Ode to My Favorite Gadget – This One Saves 99,000 Lives Per Year in the U.S. Can Your iPhone Do That?

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A piece of technology that has transformed modern health care—and our careers—is the underappreciated hand sanitizer dispenser.

Nearly every field of nursing and medicine depends on advances in the prevention and treatment of infection. For example, it is now possible to perform extended surgeries on the brain or heart while controlling the risk of later death from infection. Combined with infection prevention activities, it is now possible to give immune-suppressing drugs to cancer patients who would otherwise certainly die of an infection at some point in their disease process. One hundred years ago, patients with trauma often died of infectious complications several days after the acute injury.

Advances in every field of medicine depend on good infection control. And good infection control depends on good hand hygiene. And good hand hygiene depends on the hand sanitizer dispenser.

These devices are designed to provide ready access to hand hygiene products. Dispenser color, design, location, and branding are carefully study in efforts to improve use. Placed where they can provide a visual reminder of opportunities for hand hygiene, these devices are calibrated to dispense an effective and efficient dose of products (typically 1.2 ml). If too little product is dispensed, hand hygiene can be ineffective. If too much product is dispensed, it is wasteful, takes too long to dry and can interfere with patient care.

Many commercial dispensers use “no touch” technology where product is dispensed once hands are placed under the dispenser. These ubiquitous technological wonders use a sensor system to detect movement and provide product without the need to physically touch the dispenser, thereby reducing potential environmental cross-contamination.

More advanced dispensers can record and transmit the number of “hits” or activations of each dispenser to a centralized monitoring system. Linked with
a radio-frequency identification transmitter, these activations can be logged to a particular use in a given location at a point in time. This enables real-time individual, or aggregate, reporting of hand hygiene by health care staff. They can also provide “prompting” when hand hygiene opportunities are missed by a health care worker.

As one part of a comprehensive infection prevention strategy, deploying effective delivery systems to encourage hand hygiene is critical to preventing the estimated 99,000 annual deaths in the U.S.—and millions of poor patient outcomes worldwide—from health care-associated infections. Since the typical nurse has 50-60 episodes of hand hygiene per shift, these devices must be designed to be efficient and easy to use.

Arguably, no discovery has been more important to prevent disease than hygiene and sanitation efforts. At the forefront of hygiene efforts in health care settings are multi-modal strategies to improve hand hygiene. The hand sanitizer dispenser is a critical element of these strategies.

Can your iPhone say that?

Read more about RWJF grantees who are harnessing the power of technology to advance a culture of health.

Additional Resources
Association for Professionals in Infection Control and Epidemiology (APIC). www.apic.org

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