

## **RESEARCH INDICATES INSTANT HAND SANITIZER INCREASES HANDWASHING RATES AMONG HEALTHCARE WORKERS**

### ***Study in American Journal of Nursing Describes Long-Term Improvements in Hand Hygiene***

ROSWELL, Ga. (April 12, 2001) — A study published in the March issue of the *American Journal of Nursing* finds that healthcare workers were more likely to sanitize their hands when an alcohol-based hand sanitizing gel was available as an alternative to soap and water. Handwashing or “hand antisepsis” rates increased by nearly 44 percent when the healthcare workers studied had access to the hand sanitizer. Overall, the hand sanitizer was used in approximately 60 percent of the episodes of hand antisepsis.

Handwashing has been widely and repeatedly identified as the single most effective means of controlling and preventing nosocomial (hospital-acquired) infections.

The three-phase observational study was conducted over a period of five months in two intensive care units at the University of California, San Diego, Medical Center. To establish a baseline hand antisepsis compliance level, healthcare workers at the facility were observed washing their hands in 39.6 percent of patient contact situations. Each episode of patient contact studied had a maximum of two instances of compliance — before and after patient contact — in which healthcare workers should have degermed their hands using either soap and water or the instant hand sanitizer.

Two to six weeks after introducing an alcohol-based hand sanitizing gel as an alternative to regular “soap-and-water” handwashing, compliance rates rose to 52.6 percent (a 32.8 percent improvement). And 10 to 14 weeks after installing the hand sanitizer, hand antisepsis compliance rates continued to increase to 57 percent (an 8.4 percent increase over Phase II and a 43.9 percent increase above the baseline level).

Hand sanitizer dispensers mounted in the hallways outside of the patient rooms were nearly 30 times more likely to be used than the dispensers mounted anywhere inside the rooms.

“Increasing compliance with handwashing protocols is an ongoing quest for infection control practitioners and other healthcare workers,” explains Alvin Chapital, executive director, Kimberly-Clark Skin Wellness Institute, which provided funding and equipment for the study. “This study supports the use of hand sanitizers as a viable method of producing a sustained, long-term increase in hand antisepsis compliance rates.”

Eddie Hedrick, manager, Infection Control and Staff Health, University of Missouri-Columbia Hospital and Clinics , and a faculty member of the Kimberly-Clark Skin Wellness Institute, agrees, stating: “If you can make hand antisepsis convenient, and can shorten the process with a product that doesn’t cause the skin to dry, you can substantially increase compliance. This study can be seen as a compelling call-to-action for healthcare workers who don’t fully comply with APIC handwashing guidelines.”

### Key Findings

The study is the only trial to evaluate usage of alcohol-based hand sanitizers continuously over a period of months, before and after installation of the hand sanitizer dispensers, in a medical setting. After baseline handwashing compliance rates were measured (Phase I), seventy-three dispensers containing an instant hand sanitizing gel were installed both inside and outside the patient rooms in a 20-bed surgical intensive care unit (SICU) and a 13-bed medical intensive care unit (MICU). Phase II of the study evaluated the impact of the hand sanitizing gel on hand antisepsis compliance two to six weeks post-installation. Phase III measured compliance 10 to 14 weeks post-installation of the hand sanitizers.

In Phases I and II, physicians cleansed their hands less often than nursing personnel, who in turn cleansed their hands less often than ancillary personnel (such as radiation technicians and physical therapists). In Phase II, hand

antiseptic rates among ancillary personnel improved the most (42 percent) over baseline, followed by physicians (39.2 percent) and nursing personnel (31.6 percent).

Overall during Phase II, healthcare workers chose the hand sanitizing gel over a traditional “soap-and-water” handwash in 60.1 percent of the episodes of hand antiseptic. The nursing staff was the most likely to incorporate the hand sanitizer into hand antiseptic, using it in 62.8 percent of observed episodes. Physicians used the hand sanitizer during 61.6 percent of their hand antiseptic episodes, and ancillary personnel used it in lieu of soap 52.4 percent of the time.

In Phase III, ancillary personnel continued to have the highest rate of handwashing compliance, with 83.5 percent of their patient contacts involving at least one instance of hand antiseptic, a 14.9 percent increase from Phase II and a 63.1 percent increase over the baseline rate. Nursing personnel cleansed their hands in 56.9 percent of patient contacts, a 5 percent increase from Phase II and a 38.1 percent increase over baseline. Physicians were observed cleansing their hands in 43.7 percent of patient care episodes, an increase of 7.1 percent from Phase II and a 49.2 percent improvement over the baseline rate.

According to its authors, “[the] study attempted to address each of the often-cited explanations given for noncompliance with published guidelines and individual hospital policy: inconvenience, lack of time, and the drying effects of repeated use of soap and water on skin. Gel dispensers were installed at convenient locations throughout the two units under study, and using the gel required less time than did soap and water. Yet, at the conclusion of the study, we had not achieved 60 percent overall compliance.”

“[Since] full compliance with hand antiseptic guidelines may not be a realistic goal, we believe that our study’s findings may best be used to re-evaluate the current indications for hand antiseptic,” the authors concluded. “It would be useful to employ a system of risk stratification by procedure, one which clearly delineates which patient care activities carry higher and lower risks of hand transmission of microorganisms. Compliance would seem a more likely result if the need for hand antiseptic were emphasized for those procedures that

are more likely to transmit pathogenic microorganisms and not for those less likely to do so.”

#### About the *American Journal of Nursing*

The *American Journal of Nursing* is the largest and oldest circulating nursing journal in the world, and is the official journal of the American Nurses Association. The *American Journal of Nursing* is owned and published by Lippincott Williams & Wilkins, a unit of Wolters Kluwer International Health & Science (WKIHS). WKIHS is a group of leading publishing companies offering specialized publications and software in nursing, medicine, pharmacy, science, and related areas. WKIHS also includes Ovid Technologies, New York; Facts and Comparisons, St. Louis; Adis Interantional, Auckland, New Zealand; and Kluwer Academic Publishing, The Netherlands.

#### About the University of California San Diego Medical Center

The University of California San Diego Medical Center is one of five academic health centers in the prestigious University of California system. UCSD Medical Center provides a broad spectrum of medical services, including a major cancer center, one of the most comprehensive organ transplant programs in the country, the county’s only Level 1 Trauma Center, and one of the leading regional burn centers in the nation.

UCSD Medical Center has been responsible for important breakthroughs in the care and treatment of serious diseases. This leadership in medical research frequently enables the Medical Center to offer new clinical treatments and drugs before they are generally available. Equipped with state-of-the-art technology, UCSD Medical Center’s advanced diagnostic ability and treatment capabilities are recognized internationally.

#### About the Kimberly-Clark Skin Wellness Institute

The Kimberly-Clark Skin Wellness Institute was established in 1998 to advance the cause of better skin health in “away-from-home” settings — at the

office or the factory, at school or in the hospital, when traveling or eating out, and even at play. The Kimberly-Clark Skin Wellness Institute, based in Roswell, Georgia, focuses on skin health through research, education and communication of skin wellness practices. It was founded and is supported by Kimberly-Clark Corporation, a leading global manufacturer of health care, personal care, consumer tissue and away from home products, including skin cleansers and dispensing systems. Visit the Kimberly-Clark Skin Wellness Institute web site at [www.kcskinhealth.com](http://www.kcskinhealth.com).

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