

## RESPONSE: FACTORS RELATED TO THE SUCCESS OF THE TREATMENT PROGRAM OF MULTIDRUG-RESISTANT TUBERCULOSIS IN POLYCLINIC OF MDR-TB OF THE GENERAL HOSPITAL OF UNDATA PALU, INDONESIA

Al Asyary\*

<sup>1</sup>Department of Public Health Sciences, The Graduate School, University of Muhammadiyah Prof Dr Hamka (UHAMKA), Jakarta, Indonesia

<sup>2</sup>Problem Solving for Quality Hospitals (PSQH) Unit, Center for Educational and Community Services, Faculty of Public Health, University of Indonesia (P3M FKM-UI)

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\*Correspondence:

Al Asyary

Departement of Public Health Sciences, The Graduate School, University of Muhammadiyah Prof Dr Hamka, Jl. Warung Buncit Raya No. 17, Pancoran, Jakarta, Indonesia, 12740.

Email: [al\\_asyary@uhamka.ac.id](mailto:al_asyary@uhamka.ac.id)

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Dear Editor,

Tuberculosis (TB) still becomes a high burden for Indonesia, which is not only because of the TB itself ([Al Asyary, 2017](#); [A. Asyary, Purwentyastuti, & Junadi, 2017](#)), but also its resistant to several first-line TB drug variance, namely multidrug resistant tuberculosis (MDR-TB). I read previous publication on determinant of successful MDR-TB treatment at Palu, Sulawesi Tengah Province, Indonesia ([Napirah, Wandira, & Aulia, 2017](#)). Napirah, et al. presented a cross sectional study in tertiary healthcare facility, which revealed that there were significant relationships between knowledge, regularity of treatment, drug control, drug side effects, quality of health staffs and the success of multidrug resistant tuberculosis program ([Napirah et al., 2017](#)).

I appreciate that these findings are the meaningful results, particularly to mitigate and controlled MDR-TB prevalence in under-resourced TB control setting in Indonesia. However, I particularly concern about the

confounding and bias effects by its analytical approaches which was using bivariate analysis. I wonder how to adjust the effects' results after these variables analyzed using multivariable analysis such as simple multiple logistics regression ([Kleinbaum, Kupper, Nizam, & Rosenberg, 2013](#)). Furthermore, this study was unable to show the prior TB status of their MDR-TB cases whom treated in those programs as well as to prevent measurement bias, whether it is new case of MDR-TB (MDR-TB incidence) or previous cases (relapse, default, or failed case). In fact, it is estimated that the new MDR-TB cases are from the previous cases ([Zignol et al., 2006](#)).

The author presents the classification of casual TB that possibly develops MDR-TB cases as the following ([Microbiology Department, 2010](#); [WHO, 2009](#)): (a) New cases: a patient who has not yet treated for TB drug therapy at all or had been treated for TB drug therapy for less than a month (less than four weeks treatment); and (b) Previously treated cases,

which comprised of: (1) Relaps: a TB patient who currently is diagnosed with smear positive of *Mycobacterium tuberculosis sp.* (MTB) assessments, which had previously completed TB treatment before; (2) Default: a patient with smear-positive TB, who is interrupting TB therapy at least for two months of current TB treatment e.g. failed to follow up as the main reason; (3) Failure: a patient with smear-positive TB, who is still experiencing smear positive sputum of MTB assessment at least for five months of current TB treatment; (4) Transfer-in: a TB patient who is being transferred from one to another healthcare facility. In this case, the patient is usually following their TB either for therapy or diagnose from limited resourced to tertiary health facility, such as health facility with drug susceptibility test (DST) for MDR-TB diagnosed ([Kimerling, Lambregts-Van Weezenbeek, & Jaramillo, 2016](#)); and (5) Special cases: this case cannot be included in all classification, whereas this group is usually diagnosed as a chronic case. It consists of prior smear-positive TB patients who are confirmed as prior same outcome (smear positive TB) after current TB re-treatment.

It can be shown that the prior TB status is an important milestone that leads to the adjustable outcome of MDR-TB associations. It is therefore essential to affirm the adjusted effect of Napiral et al. study's variables in east territory of Indonesia setting with all limited resources.

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