magnitude of healthcare worker and patient risk of uncontrolled exposure to *M tuberculosis* aerosol.

Implementation of the hospitals' TB-control plan may have been influenced by the ongoing presence of CDHS project staff. For 35 individual TB patients who were observed more than once, work practices may have improved after the first observation. In addition, no observations were made during winter months (November-March). As the symptoms of TB are consistent with other respiratory infections that have a variable incidence throughout the year, a study conducted in summer months may not be generalizable to isolation procedures during winter months. ²¹ For all of these reasons, this study may have underestimated the routine potential for healthcare worker exposure to *M tuberculosis* aerosol.

The findings suggest that healthcare workers, including those who have no direct patient contact, may incur unrecognized exposures to M tuberculosis aerosol during routine hospital operations (ie, not an outbreak setting involving a massive failure of TB control measures). As the hospitals in this study treat many TB patients, over time, a greater than 10% failure rate of TB-patient-isolation control measures may pose a substantial cumulative infection risk among healthcare workers.^{22,23} Many inadequacies in policy, procedures, and training were remedied as they were identified, thereby minimizing the potential for prolonged exposures. Prospectively quantifying the implementation of a hospital's TB isolation policy may lead to more accurate estimates of risk and may help to identify and thereby prevent avoidable healthcare worker exposures to M tuberculosis aerosol.

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Skin Hygiene and Infection Prevention: More of the Same or Different Approaches?

Gina Pugliese, RN, MS Martin S. Favero, PhD

Elaine Larson, RN, PhD, from Columbia University School of Nursing in New York City, reviewed a number of published research studies that indicate a link between hand hygiene and nosocomial infections and the effects of hand care practices on skin integrity. In addition, she made recommendations for potential changes in clinical practice and for

further research regarding hand hygiene practices. Despite some methodological flaws and data gaps, evidence for a causal relationship between hand hygiene and reduced transmission of infections is convincing. However, frequent hand washing causes skin damage, with resultant changes in microbial flora, increased skin shedding, and risk of transmission of microorganisms, suggesting that some traditional hand hygiene practices warrant reexamination.

Some recommended changes in practice included use of waterless alcohol-based products rather than detergent-based antiseptics, modifications in lengthy surgical-scrub protocols, and incorporation of moisturizers into skin-care regimens of healthcare professionals.

FROM: Larson E. Skin hygiene and infection prevention: more of the same or different approaches? *Clin Infect Dis* 1999;29:1287-1294.

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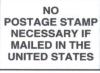
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