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Synergizing early detection and comprehensive mandatory notification to improve Tuberculosis case finding through public private mix

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Tuberculosis (TB) is a priority health problem in Indonesia. Incidence rate estimation for TB in 2020 was 301 per 100,000 population or 824,000 new cases per year which is the third highest worldwide. The Corona Virus Disease (COVID-19) Pandemic has caused decreasing performance of TB control program globally, including Indonesia. The treatment coverage was declined from 67% in 2019 to 48% in 2020 and 54% in 2021, far behind the 80% target. This fact signifies that around a half of people with TB in Indonesia are overlooked, which is estimated to be accounted for over 400,000 cases. Another TB Program's main indicator, treatment success rate at 86%, remains below the target of 90%. Low achievement of the two main indicators may result in the increasing of TB transmission, morbidity and mortality in population. Besides, Indonesia also faces the triple burden of TB, high prevalence of drug resistance TB and coinfection of TB and HIV.¹

The 2030 target for TB elimination is to reduce the incidence rate by 80% to 65 per 100.000 population and 90% mortality rate to 6 per 100.000 population. TB case finding acceleration to increase treatment coverage and success rate is very important. The evaluation of TB case finding, implementation of mandatory notification and the reporting system found a combination of under-detection and under-reporting contributed to the low TB case finding. Under-detection occurs because people with TB sign and symptoms do not come to health facility or those who had come to health facilities yet diagnosed properly. While, under-reporting implies that people with TB had been diagnosed and treated at health facilities but not reported.²

The Patient Pathway Study 2017 revealed that most people with TB symptoms (74%) firstly seek treatment to private sectors.³ The TB inventory study found 42% of people with TB were treated by private sectors but the contribution of private sectors to the total TB notifications in Indonesia was only 9%.⁴ Those studies showed the high potency of private sectors engagement to accelerate TB elimination. Since 2017, mandatory notification was initiated based on Ministry of Health Regulation Number 67/2017 regarding TB Control Program. All health providers with TB care, including private providers, are mandatory to notify TB cases. In 2018, district-based public private mix (DPPM) was implemented, which is linking TB public and private health facilities in one districts/cities under the coordination of the health office.⁵

The evaluation of DPPM in 2021 shows more than half (54%) of private hospitals notified TB cases while only 2% of the private general practitioners (GPs)/clinics did so. The contribution of private hospital on TB case finding was 21% and private GPs/clinics was extremely low, only 1% among all notified. The high potency of private sectors yet low contribution should be addressed through an innovative and comprehensive strategy.⁵ The low contribution of private sectors especially general practitioners and private clinic may due to low engagement, limited screening coverage, low reporting adherence and pattern of patient health seeking behavior. Those problem could be addressed by the implementation of early detection and mandatory notification.

TB is a disease that known as “the great imitator”, which means that it can imitate various other disease processes, signs and symptoms. The clinical spectrum also varied from without symptoms (laten TB infection), mild, moderate, severe, fatal and died. It may infect all population group and almost all human organs.⁶ Therefore, the screening strategy should be improved not only using signs and symptoms but also targeting people with risk factors and other potential population. Mandatory notification should be comprehensively covering all cascade of TB care starting from screening until the completion of treatment, involving all health providers, and integrated with all health information system.

The implementation of early detection should be started with mapping of all at-risk population and services type in particular health facilities which are potential to identify presumptive TB. The at-risk population should include household and close contact of people with Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) and Diabetes Mellitus (DM); also, those who are undernourished, smoking, immunocompromised and lived in an enclosed population or crowded community. These potential groups may be accessed not only from general, respiratory, internal medicine and pediatric services but also surgery, obstetrics and gynecology, neurology, ears nose throat (ENT) polyclinic, general medical checkup, pre-employment and immigration health examination. The screening in those point of entries should add no additional cost since it can be embedded in the routine services. The important note is that the screening criteria have to be sensitive including signs, symptoms, chest X-ray and others relevant examination to identify any abnormality suggestive to TB. The next important step is to ensure all patients with presumptive and confirmed TB that have been identified must be reported to the TB control program through TB information system (*Sistem Informasi TB/SITB*).

Health information system data comparison shows the implementation of TB mandatory notification is still ineffective. The number of people with TB from Health Social Security Agency (*Badan Pengelola Jaminan Sosial Kesehatan/BPJS Kesehatan*) data was much higher compared to those notified in SITB.⁷ This discrepancy means high number of health providers that collaborate with BPJS have identified TB cases but not yet reported. SITB in hospital is installed in the respiratory clinic, other service tends to not reporting TB cases because they do not aware with the mandatory reporting of TB cases. A comprehensive mandatory notification should cover all type of services in health facilities through a strong internal networking. Data of TB from BPJS health information system and other health information systems should be cross-checked and synchronized to SITB. The verification and synchronization process should be conducted through a simple way. The data manager in health facility can download the patient data with all type of TB diagnosis (including primary, secondary diagnosis and presumptive) from their information system. Furthermore, they have to report the data to TB program officer without exception. The TB program officer should ensure the data and the patients managed properly based on the standard.

In conclusions, to enhance TB notification and reporting, the concept of early detection should be implemented, one of the strategies is by conducting TB screening to at-risk and potential population before typical signs and symptoms occur. Detection in earlier stage will accelerate case finding, minimize transmission and increase treatment success rate. Meanwhile, comprehensive mandatory notification should be implemented by all health providers and reported to the SITB including all type of TB and then the patients should be managed according to the standard TB care. Both strategies above will synergize to overcome under-detection and under-reporting problems in the scheme of internal and external network of public-private mix.

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