



## **Predictors of low prevalence of latent tuberculosis infection among Egyptian health care workers at intensive care and bronchoscopy units**

### **Abstract**

**Aim:** Latent tuberculosis infections (LTBI) contain a significant reservoir for future epidemics. Screening of health care workers (HCWs) in a high-risk TB environment is an important strategy in TB control. The study aimed to assess the prevalence of LTBI among high risk Egyptian HCWs and to assess infection associated risk factors.

**Methods:** Fifty two HCWs who work at Intensive Care Unit (ICU), Bronchoscopy Unit, and Chest Diseases Department were tested for LTBI using both tuberculin skin test (TST) and Quantiferon TB Gold in-tube test (QFT). Risk factors for infection, knowledge of HCWs towards different aspects of TB infection and agreement between TST and QFT were also evaluated.

**Results:** Prevalence of LTBI in this study was 13.5% by QFT and TST. It was 13.6% by TST alone and 10.3% by QFT alone. There was good concordance between both tests (Kappa=0.913). There was a statistically significant association between prevalence of LTBI and age of staff  $\geq 30$  yr ( $p=0.002$ ), period of working experience ( $p=0.006$ ) and working at the Bronchoscopy Unit ( $p=0.001$ ). The total knowledge of HCWs towards different aspects of TB infection was generally good.

**Conclusion:** Although the participants in the current study were among high risk HCWs, the prevalence of LTBI was low. BCG vaccination, young age, short employment duration, good knowledge and a good infection control were the predictors of low risk of contracting TB at our hospitals. The risk of TB infection in resource-limited countries can be reduced with simple continuous educational and administrative infection control programmes.