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Community Exposure Predicts Healthcare Worker TB Skin-Test Conversion

by Gina Pugliese, RN, MS
Medical News Editor

Dr. Thomas Bailey and colleagues from Barnes Hospital in St. Louis, Missouri, a large urban teaching hospital, recently completed a study that assessed the risk for positive tuberculin skin tests among employees. The annual incidence of tuberculosis is approximately five cases per 100,000 persons in Missouri and approximately 11 cases per 100,000 persons in St. Louis. During the period January 1989 to July 1991, three patients with pulmonary tuberculosis were admitted to Barnes hospital.

Of the 6,070 active employees for whom TB screening data was available, 684 (11.3%) had a positive tuberculin skin test (TST) during the study period. Risk factors associated with a positive skin test were age >35 years, minority group status (black, Asian, Hispanic), and percentage of low-income persons within the employee's residential postal zone. Of 3,106 employees who had at least two skin tests, 29 had TST conversion; 15 (52%) occurred among employees who had no direct patient contact. Skin-test conversion was independently associated only with the percentage of low-income persons in the employee's residential postal zone. Stratifying the employees according to the degree of contact with patients or according to departmental group was not useful in determining risk for a positive TST or for TST conversion.

For certain groups of employees, an exposure to tuberculosis in the community poses a greater risk than exposure in a hospital setting. The authors concluded that their findings support the Centers for Disease Control and Prevention recommendation to include healthcare workers from "risk groups with increased prevalence of tuberculosis ... even if they do not have potential occupational exposure ... " in a periodic TST program.

FROM: Bailey TC, Fraser VJ, Spitznagel EL, and Dunagan WC. Risk factors for a positive tuberculin skin test among employees of an urban, midwestern teaching hospital. *Ann Intern Med* 1995;122(8):580-*585.*