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Prevalence of Multidrug resistant Tuberculosis: A comparative policy analysis

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Review Article

Prevalence of Multidrug resistant Tuberculosis: *A comparative policy analysis*

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Abstract

Tuberculosis (TB) remains a significant health issue in the Southeast Asian region with Multidrug resistant TB, increasingly becoming a public health problem in India and Bangladesh. Recognizing the threat, the countries developed the National Strategic Plan for Tuberculosis control (NSP 2012-17) and the National Strategic Plan for TB control (NSP 2011-15) respectively. This analyses the national policies of both the nations using the Health Policy Triangle framework by Kent and Bues. The framework consists of the Content, the Policy process, the Contextual factors and the involved Actors and stakeholders. It is followed by a comparison of the two national policies and the different strategies employed by the nations to implement the same. Both the national programs aim to reduce TB burden in the respective countries via enhancing monitoring strategies and research. However, they differ in their approaches and it remains to see the impact they shall have on the disease statuses of the nations.

Key words: MDR-TB, NSP for TB control, policy analysis, RNTCP, TB burden

Tuberculosis (TB) is a highly infectious disease that has been an age old health problem in most parts of the world. Out of the large number of people affected by the disease, the significant proportions are diagnosed to have drug resistant TB. According to WHO[1], Multidrug resistant TB (MDR-TB) is a form of TB caused by bacteria that do not respond to isoniazid and rifampicin, the two most powerful, first line anti-TB drugs. MDR-TB is a major cause of concern in the Southeast Asian region with India and Bangladesh being two of the thirty high MDR-TB burden countries. [2] Nearly, 1,00,000 cases of MDR-TB are estimated to occur every year in India. [3,4,5] With a vision of 'TB free India', the country scaled up the Revised National Tuberculosis control program (RNTCP) from 1998-2006 and launched the National Strategic Plan for TB control (NSP 2012-2017) in 2012. One of the goals of the five year program is to prevent the emergence of MDR-TB. The emergence of MDR-TB cases in Bangladesh accounts to 3.5% of new cases and 20% of previously treated patients. Acknowledging the issue, the country has adopted the 'Stop TB Strategy'[6] and has developed the five year National Strategic Plan for TB control (NSP 2011-2015) in 2011 with the National TB control program (NTP). The development and implementation of national policies in both variable and similar contexts in these countries is intriguing.

This aims to analyse and compare the formation and implementation of national policies on TB in India and Bangladesh, the NSP-RNTCP (2012-2017) and NSP (2011-2015) respectively. For the analysis, this paper uses the Health Policy Triangle framework given by Walt and Gilson (1994) which shall be briefed in the next section. In addition, this review discusses in detail about the national policies of the two countries individually and compares the two policy processes in the context of the health policy triangle stressing on the similarities and differences there in.

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Theory

Health policy is the final product of a complicated interaction of a set of elements. This review uses the Health Policy Triangle which is an analytical framework for health policy developed by Walt and Gilson (1994). It simplifies the otherwise complex interplay of several factors in practice. The framework emphasizes on the actual 'content' of the policy, the 'context' within which the policy is formulated and executed, the 'actors' involved in policy making, the 'processes' of policy development and implementation as well as on the interactions between these elements.[7]

The ideas, theories or general principles that lie within a policy form its content e.g. Human Rights. It also includes the goals and visions of the policy as well. However, it is important to understand that these interpretations or the content lie within many contextual factors. Policymaking is influenced and shaped by the plethora of factors and conditions e.g. financial resources. These factors may be largely transient like situational (e.g. Wars) or relatively unchanging like structural factors (e.g. Political System). [7] These contextual factors as well as the ever-changing ideas and perceptions form the framework within which policymakers work, a concept called 'Policy Paradigm'.[8] Apart from policymakers, individuals, organizations, NGOs as well as governments can affect, get affected, shape and even make policies. The extent of the influence of Actors and stakeholders over the policy is an indication of their power and it affects the policy process. [7] According to Sabatier and Smith (1993), the policy process can be subdivided into stages of problem identification, formulation, implementation and evaluation. Policy implementation can take up a 'bottom-up' or 'top-down' approach with the former emphasizing on the significance of implementers at the ground level and the latter being more centralized and rational. [7] Having said that, it is a complicated process and often do not have distinctive boundaries as shall be explained in the analysis of the national policies of India and Bangladesh. The following sections shall discuss briefly about the same.

Analysis of National Strategic Plan 2012-2017 of India

The development of the NSP 2012-2017 in India was a result of a ubiquitous burden of TB. Soon after the declaration of TB as a global health emergency, the RNTCP was promulgated in 1993. Despite the success of the program, the MDR-TB situation in the country continues to worsen. Apart from threatening the basic TB treatment strategies it also has abysmal economic consequences. Recognising the gravity of the situation, the government planned to scale up the WHO guidelines for Programmatic management of drug resistant TB (PMDT) under the NSP.

The content of NSP 2012-2017

The National strategic plan for TB control (NSP-RNTCP) adhered to the vision of 'TB free India' aiming to reduce the burden of the disease in the country. Some of the objectives of the five year program were early and improved diagnosis of all TB patients including drug resistant varieties, better access and patient friendly approaches and involving the private sector. To facilitate better reach, the NSP planned to integrate with the National rural health mission (NRHM). The program was funded by the government as per its twelfth plan and supported by the World Bank and the Global Fund.

Contextual factors shaping the program

The RNTCP was designed with a background of the Stop TB strategy by WHO, the Millennium Development Goals (MDGs), existing stigma related to the disease in rural areas, a continuous rise in MDR-TB numbers and shortcomings of the previous national plans. [9] It was responsible for the development of NSP and tried to apply the WHO recommended Directly Observed Treatment Short Course (DOTS) strategy to the Indian context. From a structural context, the program took into account the fallacious diagnosis and treatment aspects of the unorganised private health sector. To suffice such issues and the paradigm shift, the NSP aimed to involve multiple stakeholders, the civil society and the private sector.

The involved Actors and Stakeholders

Pioneered by the Central TB division (CTD) under the Ministry of Health and Family Welfare (MOHFW), RNTCP incorporated Private Provider Interface agencies (PPIA) to facilitate Public Private Mix (PPM) activities. [10] Further, 1,900 NGOs and 10,000 private providers were also involved with a goal of prompt reporting of cases diagnosed in the private sector. In addition, Medical colleges have been strategically supplemented with additional human resources by the RNTCP at the state, zonal and national levels. Understanding the complexities of treating MDR-TB, the program planned to ensure promulgation via civil society partners (e.g. Project Axhaya) and the media through the Advocacy, Communication and Social Mobilization strategy (ACSM).

The process of the program

The diagnosis and treatment of MDR-TB are both difficult as well as expensive. In addition some states like Gujarat, have reported cases of extensively drug-resistant TB (XDR-TB) as well. The NSP planned to scale up the PMDT by improving reference lab facilities, supply of drugs and better diagnostic techniques (e.g. Liquid Culture). The program aimed to decentralize M/XDR-TB treatment by setting up district level reference labs, improve storage conditions and capacity of drugs, and increase funding for PMDT activities and upgrade human resources (e.g. Senior Medical Officer, Drug resistant TB Coordinator). A detailed monitoring and evaluation strategy was also proposed that includes an online data management system for PMDT, establishing a PMDT support unit, video conferencing with state level teams to solve operational challenges and conduct state wise surveys. As per the reports of NSP (2017-2025), the country has achieved complete diagnostic and treatment coverage for MDR-TB in 2013. In addition, 93,000 cases have been diagnosed and put on treatment till 2015 which exceeds the number proposed in the results framework of NSP 2012-2017.

Analysis of National Strategic Plan 2011-2015 of Bangladesh

Despite strategic attempts by the NTP since 1993, the situation in Bangladesh is also a cause of concern. As a result of inefficient management, there has been a rise in the number of cases of drug resistant TB in the country [11] with approximately 2,500 new cases cropping up annually. Therefore, NTP planned to upgrade TB control activities through the NSP (2011-2015) under the Ministry of Health and Family Welfare (MOHFW).

Content of the program

The NSP has a goal of reducing the morbidity, mortality and transmission of the disease and important objectives of the program were to achieve the global target of at least 70% case detection and over 85% successful treatment. The program stressed on increasing Public Private Partnerships, addressing MDR-TB, the six key components of the Stop TB Strategy, provide socio-economic support to MDR-TB patients, procuring second line anti-TB drugs, empowering communities with better communication and encourage operational research. In addition, target indicators and evaluation plans had also been incorporated.

Relevant contextual factors of the NSP

In line with the MGDs ascent in drug resistant cases and the pledge to eliminate TB as a public health issue by 2050, the NSP 2011-2015 was formulated. The program was drafted taking into account the existing challenges such as shortage of skilled workforce, insufficient hospitalization capacity for MDR cases and poor drug management and storage systems. The limitations of previous strategies were rectified and the program was designed by the NTP which functions under the Directorate of Mycobacterial Disease Control (MBDC) of the Directorate General of Health services (DGHS).

The pertinent Actors and Stakeholders

A Country Coordination Mechanism consisting of members from MOHFW, DGHS, NTP and other Ministries have developed strategies for coordinating TB control activities nationwide. Administration, finance, logistics and training are executed by the Deputy Program manager coordinated by the

NTP Manager who reports to the Line Director or Director MBDC. Similarly, at the district and upazila levels, NTP activities are substantially regulated via collaboration with many NGOs (e.g. management of MDR cases in Rajshahi). Damien Foundation, an NGO manages the MDR-TB cases in the North Western part of the country. The plan also proposes inclusion of the civil society, cured TB patients, community health workers and the upazila health complexes (UHC) under the ACSM. Apart from that, NTP also plans to engage the media, private sector, communities, workplaces and clinics in an attempt to maximise the decentralization of MDR-TB management.

The policy process

With the lack of availability of concrete data on the MDR-TB statistics in the country and scanty human resources, the NSP was created with support from the National DOTS Plus Coordination Committee, National Institute of Diseases of Chest and Hospital (NIDCH) and the Green Light Committee (GLC). Some major implementation strategies of the program include organising international training courses to upgrade workforce, provide food and transportation for MDR-TB patients and their families, procure second line anti-TB drugs through the GLC, ensure infection control environment for MDR-TB associated staff and conduct research on drug resistance. The NTP further plans to extend MDR-TB management to the Chest hospitals in Chittagong, Khulna and Sylhet. Quarterly monitoring meetings at the upazila level, computerized data management at the district level and setting up target indicators are some of the evaluation strategies adopted by the NSP.

A comparative analysis

It is apparent from the above sections that the two national policies differ as well as agree on many contexts. However, it is imperative to understand the differences the two nations have in terms of geography, politics, health system, economy, population and culture before comparing the programs. Efforts to tackle the disease in India started in 1962 with the formulation of the NTP whereas in Bangladesh the NTP operated from 1993. [10] Apart from the historical context, the policies vary from a political point of view as well. A clear division of power can be witnessed in the NTB management system right from the Director MBDC to the UHC in Bangladesh. On the other hand, India is more central in TB control approach pertaining to the obvious issue of area and population coverage.

As mentioned above, the National program of Bangladesh hugely relies on diverse stakeholders like NGOs, private sector and the civil society for its implementation. The program is more decentralized and gets tailored according to the needs and interests of the actors at the local level giving an impression of the 'Bottom-up' approach. However, the Indian policy, with a centralized and more coherent layout, abides by the 'Top-down' approach. The NSP (India) proposes strategic task divisions in implementing the program in the form of eleven working groups whereas NTP (Bangladesh) has no such team divisions for its six key components.

Both the National programs have a vision of eliminating TB as a public health problem and have defined clear objectives of expanding TB control activities nationwide. Research programs as well as proper monitoring and evaluation strategies have also been incorporated by both policies. In addition, both programs have shown remarkable progress in achieving their target indicators as well.

Conclusion

Both India and Bangladesh have been perturbed by drug-resistant TB for long and have come up with national programs to alleviate the situation. This review employed the Health Policy triangle framework to comprehend and compare the policies and it can be concluded that it is rarely such a linear and rational process in practice. The analysis involved examining the program formulation and implementation in various contexts, the role of several actors and stakeholders, and the contents of the programs. Both programs promise better circumstances; however questions still remain about their sustainability and adaptability in future.

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