

The burden of Tuberculosis in India



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Lead Essay

The burden of Tuberculosis in India

Introduction

The recently released WHO report (2016) indicated that tuberculosis is a major public health concern in India. The lack of reporting of tuberculosis cases is significant because in the recent years India has recorded the highest number of tuberculosis cases. According to the recently released World Health Organization (WHO) report 2.2 million cases of tuberculosis were reported in India (WHO, 2016). Around 40% of India's population is infected with latent tuberculosis bacteria (WHO, 2016). In fact the report (2016) indicates that from the year 2014-2015 the rate of decline in tuberculosis incidence has remained stagnant at 1.5%. In particular the report highlights that only 6.1 million of 10.4 million new cases are notified and recorded every year. This suggests that 4.3 million cases of tuberculosis remain undetected. The Table below highlights the States and Union Territories which have reported the maximum number of cases in the year 2015.

Table 1: Top 10 States and Union Territories with highest cases of tuberculosis in the year 2015

State/Union Territory	Number of cases
Uttar Pradesh	131646
Maharashtra	66702
Madhya Pradesh	51479
West Bengal	46648
Rajasthan	46576
Tamil Nadu	41604
Gujarat	41461
Bihar	33754
Andhra Pradesh	30725
Delhi	30393

Source: TB India Report 2015 (Ministry of Health and Welfare)

These alarming statistics suggest that it is important to understand the causes which have led to high incidence of tuberculosis in India. Drawing from existing literature and the current WHO report (2016) this article will focus on the reasons behind the rise of tuberculosis in India. The article will also highlight the different policy actions introduced and implemented by the different governments of India to curb tuberculosis in India. Finally the article will give examples from other Asian countries with successful tuberculosis programs to understand the lacunae in India's policy measures.

Tuberculosis in India: Programs and Strategies

Among developing nations India was one of the pioneers to launch the National Tuberculosis Control Programme in 1962 to control tuberculosis in India. The main aim of the program was to prevent tuberculosis through Bacille Calmette-Guerin (BCG) vaccination. The goal of the program was to protect against infection from tuberculosis bacteria. In 1979 results from a BCG trial highlighted that the vaccine had failed to protect against tuberculosis infection (Barreto et al, 2006). Since the BCG vaccine could not prevent tuberculosis, in 1992 the government of India with aid from international agencies such as WHO launched the Revised National Tuberculosis Control Programme (RNTCP) and adopted the Directly Observed Treatment Short course (DOTS) strategy to eradicate tuberculosis from India (Barreto et al, 2006). The DOTS Strategy involved regular examination of chest symptomatics to detect infected patients. The DOTS scheme also ensured that regular supplies of anti tuberculosis drugs are channeled to individuals suffering from tuberculosis through a national tuberculosis program. Finally the DOTS program tracked the health of every suffering patient and also monitors the overall national programme (Udwadia and Mehra, 2015). The implementation of DOTS under RNTCP was lauded and considered to be a model of global excellence adopted by

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India. Nonetheless as statistics from the WHO report indicate that despite the application of an international model, India has not been able to control tuberculosis. In this context it is important to focus on the major causes behind tuberculosis and also highlight the gaps in the model which resulted in its failure.

Gaps in the RNTCP

Research has suggested that the DOTS program under RNTCP failed in India because it did not address the major causes behind the spread of infection of the tuberculosis bacteria. Scholars have demonstrated that social determinants play a huge role in determining increasing incidences of tuberculosis and hence for any successful tuberculosis programme those social factors need to be taken into consideration. For instance poverty is cited as one of the major reasons for rise of tuberculosis in India (Oxlade and Murray, 2012). Additionally population mobility, population growth and rapid urbanization have also been cited as causes for rising incidences of tuberculosis in India. These conditions create unequal distribution of food and shelter which results in malnutrition and also pushes the poverty stricken sections of the population to reside in overcrowded houses with lack of ventilation facilities (Hargreaves et al, 2011). For instance in the slums due to lack of proper aeration amenities the smoke and mold from the cooking gas creates indoor air pollution and increases risk of tuberculosis. Additionally due to lack of space in the houses, the risk of contamination also increases among the family members of the poor in India (Schmidt, 2008). Hence the poor are at greater risks for being contaminated by the tuberculosis bacteria. Apart from ignoring poverty which is the root cause for tuberculosis, the RNTCP also failed because it could not regulate the cost and treatment provided by the private health sector. Research has indicated that most patients suffering from tuberculosis seek initial care from private practitioners. The private practitioners often prescribe expensive drugs which most patients are not able to afford and as a result continue to suffer from tuberculosis (Khatri et al, 2002; Udwadia et al, 2012; Udwadia and Mehra, 2015). Additionally since majority of tuberculosis patients are poverty stricken; their treatment is often interrupted because of their inability to afford the full course of medicine (Tola et al, 2015). Majority of the patients resorting to private sector is indicative of the fact that the public sector does not provide adequate care to tuberculosis patients. Finally it should also be noted that the HIV epidemic often reduce the impact of tuberculosis in India. Out of 4 million individuals suffering from HIV half of them are also infected with tuberculosis. Active tuberculosis develops by 7% in co-infected individuals. As a result HIV patients coupled with the tuberculosis bacteria become drug resistant to tuberculosis medication (Khatri et al, 2002). With an understanding of the causes of tuberculosis and the reasons for the failure of the RNTCP, it is important to revisit some of the successful tuberculosis programs launched by other countries within Asia.

Tuberculosis Programs in Asian Countries: Policy Measures

Similar to India other Asian countries such as China, Bangladesh and Singapore also had high mortality rates due to tuberculosis. However these countries have been successful in curbing the higher incidences of tuberculosis. Hence it is important to understand the different strategies adopted by these countries to control tuberculosis. Among the Asian countries China has successfully reduced tuberculosis rates. The reason for the success of the DOTS program in China was that it focused on particular vulnerable groups and monitored their treatment. It identified groups such as migrants, rural and urban poor who are easily susceptible to tuberculosis due to poor housing conditions and malnutrition. Through this process of identification, China focused its treatment of tuberculosis on individuals infected in these particular groups. This strategy helped China achieve the global targets of tuberculosis control by the year 2005 (Zhang et al, 2006). Parallel to China, Bangladesh also has huge rates of migration and the transient population lives in overcrowded houses with lack of ventilation facilities. Hence tuberculosis is a major public health concern in Bangladesh. Bangladesh devised a five year National Strategic Plan to detect annual rates of tuberculosis and also maintain the treatment rate as well. The plan also aimed to develop strategies to ensure successful treatment of all multi-drug resistant (MDR)-TB cases and engages both private and public health providers (WHO, 2016). Through this plan Bangladesh achieved a treatment success rate of 93%. In fact the reporting of tuberculosis cases has also increased. In particular the multi-drug resistant tuberculosis (MDR-TB) treatment also gained a success rate of 73% and a large number of automated diagnostic machines were set up to determine TB infection from a sample in a short period of time

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(WHO, 2016). Similarly Singapore has also successfully witnessed the decline of tuberculosis cases. In 1997 the Singapore Tuberculosis Elimination Program (STEP) was launched to monitor the tuberculosis treatment in primary health centers. Additionally the Tuberculosis Control Unit was linked with 16 polyclinics to treat tuberculosis patients. Through these processes Singapore successfully treated 60% to 70% of tuberculosis patients (Chee and James, 2003). These measures highlight that the State plays a major role in eradicating tuberculosis. In this context it is important to reflect on some policy recommendations for India to reduce the tuberculosis epidemic.

Conclusion: Policy Measures

For a successful eradication of tuberculosis the government of India needs to identify the social determinants such as malnutrition, poverty and poor housing conditions and address these concerns to combat tuberculosis. Additionally the public sector should be regulated and made more accessible to sections of society suffering from tuberculosis. In fact India should also make new drugs of tuberculosis easily available to its growing population and tackle the challenge of drug resistance. Similar to China, India should also identify vulnerable groups and ensure the monitoring of tuberculosis treatment in these groups. In particular regions with high incidences of tuberculosis can be identified and regulated. Additionally measures should be designed for HIV patients and they should be prevented from being infected with tuberculosis as a secondary infection. Village communities, trained health workers and self help groups can be involved to provide information and counseling to tuberculosis patients and their family members. By not paying enough attention to tuberculosis the government of India is neglecting a major public health concern. Given the current tuberculosis crisis the government of India should focus in developing a strategic national plan to eradicate tuberculosis.

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Headlines

The Relevance of the ‘New Urban Agenda’

(Mathew Idiculla, *Live Mint*, 25 October, 2016)

The “New Urban Agenda”, rather ambitiously, calls for an “urban paradigm shift” to readdress the way we “plan, finance, develop, govern, and manage cities and human settlements.” It commits to a “vision of cities for all” where “all inhabitants” are able to “inhabit and produce just, safe, healthy, accessible, affordable, resilient, and sustainable cities and human settlements.” One of the sticking points in the negotiations leading up to Habitat III was regarding the inclusion of the provision on “Right to the City”, a term used to describe the collective right of “all inhabitants”, irrespective of their legal status, over the city’s resources and spaces. While there is still a reference to this phrase, it has been considerably diluted as a compromise between its supporters—Latin American countries—and its more powerful opponents: the US, European Union, Russia and India.

Read More: <http://www.livemint.com/Opinion/6HIHi5nTPDPyIF0lxZNSoK/The-relevance-of-the-New-Urban-Agenda.html>.

Date Accessed: 28.10.2016

Economy

China warns boycott of its goods will hit India-bound investments

(The Hindu, October 27, 2016)

“The exports to India accounted for only 2 per cent of China’s total exports and India’s boycott of Chinese goods will not have much impact on China’s exports. China is more concerned that the boycott will negatively affect Chinese enterprises to invest in India and the bilateral cooperation, which both Chinese and Indian people are not willing to see,” the statement said. Amid rising tension in Indo-Pak ties, there have been calls from some fringe entities, including through social media platforms, about boycott of Chinese goods to protest against China’s support to Pakistan. Apex traders body CAIT (Confederation of All India Traders) recently said the sale of Chinese products may decline by 30 per cent this Diwali.

Read More: <http://www.thehindu.com/news/international/china-warns-boycott-of-its-goods-will-hit-indiabound-investments/article9276419.ece>

Date Accessed: 28.10.2016

Struggling Indian savers are threatening Modi's global growth dream

(Business Standard, October 28, 2016)

Gross national savings as a percent of the South Asian nation's gross domestic product will slip this year to 30.2 percent, the lowest since 2003, and fall further over the next two years, the International Monetary Fund forecasts.

Since companies use domestic savings to fund their capital spending, the fall would increase their vulnerability to external risks - such as uncertainty over the U.S. presidential election or the prospect of monetary tightening there - that could staunch the flow of cheap investment dollars to emerging markets such as India.

Read More: http://www.business-standard.com/article/economy-policy/struggling-indian-savers-are-threatening-modi-s-global-growth-dream-116102800191_1.html

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Governance & Development

DEVELOPMENT

What's the Right Strategy to Fight the Scourge of Open Defecation?

(*Down To Earth*, 31 October, 2016)

The first crucial step to tackle the challenge of sanitation in rural India is already taken. Prime Minister Narendra Modi has brought this issue into national agenda. His personal persuasion of the sanitation agenda has already galvanised the administration on the Swachh Bharat Mission. More than 1 00,000 villages have been declared open defecation-free; many thousands will soon join the list. Now the challenge is: how to sustain this status for- ever? I know that there is slippage in sanitation status; people get back to open defecation even after having a toilet at home. Why does it happen? There are many reasons. But the biggest challenge is bringing the behavioural change that will ensure that people stop defecating in the open. And this challenge has many dimensions; each of them is a further challenge. It is going to be a long-term engagement and in future it will require the same kind of political backing as the sanitation programme is receiving now. Here is an example of how difficult the job of bringing behavioural change is. In the United States of America, government had to work for 30-40 years to ensure that people use seat belts while driving cars.

Read More: <http://www.downtoearth.org.in/news/no-debate-please-56138>.

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SECURITY

2011 Bastar violence: 8 SPOs suspended, is IG SRP Kalluri next?

(*Rajkumar Soni, CatchNews*, 27 October 2016)

Bastar's infamous IG SRP Kalluri might be in trouble after a CBI team tasked with investigating incidents of large-scale violence by state forces in three villages in Bastar in March 2011 submitted its report on 21 October. SRP Kalluri was the SSP of Dantewada, when 252 houses of local Adivasis were burnt, three locals killed, and three women raped during an operation, supposedly to combat Naxals. It was conducted jointly by the local police and CRPF, between 11 and 16 March 2011 in three villages in Bastar - Morpalli, Tadmetla and Timpuram.

Read More: <http://www.catchnews.com/india-news/2011-bastar-violence-8-spos-suspended-is-ig-srp-kalluri-next-1477568310.html>

Date Accessed: 28.10.2016

EDUCATION

New Learning Plans Could Help 52 Percent Class 5 Rural Students Who Cannot Read

(*Charu Bahri, IndiaSpend*, October 24, 2016)

Instead of the traditional blackboard-and-chalk style of rote learning, the students, like hundreds of others in six Rajasthan districts—Ajmer, Bundi, Jalore, Pali, Rajasamand and Sirohi—learn by pictures instead of words, puzzles that help them find words, alphabet cut-outs they can put together and other uncommon learning aids that whet their appetite to learn. The programme appears to be working. In 2015, these creative-learning sessions, conducted at least twice weekly during school hours with 79,695 standard 3, 4 and 5 students in 3,399 rural Rajasthan schools, helped record average score increases—irrespective of gender and social background—of 45% in Hindi, 26% in English and 44% in math.

Read more: <http://www.indiaspend.com/cover-story/new-learning-plans-could-help-52-class-5-rural-students-who-cant-read-24011>

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Governance & Development

HEALTH

The US is Standing in Way of Cheaper Drugs for the Poor

(The New York Times, October 27, 2016)

In the United States, companies have raised prices on many drugs over the past five years, mostly with little public notice or scandal. Pfizer alone raised the prices of more than 100 drugs in one year. Drug prices have seen double-digit inflation over the past three years, at a time of relatively low inflation in the rest of the economy. Recent research suggests that cancer patients may be delaying use of lifesaving drugs, while there are reports that prisoners are rationed access to hepatitis C treatments — all because of high prices. But this problem is also international. In poorer countries across the world where our organizations work, millions of people are priced out of medicines that could save lives and relieve suffering.

Read more: <http://www.nytimes.com/2016/10/28/opinion/the-us-is-standing-in-the-way-of-cheaper-drugs-for-the-poor.html?smid=tw-nytopinion&smtyp=cur&r=0>

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URBAN

CM reviews preparation of Smart City proposal for Srinagar

(Greater Kashmir, October 28, 2016)

Chief Minister, Mehbooba Mufti Thursday reviewed the status of preparation of Smart City Proposal (SCP) for Srinagar city and development of Semi- Ring Road in and around the State's summer capital under the Prime Minister's Development Package (PMDP).

Reviewing the status of preparation of Smart City Proposal (SCP) of Srinagar city, the CM emphasized that the proposal should contain the vision, plan for mobilization of resources and intended outcomes in terms of infrastructure upgradation and smart applications.

Read More: <http://www.greaterkashmir.com/news/srinagar-city/story/231962.html>

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Now, smart cities to have redeveloped 'smart' railway stations; 5 things to know

(The Financial Express, October 20, 2016)

In an interesting move, Indian Railways has tied up with the Ministry of Urban Development to ensure that the ambitious smart cities of India also have 'smart railway stations'. Under a MoU signed between the two ministries – Railways and Urban Development – railway stations and surrounding areas will be redeveloped with an aim to provide easy access to stations, better passenger amenities and also enable optimal utilisation of land at railway stations. This means that the station and an adjoining area of around 300 to 800 acres in each smart city and AMRUT city will be redeveloped! We take a look at 5 key facts about the project:

Read More: <http://www.financialexpress.com/economy/indian-railways-smart-cities-railway-station-redevelopment-mou-urban-development-suresh-prabhu-venkaiah-naidu/424492/>

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ENVIRONMENT

New Govt Data Shows AAP's Odd-Even Rule did not Improve Delhi's Air Quality

(Abhishek Waghmar, IndiaSpend, October 28, 2016)

The main reason for the failure is because no more than 25% of fine, toxic particles are emitted by cars and trucks in winter. As Delhi's air quality begins to deteriorate with Diwali, new government data indicates that the Aam Aadmi Party (AAP) government's restrictions on cars based on odd-even number plates—between January 1-15, 2016, and April 15-30, 2016—did not improve the air

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quality in the world's 11th most polluted city. The main reason the odd-even system cannot check air pollution is because no more than 25% of fine, toxic particles are emitted by cars and trucks in winter, according to this 2016 Indian Institute of Technology Kanpur (IIT-K) study, which was commissioned by the Delhi government. The failure of the odd-even system and the data were cited by the National Green Tribunal (NGT) last week, validating similar findings in January 2016 by IndiaSpend's network of #Breathe air-quality sensors, which were disputed by the AAP government.

Read More: http://www.business-standard.com/article/economy-policy/new-govt-data-shows-aap-s-odd-even-rule-did-not-improve-delhi-s-air-quality-116102800535_1.html

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LAW AND JUSTICE

The Sorry State of Indian Prisons

(The News Laundry, October 24, 2016)

A disproportionate 65 percent of the prison population is made up of Schedule Caste, Schedule Tribes, and Other Backward Classes. There have been miniscule variations in this proportion over the years. As per the PSI 2015 data, Schedule castes form 21.4 percent of the prison population, while they form 16.6% of the general population as per the 2011 Census data. Similarly Schedule Tribes form 12.8% of the prison population whereas only 8.6% of the general population. Muslims form 15 percent of the country's population but 19% of the prison population.

Read more: <https://www.newslaundry.com/2016/10/24/the-sorry-state-of-indian-prisons>

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Society

SOCIAL JUSTICE

52% Of Gay Men Without Peer Support Suffer Violence

(Sumit Chaturvedi, *India Spend*, October 21, 2016)

For all the 22 years of his young life, Ajith (name changed to protect identity) has had to hide his sexual preference for male partners. The management graduate, who works at a hotel in Chennai, comes from Kambam, a small Tamil Nadu village.

Ajith's parents and younger sister are aware of his sexual orientation but he fears the abuse, attacks and ridicule he would have to face in Kambam as an openly gay man. But in Chennai, where he is less secretive about his orientation, he said, he feels much safer thanks to the support of the community organisations (COs) for men with alternate sexual identities.

A recent survey conducted across five Indian states by Swasti Health Resource Centre for 12 such COs has proved him right: gay men who seek peer support were far safer than those living with their parents, most often without outing themselves. The aim of the study was to get a better understanding of the profiles and needs of those who approach the COs for help.

Read More: <http://www.indiaspend.com/cover-story/52-of-gay-men-without-peer-support-suffer-violence-65005>.

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Opinions/Books

OPINIONS

Indian Socialists and Their Legacy

(Sonal Shah, *The Economic and Political Weekly*, October 22, 2016)

The principles and programmes that the socialists formulated over 75 years ago still seem relevant in today's India. Perhaps, if they had not splintered into so many factions and so frequently, they might have succeeded in implementing some of their plans and may have had greater impact in resolving part of the inequalities and inequities in our society

Read more: <http://www.epw.in/journal/2016/43/commentary/indian-socialists-andtheir-legacy.html>

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