

## Editorial

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# Counting Tuberculosis Patients in India: A Continued Imbroglio?

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In India, tuberculosis continues to be major public health problem despite the efforts of the Revised National Tuberculosis Control Programme (RNTCP) since 1997. In 2014, out of the estimated 9.6 million TB cases across the globe, India alone harbors nearly 23% (2.2 million TB cases) of the total global TB burden.<sup>1</sup>

Globally, estimating the TB incidence in the countries has always been difficult and challenging. Measuring TB incidence at a National level was never possible because it involves large number of patients in a cohort for long duration and involves huge costs for logistics.<sup>2</sup> The World Health Organization (WHO) publishes the Global Tuberculosis report every year which includes the TB incidence, prevalence, mortality and other indicators of all the countries. The following methods were used to estimate the TB incidence in the countries. (a) Case notification data combined with expert opinion about case detection gaps (b) Results of National Prevalence Surveys (c) Notification in high income countries adjusted by standard factors to account under-diagnosis and under-reporting (d) Results from capture and re-capture studies.<sup>1</sup>

The Government of India did not accord its official approval for the TB incidence estimates provided in the WHO global tuberculosis report 2013.<sup>2</sup> Probably, the national experts were not convinced with the “onion model” which used the experts opinion to estimate the missed and the under reported cases. Hence, the TB incidence figures for that year were considered provisional.

In May 2012, the Government of India made TB notification mandatory to notify the TB disease either diagnosed at public or private health systems. Till that time, only TB cases diagnosed at public health facilities were notified while the cases notified from the private health sector was minimal.<sup>3</sup> The TB notification initiative was undertaken mainly because it serves as a proxy indicator for the TB incidence which includes the TB cases diagnosed at both public and private health sector. In India, the private health sector is huge, fragmented and complex; the TB patient notification from the private health sector is catching up slowly over the years and the programme is optimistic about complete participation of private sector in the coming years. To make it a reality, the programme has to invest substantial amount of money, time and human resources to implement effective strategies and set up mechanisms for smooth functioning.

The recent studies conducted to understand the quantum of TB patients in private sector based on anti-TB drug sales in India has shown that private-sector tuberculosis burden is 2.2 million cases (1.2-5.3 million) which is more than twice the burden suggested by previous assumptions.<sup>4</sup> This is an alarming situation for the country and the health system has to be geared up immediately to tackle the TB menace.

To conclude, with whatever dilemma that exists in methods of TB burden estimates for India, it is imperative the country has to take bolder steps in order to meet the End TB Strategy.<sup>5</sup>

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**REFERENCES**

1. WHO. Global tuberculosis report 2015. Geneva; 2016. Web site. [http://apps.who.int/iris/bitstream/10665/191102/1/9789241565059\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/191102/1/9789241565059_eng.pdf?ua=1). Accessed August 29, 2016
2. WHO. Global tuberculosis report 2013. Geneva; 2014. Web site. [http://apps.who.int/iris/bitstream/10665/91355/1/9789241564656\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/91355/1/9789241564656_eng.pdf). Accessed August 29, 2016
3. Nagaraja SB, Achanta S, Kumar AM V, Satyanarayana S. Extending tuberculosis notification to the private sector in India: Programmatic challenges? *Int J Tuberc Lung Dis*. 2014; 18(11):1353-1356. doi: [10.5588/ijtld.13.0836](https://doi.org/10.5588/ijtld.13.0836)
4. Arinaminpathy N, Batra D, Khaparde S, et al. The number of privately treated tuberculosis cases in India: An estimation from drug sales data. *Lancet Infect Dis*. 2016; 3099(16): 1-6. doi: [10.1016/S1473-3099\(16\)30259-6](https://doi.org/10.1016/S1473-3099(16)30259-6)
5. World Health Organization. WHO | WHO End TB Strategy. 2015; Web site. [http://www.who.int/tb/post2015\\_strategy/en/](http://www.who.int/tb/post2015_strategy/en/). Accessed August 29, 2016