed and implemented by civil society organizations, the private sector, and international agencies. This funding scenario demonstrates the potential scope for full, multisectoral collaboration and engagement of all providers, both private and public, which is an essential component of the Global Plan to Stop TB.

Tuberculosis grants to programs that included delivery of tuberculosis services in prison settings were performing equally well compared with tuberculosis grants without tuberculosis services in prisons. In relation to the scope and scale of tuberculosis services delivered in prisons, there was some variation across regions, with a

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large number of countries in the EECA region delivering a range of services for prisoners, while the coverage of such services was almost nonexistent in Southern Africa. By contrast, a number of countries in the WCA region reported Global Fund support for tuberculosis service delivery for prisoners, despite the relatively lower tuberculosis burden and the lowest prison population rate in Africa. Of equal concern was the fact that no high tuberculosis burden countries in the Southwest Asia region had tuberculosis grants that were supporting activities aimed at delivering tuberculosis care within prison settings.

The particularly low coverage of tuberculosis services in Southern Africa, a region with a heavy HIV and tuberculosis burden, merits further investigation, especially given its relatively high median regional prison population rate and the large number of countries with rates twice as high as the global median and high absolute numbers of prisoners and populations infected with tuberculosis. The same holds for the Southwest Asia region, which has attracted no funding from the Global Fund for prison-based tuberculosis services. All regions need to scale-up further prison-based tuberculosis services because support is not always consistent with current needs, as measured by either high tuberculosis/MDR tuberculosis or HIV burden or high prison population rates.

There is a need to further examine the reasons for the good coverage achieved in the WCA region and to draw lessons learned for implementation in other regions. With the exception of the EECA

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region, most prison-based tuberculosis programs supported through Global Fund grants offer limited services for prisoners. Therefore, there is a need to better define and promote a more comprehensive package of tuberculosis care tailored and adapted to delivery within congregate settings. In particular, the minimal provision of MDR tuberculosis services was highlighted in our analysis, perhaps not surprisingly, because drug-resistance management requires extensive expert resources and dedicated infrastructure and is even more of a challenge in prison settings, where medical and specialized skills and the available resources are severely constrained. This issue will need to be addressed with a sense of urgency given that MDR tuberculosis is particularly prone to propagation within prison walls¹⁷².

Table 2.

Information Gaps and Challenges Identified in the Study

<ul style="list-style-type: none">• Lack of systematically available financial data for tracking the funding allocated for tuberculosis service delivery in prisons from the Global Fund or other major international donors.
<ul style="list-style-type: none">• Lack of financial information such as budgets and expenditures from correctional facilities to monitor domestic fund sharing.
<ul style="list-style-type: none">• Different countries have different modalities for delivering tuberculosis treatment within penitentiary settings, e.g., as private–public mix or as part of regular public health service.
<ul style="list-style-type: none">• Lack of a standard set of indicators for monitoring tuberculosis service delivery in prisons, with services delivered through Global Fund–supported programs not documented in grant performance frameworks.
<ul style="list-style-type: none">• No information on how linkages between ministries of health and others function in the delivery of tuberculosis services for the incarcerated population.

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We encountered several limitations during this analysis, primarily a shortage of relevant data globally and for the grants supported by the Global Fund (Table 2). First, there were no standardized financial data available from the Global Fund grants database that were codified to enable quantification of funding allocated and expended on prison-related tuberculosis service delivery at an aggregate level. Also, there was a paucity of systematically compiled information on the extent of international financing provided for tuberculosis service delivery in prisons by other major funding agencies, such as the World Bank and other bilateral and nongovernmental organizations¹⁶⁷. This made it difficult to examine the Global Fund's contribution within an appropriate context of total funding for these services. Second, there was a lack of internationally agreed-upon and standardized tuberculosis service indicators specific to monitoring of program delivery in prison settings. This hampered our efforts to accurately capture the full extent of services delivered within Global Fund-supported programs because not all activities carried out in these programs were monitored by the performance frameworks for these grants, which track indicators deemed to be the most suitable for monitoring grant performance. In other instances, many countries did not include tuberculosis treatment and care activities as PPM in prisons because often there is no separate healthcare delivery system in prisons; tuberculosis care services are extended to prisons under regular public health functions. Thus, the true extent of service delivered to prisoners through Global Fund support might have been underestimated. Third, there are no systematically available estimates

of budget allocations for prison healthcare costs and expenditures by country. Typically, the budgets for NTPs do not include tuberculosis service delivery costs in penitentiary settings because these are the responsibility of ministries of justice or ministries of the interior, which oversee correctional facilities. Fourth, there is scant information on the linkages between ministries of health and other ministries involved in financing and delivering tuberculosis services in prisons. The absence of reliable financial information on prison-based tuberculosis services makes it difficult to explore factors that influence the uptake of Global Fund finances to deliver tuberculosis or other health services within penitentiary systems and to ascertain future resource needs and funding gaps.

7.9 Conclusions

Our study is an important first step in establishing an overall picture of financial support for prison-based tuberculosis services from international sources to protect and improve the health of prisoners, a disadvantaged and marginalized group. There are many areas in which tuberculosis control and overall healthcare provision in prisons can be improved. Prison settings have obvious advantages for direct observation of treatment and provision of high-quality care for a highly marginalized group with high levels of tuberculosis¹⁵⁴. There is an urgent need to better understand the financing needs and cost-effective service delivery models for tuberculosis care in prisons, including models that provide meaningful linkages to affected communities and civil society, in order to mount a truly multisectoral

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response to tuberculosis and overcome decades of unacceptable neglect^{159-161,173}.

Note

Potential conflicts of interest. D. L., and S. S. L. are employees of the Global Fund. All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

