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Impact of tuberculosis treatment length and adherence under different transmission intensities

STR PINHO¹, P RODRIGUES², RSF ANDRADE¹, H SERRA³, JS LOPES⁴, AND
MGM GOMES⁴

¹*Instituto de Física, Universidade Federal da Bahia, Campus Universitário de
Ondina, Salvador, Brazil*

²*Centro de Matemática e Aplicações & Faculdade de Ciências e Tecnologia,
Universidade Nova de Lisboa, Monte da Caparica, Portugal*
pcpr@fct.unl.pt

³*Faculdade de Educação, Universidade Federal da Grande Dourados, Brazil*

⁴*Instituto Gulbenkian de Ciência, Oeiras, Portugal*

ABSTRACT

Tuberculosis (TB) is a leading cause of human infectious mortality. TB default is a relevant problem for this scenario reducing treatment success and increasing the risk of resistant TB. In this work we analyse the relation of treatment default to treatment length along with its consequence on the disease spreading [1]. We use a stylized model structure to explore, systematically, the effects of varying treatment duration and compliance. We find that shortening treatment alone may not reduce TB prevalence, especially in regions where transmission intensity is high, indicating the necessity of complementing this action with increased compliance. A family of default functions relating the proportion of defaulters to the treatment length is considered and adjusted to Portuguese data. We find that the epidemiological benefits of shorter treatment regimens are tightly associated with increases in treatment compliance and depend on the epidemiological background.

References

- [1] Pinho STR, Rodrigues P, Andrade RSF, Serra H, Lopes JS, Gomes MGM (2014) *Impact of tuberculosis treatment length and adherence under different transmission intensities*, submitted.