

Health care practitioner's TB screening practice preferences

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Background: Tuberculosis has re-emerged as an infectious threatening disease. Some challenges encountered with tuberculosis are predominantly due to the lack of understanding of the disease, the rapid mutating properties of the TB microorganism, and to the lack of standardized TB screening. While great progress was made in the early 1900's towards the development of the tuberculin skin test (TST) and successful development of an effective vaccine; the problem with standardizing accepted screening practices remain.

Introduction-

Occupational exposure to tuberculosis (TB), including multiple and extensively-drug resistant TB (MDR-TB and XDR-TB) poses a serious risk to all healthcare workers (HCWs) globally. South Africa has the second highest incidence of TB in the world at 1000 per 100,000, a rate that has increased more than five-fold since 1986. The emergence of MDR-TB and XDR-TB has heightened the importance of improving access to and utilization of active TB case finding programs, as well as the provision of effective treatment to prevent the spread of this highly infectious disease. HCWs in South Africa face a very high risk of acquiring TB in the workplace due to high rates of TB, MDR-TB and XDR-TB exposure combined with a high prevalence of human immunodeficiency virus (HIV) among HCWs and deficiencies in infection control practices. Studies suggest that despite the fact that HCWs are at high-risk of occupational exposure to blood-borne and airborne infections, the timeliness of diagnosis and prompt initiation of treatment among this group remain low.

To ensure the health and safety of HCWs internationally, the American College of Occupational and Environmental Medicine (ACOEM) recommends that all health facilities incorporate TB surveillance for HCWs using baseline and periodic screening. Due to the high prevalence of latent TB infection (LTBI) in South Africa, case finding and TB testing policies focus on active TB disease as opposed to LTBI. Most health facilities in South Africa do have occupational health units (OHUs) available to provide free testing for active TB, however, it is thought that healthcare workers are often not tested regularly and one study found that only 32% of HCWs in Free State South Africa had ever been tested for active TB. Even HCWs without routine patient contact can be at an elevated risk for TB exposure. A recent study that collected air samples in a South African hospital noted concerning levels of Mycobacterium tuberculosis in areas not used for patient care, such as the information technology room.

The ultimate goal of an active TB case finding program is to promote early and accurate TB diagnosis, which is essential to improve treatment outcomes for individual patients and to reduce transmission to others. In 2010, the WHO, International Labour Organization, and Joint United Nations Program on HIV/AIDS released guidelines recommending that testing for active TB be available to HCWs and combined with other

infection-control interventions.[] The systematic review conducted during the WHO guideline development process highlighted the fact that there are few published studies focused specifically on issues related to testing programs for this high-risk workforce.

Although the South African National Department of Health has comprehensive TB guidelines that address active TB case finding, HCW case finding programs are designed and implemented provincially.

Purpose: The purpose of this descriptive, cross-sectional study was to identify current TB screening practice preferences and commonalities among health care practitioners (HCPs) and to evaluate the length of time that takes HCPs to provide medical clearance to patients who tested positive for TB using a TST for screening. **Methods:** There were 210 participants identified as HCPs actively involved in TB screening practices. They completed a sixteen questions questionnaire. Healthcare workers (HCWs) in South Africa are at a high risk of developing active tuberculosis (TB) due to their occupational exposures. This study aimed to systematically quantify and compare the preferred attributes of an active TB case finding program for HCWs in South Africa.

Methods-

A Best–Worst Scaling choice experiment estimated HCW's preferences using a random-effects conditional logit model. Latent class analysis (LCA) was used to explore heterogeneity in preferences.

Results: Physicians were significantly more actively involved in TB screening than non-physician providers, (OR: 3.696 7 CI 1.047-13.047, p=0.03). Non-physician providers were significantly more likely to use the two-step tuberculin skin test (TST) (OR: 3.57; CI: 1.35-9.38; p = 0.007) and single blood assay (OR: 2.86; CI: 1.80-7.48; p = 0.002) than physicians.

Conclusions: The findings suggest that although much research has been done on TB screening, with the advent of numerous blood assays single TB screening test, most HCPs have been extremely cautious to adopt these new practices, and continue to rely on proven TB screening tests and practice methods that have been established for many decades. However, it does not indicate that there is a commonly accepted TB screening practice among practicing HCPs. On the contrary, the study supports the variation of TB screening styles currently in use.

References-

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