

Badge sensor alerts health-care workers of need to wash hands

September 16 2009

A wireless, credit-card-sized sensor that can detect whether health care workers have properly washed their hands upon entering a patient's room is being studied at the Virginia Commonwealth University Medical Center. The device could greatly reduce the number of hospital acquired infections nationwide since most are transmitted through contact due to poor hand-washing practice.

The VCU Medical Center was chosen as a study site because of its higher-than-average rate of hand hygiene compliance, nearly twice the national average. The sensor is worn like a name badge and is programmed to detect the presence of ethyl alcohol, the most common ingredient in hand cleansing solutions used in hospitals.

When a [health care](#) worker enters a patient's room, a small, wall-mounted sensor sends a signal to the badge to check for the presence of alcohol. The worker places their hands near the badge to obtain a reading. Lights on the badge glow red if no alcohol is present, indicating the need to wash hands. A green light indicates alcohol is present.

Experts say nearly 2 million hospital-acquired infections occur each year, resulting in about 5,000 deaths and more than 90,000 illnesses. Research shows that simple [hand washing](#) by medical staff could cut the number of infections in half.

"Health care workers don't deliberately avoid washing their hands; they get distracted or are so busy moving from one thing to the next they

don't remember to do it," said Mike Edmond, M.D., chief hospital epidemiologist, and principal investigator of the study. "Until now, the only way we've been able to track hand washing habits is through direct observation. This new system continuously monitors and records data and serves as a constant reminder."

VCU will study the device over a two-week period in a 21-bed unit of the hospital. Data gathered will measure how many times staff members followed proper hand washing procedure and how often they had to be reminded. The study also will assess staff perceptions of the technology and how compliance data compared with direct observation studies in the same unit.

The device was developed by BioVigil, LLC.

VCU was selected as the study site because of its high hand washing compliance rate - about 87 percent - nearly double the national average and because of the aggressive patient and environmental safety initiatives that have been established within the organization.

The [hand hygiene](#) program is part of an aggressive environmental and patient safety campaign at the VCU Medical Center called Safety First, Every Day. The goal of the campaign is to make the medical center the safest health care institution in the country with no events of preventable harm to patients, employees and visitors.

Source: Virginia Commonwealth University ([news](#) : [web](#))

Citation: Badge sensor alerts health-care workers of need to wash hands (2009, September 16)
retrieved 1 May 2024 from
<https://medicalxpress.com/news/2009-09-badge-sensor-health-care-workers.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.