

HOUSEKEEPING HEALTH CARE WORKERS HAVE THE HIGHEST RISK FOR TUBERCULIN SKIN TEST CONVERSION

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Background and aims: TB is especially prevalent among health care workers (HCW) as compared to the general population. Not all health care workers are at the same risk for tuberculin skin test (TST) conversion, indicating latent tuberculosis infection. In Israel, reported rates of latent TB infection incidence and prevalence are relatively high. We hypothesized that exposure to hospitalized patients in internal medicine wards will be associated with higher risk of TST conversion. The aim of this study was to identify risk factors for TST conversion among health care workers.

Methods: A retrospective cohort study was conducted at a tertiary university medical center. We included every health care worker who had had a two steps negative TST at work entry and at least one consecutive TST in the five years period of 2005-2009 (mean follow-up period 55 months). Potential risk factors such as age, health care profession, patient exposure profile, workplace division and history of BCG vaccination were entered in the binomic logistic regression model.

Results: There were 450 subjects who met the inclusion criteria and 93 subjects had TST conversion (crude annual conversion rate 4.3%). The highest annual rates of TST conversion occurred in health care workers who worked as housekeeping staff (6.9%).

Older age of staff (above 35), a work environment with high patient turnover and employment in maintenance departments were significant risk factors for TST conversion (adjusted odds ratio of 2.05[1.3-3.3], 5.2[1.3-20] and 8.4[1.7-42], respectively [95% confidence interval]).

Conclusion: Housekeeping staff, older age workers and health care professionals working in the environment of high patient turnover are at increased risk for latent tuberculosis infection. Current measures for latent tuberculosis infection appear to be insufficient. We recommended to increase the awareness of housekeeping staff to occupational hazard of TST conversion and to allocate of more resources to screening system.