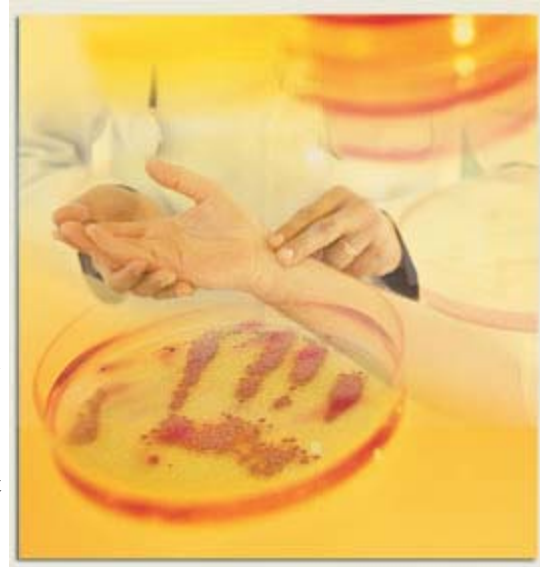


Washing away the flu blues

by Susan Cantrell, ELS

Picture this: you're walking down stairs, sliding your hand along the rail where a child had walked before you, who also slid his hand along the rail, just after wiping his hand across his runny nose. You lift your hand from the rail and scratch your own nose. Someone sneezes, wipes their hands on their pants, then opens a door by the knob that you come along behind and open, too. Then you rub your eye. Driving through a fast-food restaurant you get handed your change from a cashier who just wiped thumb and forefinger down the corners of his mouth. Then, with the hand you accepted the change, you rub that bit of lipstick off your front tooth.



The people who came before you may be harboring the flu bug but not yet know it. When you touch your nose, eyes, or mouth after touching surfaces they contaminated, suddenly you may have it, too, and you're contaminating surfaces for the people who come behind you.

It is amazing how often we touch our faces and are totally unaware of it. Start noticing, and you'll be surprised. A recent study by Nicas and Best, performed at the University of California-Berkeley, found that students who were observed as they read or worked on their laptops touched their faces an average of about 16 times an hour, once every 4 minutes.¹ Another study by Nicas and Jones found that one-third of the risk for flu infection was due to hand-to-face contact.²

What's the single most important thing you can do to beat the flu bug? Listen to your mother: Wash your hands. Don't touch your face is good advice, too, but if your hands are clean, chances of transferring bugs you pick up from other people to your own mucous membranes are far less.



Dial's Complete Antimicrobial Foaming Hand Soap

Hand hygiene gets short shrift

Wash your hands for good health. The message is everywhere we turn, particularly with flu season now here, but it's important all of the time. Nowhere are clean hands more important than in a healthcare setting; yet, it's amazing how often caregivers don't do it when called for. It's not that healthcare workers resist the idea of clean hands; the logic and the motivation certainly are there. It's more that there isn't enough time in the day to clean their hands between every patient contact or that it's inconvenient to clean their hands at the time or perhaps that their hands are already hurting from damage due to repeated washing. Hand-hygiene compliance is a big deal, but it often gets short shrift, for a variety of reasons.

The patient connection in compliance

Traditionally, the responsibility for compliance has been totally up to the healthcare worker. In the past few years, the onus of compliance has

been expanded to include patients. Patient-empowerment programs promote compliance because they educate patients as to how important hand hygiene is to their health.

The Centers for Disease Control and Prevention offers a video, "Hand Hygiene Saves Lives," that, in many facilities, is played for patients and their families upon admission. The video points out that over 1 million infections per year are acquired by patients during their hospital stay and that vigilant attention to hand hygiene can make a difference in whether they're one of the unfortunate ones. It empowers patients to remind doctors, nurses, family members, and other visitors to wash their hands with soap and water or use an alcohol-based product before touching the patient.

[Ecolab Healthcare](#) (St. Paul, MN) is one company that offers a patient-empowerment program. Theirs is aptly named "It's OK to Ask," because it's designed to help patients feel more comfortable in questioning caregivers entering their room about their hand hygiene. Cheryl Littau, PhD, senior program leader for skincare product development, noted: "The World Health Organization (WHO)'s updated hand-hygiene guidelines include patient empowerment as a means to encourage proper hand hygiene." (Go to www.who.int/gpsc/5may/Guide_to_Implementation.pdf to see "A Guide to the Implementation of the WHO Multimodal Hand Hygiene Improvement Strategy." This document is a component of WHO's "Save Lives: Clean Your Hands" initiative.)

Ecolab's FlexMount dispensers can attach to beds, IV poles, or other areas within the patient room for convenient hand sanitizing

Products that can promote compliance

Ecolab developed a product that addresses another problem dominant in the issue of hand-hygiene compliance: convenience. Littau noted how important dispenser placement is and talked about the innovative solution they offer. "The unfortunate reality is that, if product isn't conveniently placed where the healthcare worker can access it in the course of their natural workflow, it won't get used as often as it should. To encourage proper hand hygiene, Ecolab has created FlexMount, flexible mounting dispensers that can attach to beds, IV poles, or other areas within the patient room to make it quicker and easier for staff to sanitize their hands at every appropriate opportunity at the point of care."

You'll need, of course, an effective soap or alcohol-based hand sanitizer. Dial is a name everyone knows. Yon Makino, senior brand manager—healthcare, [Dial, A Henkel Company](#), Scottsdale, AZ, told *Healthcare Purchasing News*, "Having a well-recognized brand like Dial encourages handwashing. In a blinded, independent study of 1,000 public restroom users, nearly half reported having a more favorable opinion of a facility when they recognized a trusted soap brand."

"We've heard from customers that other soaps they've used were harsh or smelled bad, but not so with Dial soap," Makino said. In a blinded clinical study, Dial Complete antimicrobial foaming soap showed low skin irritation potential. "In fact, Dial Complete was statistically equivalent to saline itself," said Makino. (Study conducted by Diana Hassenbein, Dial Clinical Research Laboratory, Study TM&R-0003-08-TXC Dose Response Patch Test, April 2008.) Independent in-use hospital studies (conducted by a research firm, March 2002) in well-known facilities show that Dial Complete soap was preferred in all dimensions over other soaps.



Georgia-Pacific Professional's enMotion with Lotion towel roll

Dial may be mild on the skin and have a pleasant smell, but it also has teeth, according to Makino. "Dial Complete Antimicrobial Foaming Soap kills more germs faster than other soaps due to its Activated Triclosan Technology. For example, against community or hospital-acquired methicillin-resistant *Staphylococcus aureus*, Dial Complete achieved a far greater log₁₀ germ reduction than other healthcare soaps. In a published scientific study, washing with Dial Complete was shown to significantly reduce germ transfer and thus could help reduce disease transmission by 50% when compared to washing with a plain soap."³

No matter how mild a soap might be, when hands are washed as much as 30 times each shift, skin can dry out and crack. That hurts. It also presents a danger to the healthcare worker and his or her patients, because skin whose

integrity has been breached may be more susceptible to colonization and infection.

[PURELL from Gojo](#), now comes in a formula made just for healthcare workers who sanitize their hands frequently throughout the day. PURELL Instant Hand Sanitizer with Dermaglycerin System is a one-step sanitizing and moisturizing formula that combines the broad spectrum efficacy of PURELL with high-performance moisturizing. Designed to help prevent skin dryness and damage from frequent handwashing, the product is clinically proven to improve skin condition in 14 days. It is CHG compatible, and can be used with, latex, nitrile and vinyl gloves. This alcohol-based formula kills 99.99% of most common germs that may cause disease, and works in as little as 15 seconds. The product meets hand sanitizer guidelines provided by the CDC, Joint Commission and other organizations.

Hands that are dry and cracked from frequent hand washing may benefit from [Germ Pro](#) (Tampa, FL) Hand Sanitizing Lotion, which has persistence. Wayne C. Albright, president, told *HPN*: "Germ Pro's alcohol-free, antimicrobial Hand Sanitizing Lotion has a broad-spectrum (99.9%), persistent kill that only needs reapplying every 3 to 4 hours. Germ Pro's lotion is to be used in addition to hand-hygiene guidelines to kill [pathogens] in between hand washings."

Albright added: "Hand hygiene is more effective when hospital surfaces are free of germs. Germ Pro's Persistent Action Plan (PAP) uses the combination of our Hand Sanitizing Lotion and our Surface Disinfectant, both with persistence, to help prevent healthcare-acquired infections (HAIs) by killing pathogens persistently before they can become infections. Hospital trials using the PAP have shown greater than 25% reduction in HAIs within 90 days. If you persistently kill the germs on your hands and the surfaces your hands touch, you will not be able to pick up or transmit infections easily."

Dynamic Computer Corp's RTLS hand-hygiene—compliance solution alerts staff to wash their hands before patient contact

[3M Avagard D](#) Instant Hand Antiseptic with Moisturizers provides rapid bactericidal action against a broad spectrum of microorganisms while helping to maintain the skin's integrity and prevents skin breakdown. Avagard D hand antiseptic contains 61% w/w ethyl alcohol in a moisturizing base. It's a waterless hand antiseptic that feels like a moisturizer. Its unique rich emollient base feels smooth on hands, but doesn't leave hands sticky or impact glove performance. Avagard D instant hand antiseptic is proven to have broad spectrum activity to kill more than 99% of harmful bacteria within 15 seconds.

[CLX Hand Sanitizer from The Clorox Company](#) is available in a spray form. "The spray form provides the opportunity for better coverage in the germ 'hot spots' such as under the cuticle, under the fingernails, etc.," said Margaret Pinzuti, customer marketing manager – Healthcare. "Also, by being preferred by endusers, compliance with hand sanitization guidelines may increase as endusers prefer the 'clean' feel of the spray on their hands."

The CLX Hand Sanitizer program is supported by Proper Hand Hygiene Protocol posters. These are available, free of charge, to anyone who participates in the CLX Hand Sanitizer Program, noted Pinzuti.



Germ Pro alcohol-free Hand-Sanitizing Lotion

The latest skin care innovation from [Kimberly-Clark Professional](#) is the new electronic touchless dispenser system. While research shows that 25% of unsealed bulk soap systems are contaminated with potentially harmful bacteria, this new system is sealed to eliminate the contamination threat. The hygienic touchless dispenser is filled with Kimberly-Clark's KLEENEX Foam Soap that provides a light, smooth and luxurious feel. The system includes low battery and low product indicator lights that show when maintenance is required. Long battery life dispenses 60,000 single uses. It also dispenses the perfect amount of foam soap per hand wash, resulting in less waste.

[Germgard Lighting LLC](#) (Dover, NJ) has come up with a different approach to hand hygiene. Their product sanitizes the bare or gloved hand using UV-C illumination.

Peter E. Gordon, vice president, marketing, explained that Germgard approached the challenge of hand-hygiene compliance from the viewpoint of "how do we protect workers' skin while increasing more effective hand hygiene?" Gordon said: "Common sense suggests that worker skin health will improve with use of a UV-C based system instead of alcohol rubs or hand washing, since erythema is totally avoided in the first place. So in practice, Germgard offers the use of a more comfortable and healthier hand-hygiene solution at the point of care and, as a result, hand-hygiene compliance will rise at the patient bedside."

Gordon explained how their product works. "Germgard has demonstrated a unique approach, based upon the utilization of UV-C, that consistently produces a 4-log reduction of virus, bacteria, and spores on the entire surface of a bare hand or gloved hand within 3 seconds. The system is safe, simple to use, non-irritating to skin, lightweight, battery-powered, and portable. It can be conveniently placed at bedside or on a mobile cart."

Gordon compared cost of Germgard's solution to more traditional means of hand hygiene. "The upfront expense of the system, plus the ongoing cost per application, is estimated to be no more than one-third of the current annual cost of alcohol-based hand rubs on a per-bed basis. This indicates a significant material savings exceeding \$2 billion to hospitals [across the United States] per year over current solutions."

[Georgia-Pacific Professional](#) (Atlanta, GA) has found yet another way to soothe sore hands to promote better hand-hygiene compliance. Jacquell Kelly, senior healthcare market development manager, described their solution. "Georgia-Pacific Professional paired the enMotion Automated Touchless dispensing system with its enMotion with Lotion towels, the only moisture-activated lotion towel in the away-from-home market. The enMotion with Lotion towel is designed with added softness to help protect hands from signs of dryness, cracking, and scaling, common issues produced by frequent hand washing. The release of the lotion applied to the towels is enhanced when in contact with water, typically when hand washing. Coupled with the enMotion Automated Touchless Soap Dispenser, which eliminates bacteria, the entire hygienic package reduces risk of cross-contamination and increases hand-hygiene compliance while maintaining operational efficiency."



Germgard's UV-C—based hand-hygiene solution is easy-to-use, non-irritating, lightweight, battery-powered, and portable.

Littau, Ecolab, also emphasized the importance of products that help to maintain hand health and skin integrity. "It's critical that hand-sanitizing and soap products are chosen to be effective but also to be non-drying to support skin health, so that healthcare providers don't mind using it. Ecolab's Quik-Care line of foam and gel hand sanitizers and Mild Moisturizing Liquid and Foam Soap are formulated with humectants, to increase skin moisture content, and emollients, to replace the skin's natural oils, so that, even with repeated use, they keep skin healthy and moisturized. Our Endure Revitalizing Lotion is also designed to reduce irritation and replace the moisture and oils that frequent hand hygiene can remove from skin."

A many-pronged approach may reap better results. Littau cited an example of a facility using their multi-modal approach. "In Baltimore, Maryland, Good Samaritan Hospital's hand-hygiene—compliance program uses our 'It's OK to Ask' patient-empowerment program and staff education, combined with direct observation and product-volume measurement to gauge compliance.⁴ As subscribers to Ecolab's Hand Hygiene Compliance Monitoring Program, they get a monthly analysis of its compliance rates through an independent consulting group that showed sustained high levels of compliance over 6 months. After 1 month of the program, the product-volume—measurement compliance average was 70%; the direct observation average was 96%.⁴

After 6 months, the compliance average, as measured by product volume, was 77%, whereas direct observation compliance average was 97%.⁴ According to studies in the *American Journal of Infection Control*⁵ and the *Journal of Hospital Infection Control*,⁶ patient-empowerment programs have been shown to improve and sustain hand-hygiene compliance significantly.

RFID for accountability

[Dynamic Computer Corporation](#) is using radio frequency identification (RFID) to enforce hand-hygiene compliance. Farida Ali, president and CEO, Dynamic Computer Corporation (DCC), Farmington Hills, MI, briefly described their product and explained how the RFID-based system addresses the issue of hand-hygiene compliance. "The hand-hygiene compliance real-time locating solutions [RTLS] system, based on patented infrared radio frequency [IR-RF] technology from Versus Technology (Traverse City, MI), consists of IR-RF badges, ceiling sensors, and soap or sanitizer dispensers retrofitted with IR-RF sensors. When a staff member dispenses soap or sanitizer, the sensor reads the ID badge and timestamps the occurrence. If a staff member approaches a patient prior to handwashing, the system alerts them using a vibration to a pager or an audible sound. The data are stored in a database for retroactive reporting and can be easily integrated with other electronic systems. The system simply and effectively addresses hand-hygiene compliance by automatically capturing data on handwashing in the background. It monitors 24/7 and alerts staff on compliance in real-time, allowing hospitals to prevent adverse events before they occur."

Visit www.dynamicrfidsolutions.com/solutions/preventing_hais.php, to see how DCC's RFID-based system works.