

Tuberculosis Screening in New Healthcare Employees: A Comparison of

QuantiFERON®-TB Gold In-Tube Test and Tuberculin Skin Test

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ABSTRACT

Background: Streamlining onboarding processes for new hires to maximize efficiency and reduce costs while meeting regulatory requirements is a constant challenge for healthcare systems' Employee Health staff. Health screening is a required step and includes obtaining a detailed health history, tuberculosis screening, drug screens, immunizations, fit for duty examinations, obtaining medical records, clarification of disability accommodations, pre-work screens, and other tests which are time consuming and result in delays in hire dates. Faced with a high volume of potential new employee hires a major southeast healthcare system was concerned about delays in new hire start dates. The two-step tuberculin skin test administration and follow-up process was identified as a potential area for improved onboarding efficiency.

Method: A quality improvement study was designed and implemented to compare baseline testing for new employees with an Interferon-Gamma Release Assay (IGRA) known as QuantiFERON®-TB Gold In-Tube Test (QFT®-GIT) to the two step PPD Tuberculin Skin Test (TST) for tuberculosis screening time, overall onboarding time, compliance with screening

within 10 days of hire date, and associated costs. A retrospective electronic record review included a sample of 484 new hire employees.

Results: Results showed that the QFT®-GIT for tuberculosis screening in comparison to the TST testing significantly reduced tuberculosis screening time for new hire employees (TST = 8.03 days, QFT®-GIT = 4.11 days; $p < .0001$) and overall onboarding time (TST = 7.92 days, QFT®-GIT = 5.07 days; $p < .0001$) while improving compliance with tuberculosis screening within 10 days of hire date (TST = 92.92%, QFT®-GIT = 100%; $p < .0001$).

Conclusions: The utilization of QFT®-GIT for tuberculosis screening of new employees significantly reduced screening and onboarding time while improving compliance with screening within 10 days of the hire date. Anecdotal feedback from hiring managers and senior management indicated improved satisfaction with the Employee Health hiring process.

Implications: Healthcare systems should consider implementation of an IGRA in order to streamline processes for onboarding new employees. New processes require negotiations between healthcare systems and lab vendors, changes in policies and procedures, and employee health and laboratory staff development. Future research should focus on cost analyses, as well as, IGRA use for annual screenings.