Assessing knowledge, attitudes and practices regarding *Mycobacterium tuberculosis* infection risk among Health Science students in a TB endemic setting

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**Background**

South African health care workers, including Health Science students (HSS), are at increased risk of contracting tuberculosis (TB) and require knowledge of TB infection prevention and control (IPC) measures.

**Objective**

To assess knowledge, attitudes and practices regarding TB infection risk among HSS.

**Methods**

Three hundred and twenty-seven HSS at Stellenbosch University participated in a cross-sectional interventional study, with pre- and post-intervention questionnaires. The intervention included personal accounts by medical professionals affected by TB and TB-IPC education.

**Results**

HSS overestimated their risk of developing TB, but underestimated drug-resistant tuberculosis (DR-TB) mortality. Reported practices at Tygerberg Hospital (TBH), Western Cape showed that 63% (114/182 respondents) interacted once a week or more with patients who had previously defaulted on TB treatment. Only 8% reported that N95 respirators were always available where needed (15/177 respondents). Natural and mechanical ventilation were reportedly not used in clinical areas (60%, 108/179 and 55%, 90/164 respondents, respectively). Additional DR TB-IPC measures including airborne precaution signs and isolation rooms were reportedly inadequately utilized. Pre-intervention knowledge of personal protective equipment use was poor, but improved by 20% post-intervention (0.575 vs 0.775 out of 1 [p < 0.001]).

**Conclusion**

HSS lack knowledge of TB control measures and report poor implementation of TB-IPC in their training institution. A structured educational intervention increased students’ awareness of occupational TB infection risk and knowledge of TB-IPC measures. More opportunities for training in TB-IPC are urgently needed for HSS in TB-endemic settings. A similar intervention could be included in all Health Science curricula to protect students and future professionals.

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