

## Centre for health Systems Research & Development

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### Infection control and tuberculosis in health care workers: an assessment of 28 hospitals in South Africa

#### CITATION

O'Hara LM, Yassi A, Bryce EA, Janse van Rensburg A, Engelbrecht MC, Zungu M, Nophale LE & FitzGerald JM. 2017. Infection control and tuberculosis in health care workers: an assessment of 28 hospitals in South Africa. *International Journal of Tuberculosis and Lung Disease*, 21(3): 320-326.

#### ABSTRACT

**Setting:** Twenty-eight public hospitals in the Free State Province, South Africa

**Objective:** To examine the association between tuberculosis (TB) infection control (IC) scores in Free State hospitals and the incidence of TB disease among health care workers (HCWs) in 2012

**Design:** A cross-sectional survey and mixed-methods analysis of TB IC policies, practices and infrastructure using a comprehensive, 83-item IC audit and observation tool

**Results:** As the total IC score increased, the probability of TB in an HCW at that hospital decreased. When adjusted for other covariates in multivariate analysis, if the total score of a hospital increased by one unit, the odds of an HCW having TB decreased by 4.9% (95%CI 0.9-8.8). Significant associations were also seen for the personal protective equipment (PPE) score, where odds decreased by 11.5% (95%CI 1.8-20.1) for each unit increase in score. Administrative score, environmental score and miscellaneous score were not statistically significant in the multivariate model.

**Conclusions:** These findings reaffirm that overall IC and PPE are essential to protect HCWs from acquiring TB. More attention to TB IC is required to protect the health care workforce and to stop the South African TB epidemic.