GOJO

HAND HYGIENE TIMES

Your resource for the latest news in effective infection control program development and best practices.

Issue 11 Volume 3

The Importance of Human Factors Engineering in Improving Hand Hygiene Compliance

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When discussing hand hygiene and barriers to hand hygiene compliance, occasionally one might hear the term human factors or human factors engineering. For example, a publication uses the phrase: "Hand hygiene compliance by healthcare providers has been difficult to achieve due to diverse environments, work culture, processes and task requirements. Because of this complexity, hand hygiene lends itself well to a human factors analysis in order to design a system that matches human cognitive and physical strengths and makes allowances for human limitations".[1]

What does the phrase human factor mean, and how does it relate to hand hygiene in healthcare? The National Center for Human Factors Engineering in Healthcare states:

Human Factors Engineering (HFE) is an inter-disciplinary approach to evaluating and improving the safety, efficiency, and robustness of work systems, such as healthcare delivery. Human Factors scientists and engineers study the intersection of people, technology, policy, and work across multiple domains, using an interdisciplinary approach that draws from cognitive psychology, organizational psychology, human performance, industrial engineering, systems engineering, and economic theory.

HFE addresses multiple aspects of work including:[2]

- Task analysis and design
- Device evaluation and usability
- Communication, collaboration, and teamwork
- Training
- Systems resilience, adaptation and failure

As part of a human factors evaluation, a recent study examined the desirable ergonomic characteristics of patients' rooms in an ICU setting for practicing hand hygiene. The study examined sinks, waste receptacles and alcohol based hand rub dispensers. **Desirable attributes for the sink included:**[3]

- Hands free operation
- Easy to set desired water temperature
- Easy to access soap dispenser
- Placed at optimal height
- Within reach from patient's bedside
- Easily visible
- Easy to access towel dispenser
- Unobstructed approach from patient's bedside

The study identified HFE features for the waste receptacle to include also within easy reach from the patient's bedside.

Desirable attributes for the alcohol based hand rub dispenser included:

- Easily visible
- Placed at optimal height
- Easy to actuate
- Redundant dispenser available
- Within easy reach from the patient's bedside
- Unobstructed approach from the patient's bedside

Take a minute and look at your facility.

- Are the hand hygiene products accessible?
- Has the staff been educated as to when to clean their hands since their orientation?
- Are there fresh reminders visible to the staff and visitors?
- Is there a process in place to refill empty dispensers?
- Are there hand hygiene products within the point of care?
- Does the staff receive feedback about their hand hygiene compliance, either by unit or individually?
- Is the staff aware of patients who acquired infections while on their unit?

Human factors engineering and its application to hand hygiene in healthcare is all about making it easier for healthcare workers to be compliant with hand hygiene policies and ultimately for patients to have good outcomes without acquiring an infection while hospitalized.

1 Chagpar, A. et.al. (2010). Challenges of hand hygiene in healthcare: The development of a toolkit to create supportive processes and environments. Healthcare Quarterly 13 (Sp) 59-66. Retrieved October 30, 2011 from: http://www.longwood.com/content/21968

2 National Center for Human Factor Engineering in Healthcare. What is Human Factors Engineering? Retrieved October 30, 2011 from: http://medicalhumanfactors.net/what-is-hfe

3 Alvarado, C. J. (2009). Infection prevention, patient safety and human factors. Presented October 27, 2009 at The Beacon Conference, Freemont, CA. Retrieved October 30, 2011 from:http://www.beaconcollaborative.org/assets/files/1009_Quarterly%20Meeting/1009_InfectionPreventionPatientSafetyHumanFactors_Alvarado.pdf

THAT'S a FACT!

In a recent study, Multidrug-resistant *Acinetobacter baumannii* (MDR-AB) were found on supply drawer handles (20%), floors(16%), infusion pumps (14%), ventilator touchpads (11.4%), and bedrails (10.2%), and 85% of environmental cultures matched the strain of the infected patient in that room.

http://www.sciencedaily.com/releases/2011/11/111101095119.htm

Product Feature

DISPENSER DESIGN – TOUCH FREE, ACCESSIBLE AND COMPLIANT

At the foundation of every infection control program are dispensing systems that can be mounted on walls inside and outside of patient rooms. This ensures that HCWs, patients and visitors have an opportunity to clean their hands on entering and leaving the patient rooms. At GOJO, our focus is to help improve hand hygiene compliance by improving patient outcomes. This is evident with our investment in our dispenser systems.

Our Touch Free Dispensing System has been proven to help improve hand hygiene compliance. A study comparing the frequency of use of manually operated and touch-free dispensers of hand sanitizers found that touch-free dispensers were used significantly more often than manual dispensers; resulting in a 20.8% increase in hand hygiene compliance.[1]

In addition, providing the right delivery system and easy access to hand hygiene and skin care products are essential to help reduce key issues that hinder compliance. The Touch Free Dispensing System helps remove the obstacles that can affect healthcare worker compliance with proper hand hygiene and skin care practice.

The GOJO Touch Free Dispensing System is an automatic delivery system where product is dispensed without a touch to reduce contact contamination. Just place hands below and product is automatically dispensed. This system dispenses both PURELL® and PROVON® foam or gel sanitizer and soap products. Further, several accessories such as our Service REFILL ALERT™ flag, SHIELD™ Floor Protector, and the MESSENGER™ Dispensing Station offer convenience for maintenance and awareness for an effective hand hygiene program.

Key Features of the TFX Touch Free Dispensing System:

- Reduces contact contamination
- Holds high-capacity refills to reduce number of changes
- SANITARY SEALED™ refills with a fresh dispensing valve
- Provides 30,000 actuations from three standard C-size alkaline batteries (first set included)
- Patented Infrared Sensor minimizes cost and waste
- Fully ADA Compliant

Our Touch Free Dispensing System has been proven to help improve hand hygience complicance.

Dispenser Accessories

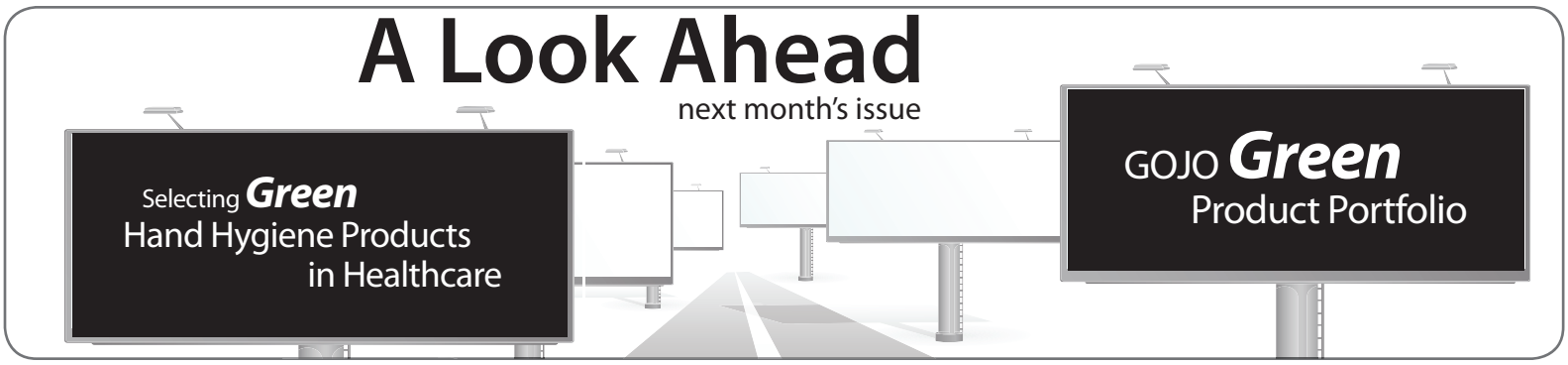
GOJO provides dispenser options and placement recommendations to meet regulatory requirements (CDC, CMS, JC, NFPA, IFCC and ADA) and helps maximize hand hygiene compliance within healthcare facilities.

Product Description	Order Number	Case Pack
PURELL® TFX ™ Touch Free Dispensing		
PURELL® TFX™ Touch Free Dispenser	2720-12	12
PROVON® TFX ™ Touch Free Dispensing		
PROVON® TFX™ Touch Free Dispenser	2745-12	12
Accessories		
AT-A-GLANCE™ Service REFILL ALERT™	2101-24	
TFX™ Shield™ Floor and Wall Protector	2760-06	
MESSENGER™ Dispensing Station	2105-12	

1 Larson EL, Albrecht S, O'Keefe M. Hand hygiene behavior in a pediatric emergency department and a pediatric intensive care unit: comparison of use of 2 dispenser systems. Am J Crit Care. 2005 Jul;14:304-11; quiz 312.

A Look Ahead

next month's issue



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