

# CONTAGIOUS COMMENTS

## Department of Epidemiology

### "It's As Simple as ABC-- WASH YOUR HANDS"

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It should be simple to follow common sense practices for a better outcome—preventing infection. But....

#### Why Is It So Hard to Wash Your Hands?

Cabana and colleagues described several barriers to healthcare worker adherence to practice guidelines, practice parameters, clinical policies, or national consensus statements.

- **Knowledge Barriers** exist when HCW are not properly educated about expectations and methods of compliance. With regards to hand hygiene, we need to assure that our education information is accessible and brief so that there is time to stay informed aka "Keep It Simple."
- **Attitude Barriers** are perhaps the most complex in that they revolve around human behavior.
  - Lack of agreement. Many health care providers may find instruction in hand hygiene and infection control "too cookbook", too rigid, and not practical
  - Lack of outcome expectancy. Does hand hygiene actually save lives? Show me the connection. Over 150 years ago Dr. Semmelweiss first proved that when mothers' babies were delivered with clean hands the mothers were more likely to survive child birth that those delivered by physicians with contaminated hands.
  - Lack of motivation caused by inertia, habit, or conflicting routines may lead us to be lackadaisical about the meticulous practice of something as simple as handwashing.
- **Practice Barriers** exist when guidelines conflict, patient preferences lead us away from recommended practice, and resources or systems problems block our paths.

Daniel Sokol, author and a medical ethicist at the Imperial College Faculty of Medicine, London, commented about the inertia associated with the performance of hand hygiene:

*"Rather, washing your hands properly, like brushing your teeth correctly (for three interminable minutes), is a terribly boring, time-consuming activity which, in a busy environment, can be easily avoided through laziness, forgetfulness, or the belief that more important things await."*

#### What is Our Record at Children's?

At The Children's Hospital, our goal is to raise compliance with required hand hygiene to an overall rate of 90% or greater. We have monitored our in-patient unit compliance rates for over a year and disseminate these data regularly to administration and TCH staff members.

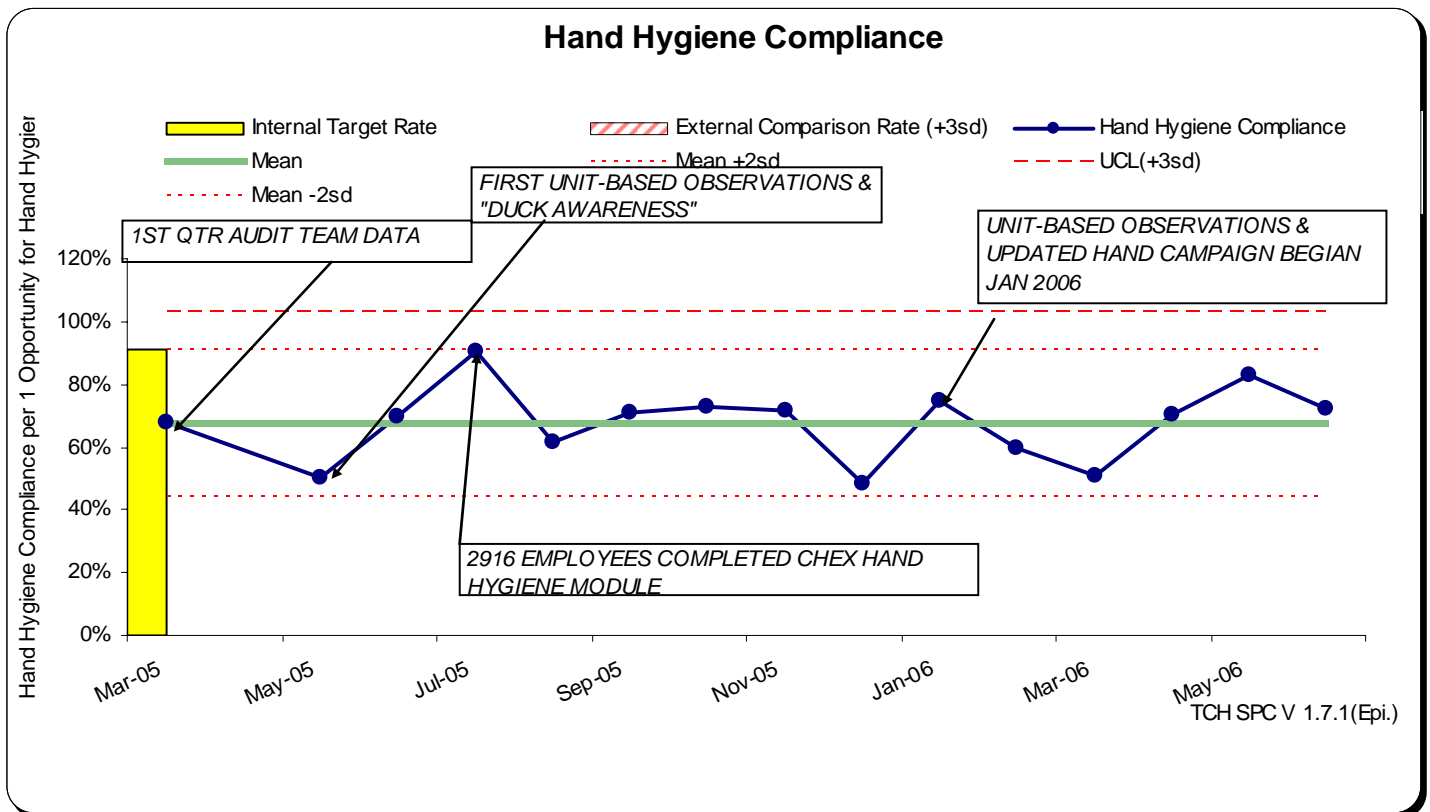
Since January 2006, a designated person from each inpatient nursing unit performs weekly hand hygiene monitoring. The observer selects a convenience sample of those performing patient care during that week's event. We record the staff member's title or discipline, the type of activity being performed, and whether hand hygiene was performed when required for each particular activity during the 5-minute individual observation. These observations are recorded on a standard data collection form and returned to Epidemiology where the data is compiled and reported back to the units.

For the first half of 2006, we have an overall rate of 66.73% (n=1587) compliance. When these data were analyzed further, we see that we are more likely to perform hand hygiene

- after removing gloves (87.6%) and
- when leaving a patient's room (72.3%) than we are when we
- first encounter a patient (65.9%) or
- after we come in contact with the patient's environment (47.7%).

Our nursing staff has a compliance rate for 2006 of 71.6% (n=925) and our physician staff has a rate of 43.8% (n=233). The rates include observations of students, fellows, residents, and attendings for these disciplines. The 5 North patient unit had the highest rate of compliance in 2006 with a rate of 87.2% (n=109).

The following graph demonstrates the measurements of overall TCH hand hygiene compliance since March 2005.



#### What is Hand Hygiene?

Hand hygiene is a general term for either using soap and water to wash hands or use of an alcohol-based hand rub for quick and effective disinfection. If hands are visibly soiled, a soap and water, 15-second hand washing must be performed (about the time it takes to sing the ABC song!), using a clean paper towel to turn off the faucet. If hands are not visibly soiled, *we recommend the use of the alcohol hand rub* for hand hygiene by applying enough spray or gel to cover all surfaces and rubbing hands together until the alcohol has dried.

#### When Should You Perform Hand hygiene?

- Before and after each patient contact whether or not gloves are worn
- When going from a more heavily contaminated site to a cleaner site when performing care on a single patient
- Whenever we perform invasive procedures (inserting catheters)
- After removing gloves
- Before donning sterile gloves for central line placement
- After direct contact with a patient's skin or with inanimate objects in the immediate vicinity of the patient

#### What Has Been Done to Make it Easier to Perform Hand Hygiene?

- To help reduce barriers to performing hand hygiene we have increased the number of alcohol hand rinse dispensers and made them more visible.
- Audits of hand hygiene opportunities will continue with "teaching moments" to "break the chain of transmission" of organisms between patients. New employee orientation and the annual review via the CHEX system includes education on hand hygiene. A public relations campaign is in progress that reminds us that "Good Health is in Your Clean Hands!"
- Next action plans include encouraging families to participate with us in preventing infections, creating simpler monitoring tools, and promoting personal accountability for hand hygiene.

#### Frequently Asked Questions

- *How effective are the alcohol hand rubs?* If hands are not visibly soiled, alcohol hand rubs have excellent activity against gram-positive and gram-negative bacteria, including MRSA and VRE. Viruses such as HSV, HIV, influenza virus and RSV are susceptible to alcohols. In all but two trials cited in the CDC hand hygiene guideline, alcohol reduced bacterial counts on hands more than washing with a variety of anti-microbial soaps. The caveat to the preferred use of alcohol hand rubs is in the presence of an anthrax threat or an outbreak of *Clostridium difficile* disease. Alcohol hand rubs are less effective against spore-forming bacteria than the friction of soap and water washing and

running water rinse. At TCH, we have not seen an increase in nosocomial *C. difficile* cases since instituting the use of alcohol-based hand rubs several years ago.

- *Do I need a really long hand scrub in the morning?* A 15-second hand wash with soap and water, covering all surfaces of hands and wrists (including fingernails) and working up a lather is a good way to start and end your work day in healthcare. If hands are not visibly soiled, alcohol hand rubs are recommended for hand hygiene throughout the day.
- *I didn't touch the patient; do I need to perform hand hygiene?* Personnel who had contact only with surfaces contaminated by secretions of infants with RSV also became infected. Inanimate objects (fomites) in patient rooms can be the source of contamination for hands and equipment. Cultures of inanimate objects, e.g. ink pens, computer keyboards, stethoscopes, chart covers, have demonstrated their capacity to be vectors of disease.
- *I wore gloves; do I need to perform hand hygiene, too?* While gloves reduce the amount of contamination to hands during patient care, they can have unnoticed holes and tears. Healthcare workers have also been shown to contaminate their hands during glove removal. For those reasons, hand hygiene should always be performed after glove removal.
- *I always wash when I leave the room. Why do I need to wash when I enter the next room?* Can you count on the next person having the same habits? Everyone performing hand hygiene before and after each patient encounter is the safest way to "break the chain" of transmission.

### **Why Do It?**

To decrease healthcare-associated infections, reduce antimicrobial resistance, and improve patient quality and safety. Our accreditation agency, JCAHO, includes hand hygiene again as one of the 2007 National Patient Safety Goals. The public is demanding that hospitals across the nation be required to report infection rates and rates of compliance with recommended process measures. Though we have increasing external pressure to improve our outcomes, we are capable of seeing the necessity to improve patient care and return to proven effective infection control practices on our own.

We have a common responsibility to prevent the preventable. How many of you feel uncomfortable in the car if you don't wear your seatbelt? Our efforts at TCH are aimed at making hand hygiene a similar "over-learned" and automatic behavior, one that we would not consider omitting. We ask you each to hold yourselves and your colleagues accountable for doing the right thing where hand hygiene is concerned.

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