

An Infection Control Module:

HANDWASHING

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Developing Top-Notch CNAs, One Inservice at a Time

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An Infection Control Module: Hand Washing

GERMS NEED PEOPLE!

Benjamin Franklin said, "***In this world nothing can be certain, except death and taxes.***" But, Ben was WRONG!

There is something else you can be certain of . . . germs!

Germs are everywhere! No matter how much we spray, wipe, dip, scrub, sanitize and sterilize, we'll never be completely free of germs.

The good news is that germs only have the power to make people sick if we let them. The fact is that most ***germs need people*** to get from place to place. If you take the time to wash your hands at the right times throughout your day, you will deny many of those germs the vehicle (your hands) that they need to spread from person to person.

Hand washing is the single most important thing you can do to stop the spread of germs!

The bad news is that studies continue to show that ***less than half*** of all healthcare workers actually wash their hands as often, or as well, as they should. This makes germs happy . . . but it makes people sick!

The CDC estimates that each year, at least 1.7 million people get sick from germs that are spread by the hands of healthcare workers. Nearly 100,000 people die from complications of those infections.

The bottom line: You can be *certain* there are germs on your hands! Therefore, you have to make the ***choice*** to wash them away before they make you or someone else sick.

Keep reading to learn more about how, when and why you should make the choice to wash your hands, and then get out there and DO IT!



HOW DO YOUR HANDS SPREAD GERMS?

**IT STARTS
HERE!**

THE HOST: *This is any place where germs are happy to live and grow! It may be **a person**, like your client or co-worker . . . or it may be a place in the **environment**, like a table doorknob or telephone.*



THE RIDE: *Germs can't just get up and walk around, so they hitchhike a ride on someone's hands! **The most common way germs are spread in healthcare settings is by the hands of healthcare workers.***



THE RECEIVER: *This is any person who cannot block germs from invading the body and causing infection. Most of your **clients** are germ receivers.*

The Facts

- Eighty percent of all infectious diseases are spread by touch.
- It is estimated that the hands of medical workers carry as many as 500,000 bacteria per square centimeter!

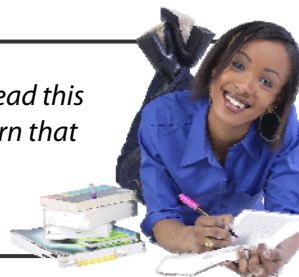


This is one square centimeter!

- The CDC recommends healthcare workers wash their hands for at least 15 seconds. However, studies show that washing with soap for *30 seconds* gets rid of ten times more bacteria than soaping up for just 15 seconds.
- **Unfortunately, the average wash time for health care workers is a mere 9 seconds.**

**WHAT'S
NEW?**

Grab your favorite highlighter! As you read this inservice, **highlight five things** you learn that you didn't know before. Share this new information with your co-workers!





WHAT EXCITES YOU?

A new, high tech hand washing tool is now being used in leading US hospitals.

The HyGreen System is a smart computer that reminds busy health care workers to wash their hands!

How it works: After washing hands, a healthcare worker places them under a HyGreen sensor which sends a wireless "all clean" message to his or her HyGreen badge.

When the healthcare worker approaches a patient bed, the HyGreen monitor above the bed checks if the badge is transmitting an "all clean" signal. If the badge is *not* green, it vibrates, reminding the worker to wash his hands.

One hospital reduced healthcare associated infections by **89 percent** while using the HyGreen System!

WHICH GERMS ARE ON YOUR HANDS?

There are many different types of disease causing germs that can be passed from person to person by your hands. Here are a few:

Bacteria, Viruses, Worms, Parasites and Yeast

- The Common Cold
- Herpes Simplex (Cold Sores)
- Mono (It's not just from kissing!)
- Pink Eye
- RSV (A serious lung infection)
- MRSA (Antibiotic resistant staph)
- Strep Throat
- Scarlet Fever
- Yeast Infections
- Scabies
- Lice
- Infectious Diarrhea
- Ringworm

- Norwalk Virus
- Hand, foot and mouth disease
- Viral Meningitis
- Salmonella (Food Poisoning)
- Thrush
- Warts

Vaccine Preventable Diseases

- Chicken pox and Shingles
- Diphtheria
- Rotavirus
- Hepatitis A
- Measles
- Mumps
- Polio
- Rubella

ARE ALL GERMS BAD?

There are two types of microorganisms that can be found on your hands — "resident flora" and "transient flora."

- **RESIDENT FLORA:** Bacteria that normally live on everyone's skin are called resident flora. These microscopic creatures are found on healthy people and are generally not harmful. In fact, they can even be helpful!

The "Residents" are attached to deeper layers of the skin and are harder to wash away with soap and water.

- **TRANSIENT FLORA:** Transient germs are "just visiting" or "hitchhiking a ride." These freeloaders attach to your hands when you touch a colonized person or object in the environment.

The "Transients" sit on the *outer* layers of the skin and are removed easily by routine hand washing. The "Transients" are the germs that most frequently cause illness and infections.

FIVE EASY STEPS TO HAND HYGIENE!

Since you deal with many different clients everyday, it is extremely important to keep your hands clean.

Even by touching a doorknob or a cell phone, you can pick up and pass on thousands of different germs. Here are the five suggested steps to follow to properly wash your hands, whether you are at home or at the workplace.

1. **WATER AND SUDS:** Begin by wetting each hand thoroughly. Use an antibacterial soap. It can be in either a liquid form or a bar of soap. If using a bar of soap, make sure that it is placed on a clean rack when you are finished. All water will drain off the soap and keep it free from germs.
2. **RUB:** Once you have applied soap, rub your hands together making sure you don't miss any spots. Scrub all surfaces, including in between each finger.
3. **TAKE YOUR TIME:** Resume scrubbing each hand for at least 15 seconds (but 30 is better). Do not rub so hard that your skin becomes irritated, as this can lead to certain skin conditions.
4. **RINSE:** Rinse both hands well in warm, but not scalding, water. There are studies proving that very warm water can do a lot of harm to your skin, and even add to infection!
5. **DRY:** Dry hands thoroughly. As paper or cloth towels work, the best way to dry is by using a motion activated dryer. These dryers are touch free, which means less infection!



THINK ABOUT IT!

When should you wash your hands?

Here are a few times when it is absolutely necessary to wash your hands:

- Before and after ANY contact with a client.
- Before and after you use the bathroom or eat.
- After touching contaminated items such as urine measuring devices.
- Before putting on, and after taking off gloves.
- Any time a client asks you to wash your hands.
- Whenever you are preparing food for a client.
- After sneezing or coughing, even if you used a tissue.

Think of at least three more situations when you absolutely must wash your hands.

Share your answers with your supervisor and co-workers!

WHAT ABOUT WATERLESS HAND CLEANERS?

Waterless hand sanitizers can eliminate many of the problems that health care workers face when taking care of patients.

- Alcohol-based hand rubs are faster because you can rub your hands while you are moving between patients.
- Hand rubs are gentler and do not cause the irritation, drying and cracking you find with hand soaps.
- **To use:** Place a small amount in the palm of one hand. Rub hands together, being sure to cover all surfaces of hands and fingers. Rub until hands are dry.
- Only use waterless hand rubs when hands **are not visibly soiled**. If hands are visibly soiled always wash with soap and water.

“GEL IN, WASH OUT!” Clean your hands both before and after client care by using the “Gel In, Wash Out” method. Use waterless hand cleaner *before* client care, then wash with soap and water when you are done!



THE NEXT STEP!

KEEPING EVERYONE SAFE

You work in healthcare, so you understand the benefits of hand washing.

Unfortunately, your clients and their visitors may not understand the seriousness of the situation.

How would you explain to a visitor the importance of washing hands before and after the visit?

What would you say to a visitor who refuses to wash hands before or after visiting a client?

ALL ABOUT GLOVES!

You should always wear gloves whenever you are likely to come into contact with any bodily fluids, blood, mucous membranes, contaminated materials, or broken skin.

For these reasons, gloves are essential. But, are they harmful as well?

- No glove, no matter how tough, is completely resistant to infectious diseases.
- Gloves can protect the wearer, but what about the client? Microorganisms can still be passed from the outside of the glove to the client!
- Wearing gloves constantly can irritate your hands and possibly lead to dermatitis.

That's why it's important to know:

- The Center for Disease Control (CDC) advocates proper hand washing at all times . . . even after removing gloves!
- Gloves and waterless hand sanitizers should *never* take the place of proper hand washing. While these types of preventive measures are important, they are only meant to aid infection control. Hand washing still remains in first place.

CAN YOU BECOME ALLERGIC TO GLOVES?

Latex allergies develop over time with repeated or prolonged exposure. So, while you may not have been allergic to latex in the past, there is a chance you could develop a latex allergy in the future.

Latex contains certain proteins that cause allergic reactions. At least 10 different proteins have been linked to allergic reactions.

Other chemicals in gloves, known as accelerators and antioxidants may also cause allergic reactions.



- **Typical allergic reactions to latex include itching, hives, swelling, and runny nose.**
- **More serious symptoms may involve wheezing, difficulty breathing, nausea, heart palpitations, decreased blood pressure and anaphylactic shock.**

Ask your supervisor for latex free gloves if you are experiencing a latex allergy.

Latex free gloves may also be called vinyl, nitrile rubber or neoprene gloves.

KEEPING HANDS GERM FREE

A surprising statistic from The Association for Professional Infection Control and Epidemiology (APIC) states that regular hand washing for general patient care only occurs about half the time. To make things worse, the healthcare workers that DO wash their hands, don't do a good enough job!

- According to the Chicago Tribune, the yearly deaths due to germs from unclean hands in hospitals are higher than deaths due to fire, drowning, and car accidents combined!
- Most of the germs on your hands are hiding under and around your fingernails. Be sure to scrub your nails well when you wash your hands.
- Keep nails short and natural. Long (artificial and natural) nails have been blamed for numerous outbreaks of infectious diseases around the country.
- Artificial nails are difficult to clean with proper hand washing. It's best to avoid them if you are providing patient care.
- Freshly applied nail polish has not been shown to increase germs on fingernails. However, chipped or flaking nail polish CAN harbor dangerous germs.
- Jewelry on your fingers and wrists can serve as a nest for germs. Think about leaving your rings at home and sliding your watch above your wrist when you wash your hands.



GET OUT!

THINK OUTSIDE OF THE BOX!

Working with clients in the home often requires coming up with creative solutions to uncommon problems.

- **THE PROBLEM:** You are caring for an 86 year old woman who lives at home with her adult grandson.
- Every time you come to the house, you attempt to wash your hands. However, the sink is always full of dirty dishes, there is no soap and no paper towels. The bathroom is no better.
- **WHAT YOU KNOW:** You know that if you can't wash your hands, then no one else in the house is doing it either. And, you know your client has a weak immune system and will get very sick if exposed to germs.
- **GET CREATIVE:** What will you do? Think of three creative solutions to this problem.
- **TALK ABOUT IT:** Share your ideas with your co-workers and supervisor and find out how they would solve this problem.

PROTECTING YOUR SKIN

Germs on your hands are not just harmful to your clients. They can make you sick, as well! Any break in the skin on your hands can serve as an "on-ramp" for germs to enter YOUR body. Protect the skin on your hands by following these suggestions:

- Wash your hands under water that is at least 110 degrees F. It's important to keep the water hot enough to remove bacteria, but cool enough not to cause any damage to your hands. A tip for water temperature is to turn it as hot as you can stand and still be comfortable.
- Rinse all the soap off your hands. The water will carry away the germs that you have loosened by rubbing your hands together and rinsing will keep your hands from drying out and cracking.
- Harsh soaps, detergents, chemicals, and not completely drying your hands can lead to dermatitis. Read more about the dangers associated with dermatitis on page 7.



TALK ABOUT IT!

Are you looking for a way to prevent dry and chapped skin on your hands?

Look around at your co-workers' hands! When you see a nurse with smooth, soft hands, ask her what she uses!

Here are some products trusted by nurses:

- BagBalm (available in most drug stores)
- Burt's Bees Hand Salve
- Skin Friendly products, available at www.skinfriendly.com
- Liquid Gloves, found at www.liquidgloves.co.za
- Gloves in a Bottle, from www.glovesinabottle.com
- Hand Shield by Jungle Brolly, available at www.junglebrolly.com

A WORD ABOUT DERMATITIS

Dermatitis is an inflammation of the skin and can be a very frustrating condition for healthcare workers. It is a chronic disease, but is not contagious (cannot be passed from one person to another). The cause of dermatitis is not known, but the disease seems to result from a combination of genetic and environmental factors.

- Eczema, one type of dermatitis, occurs when an irritating material comes in contact with the skin. For hospital workers, this material is often the latex in gloves! Excessive hand washing and chemicals can also irritate the skin and cause dermatitis to worsen.
- According to the National Institute for Occupational Safety & Health, skin injuries and illnesses (including dermatitis) make up a huge amount of all occupational injuries and illnesses!

The symptoms of dermatitis include:



- Persistently itchy, red, swollen skin
- Tender, hot, or painful skin
- Dry, scaly, sensitive skin
- Blistered and/or crusty skin

If dermatitis remains untreated, the skin could become thicker and/or a darker color. And, as dermatitis heals, the skin may begin to flake and/or scale. Sometimes this healing process is confused with dry skin.

HOW CAN YOU PREVENT DERMATITIS?

Even though dermatitis is sometimes hard to avoid, there are a few things you can do to prevent it:



- Use mild antibacterial soaps.
- Rinse hands thoroughly and do not leave any excess soap residue.
- Dry hands completely after hand washing.
- Apply moisturizers to your hands frequently. Keeping your skin healthy and moisturized is one of the key ways to prevent dermatitis.
- If you feel you are developing an allergy to latex, be sure to talk to your supervisor right away about an alternate type of glove.

THE COST OF INFECTIOUS DISEASES

When a client who is free of infection develops an infectious disease after being cared for by healthcare workers, it is said to be a "healthcare associated infection, or HAI for short.

- Hand washing is the single most important activity in health care settings that can *prevent* the spread of dangerous HAI's, like those mentioned on page 4.
- Paying close attention to basic hand hygiene has the potential to reduce the nation's health care debt by billions of dollars.
- The CDC estimates there are 1.7 million health care associated infections each year and nearly 100,000 people die from complications of those infections.
- It is estimated that the cost of treating patients with HAI's is at least \$20 billion a year.
- On average, a hospital charge for patients without an HAI is \$33,260. The average hospital charge for a patient with an HAI is \$175,964 and the average length of stay increase by 5 times.

The Centers for Medicare and Medicaid Services no longer make payments for the treatment of eight hospital-acquired conditions, including some types of healthcare associated infections.

In addition to not receiving reimbursement from Medicare for these situations, healthcare providers are not allowed to seek payment from the client or family, either!

So, who is paying for this? If you think that because you have never been directly billed that you are not paying . . . think again!

- As a society, we pay for these infections through increased insurance premiums, staggering medical costs and tax raises.
- We all suffer when small community hospitals close because they can no longer afford to operate.
- Nurses and Aides suffer when there is not enough money to offer our hardest workers a decent wage or an occasional pay raise.
- Clients suffer when employers can no longer afford to staff facilities appropriately, leaving everyone overworked and stretched to the limit!



TIME TO LAUGH!

Getting sick from germs is NOT funny, but here are a few silly jokes to make you giggle!

Scientists say that 90% of all one dollar bills carry germs. Not true! Even a germ can't live on a buck these days.

Q: What do you get if you cross a comedian with germs?

A: Sick jokes!

Q: Did you hear the story about the germ?

A: Never mind. I don't want it spread all over!

"If a doctor treats your cold, it will go away in fourteen days. If you leave it alone, it will go away in two weeks."

~ Gloria Silverstein



FIVE KEY POINTS!

REVIEW WHAT YOU LEARNED!

1. Each year, at least 1.7 million people get sick from germs that are spread by the hands of healthcare workers.
2. The CDC recommends healthcare workers wash their hands for at least 15 seconds. But washing with soap for *30 seconds* gets rid of ten times more bacteria.
3. While they are important infection control measures, gloves and waterless hand sanitizers should never take the place of proper hand washing.
4. Germs on your hands aren't just harmful to your clients. They can make you sick, too!
5. Hand washing remains the single most important measure for stopping the spread of infection.

WHAT'S STOPPING YOU?

Statistics show that fewer than half of all healthcare workers wash their hands as often as they should.

There are many reasons health care workers give for not washing their hands before and after patient care. Here are a few:

- **Skin Irritation.** The hand cleaners are harsh and damage the skin.
- **Supplies are not available.** Sinks are not conveniently located or are not stocked with soaps and towels.
- **Urgent or emergency care.** The client needs immediate care, there is no time to wash hands.
- **Wearing of gloves.** The belief that if gloves were worn, hands do not have to be washed after client care.
- **Not enough time.** High workload and understaffing.
- **Hand hygiene interferes with health-care worker relationships with patients.** There are those who mistakenly believe that a client will feel insulted if the healthcare worker goes right to the sink to wash her hands after touching the client.
- **Low risk of acquiring infection from certain patients.** A false sense of security may lead some healthcare workers to believe that if a client doesn't seem sick, there is no need to wash hands after care.
- **Lack of knowledge of guidelines or protocols.** When the guidelines are unclear, absent or misunderstood, people are left to make assumptions. And, you know what happens when you assume!
- **Not thinking about it/forgetfulness.** You have so much to think about and do during the day. It's easy to let this one step slip your mind.
- **Skepticism regarding the value of hand hygiene.** The problem with germs is that you can't actually SEE them on your hands. When you can't SEE a problem, it's hard to believe you need to do something about it.
- **Lack of proof of the positive impact of hand hygiene on healthcare associated infection rates.** Some people just need to see the proof. If you need proof, go to www.cdc.gov and type "hand hygiene" in the search box. Click around the site. You will find proof in everything you read.



