



# 11 HAND WASHING FACTS

*Could singing Yankee Doodle save your life?*



*By Jay Hardy, CLS, SM (ASCP)*

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The company began in 1980, shortly after Hardy served as a Medical Technologist and microbiologist at Goleta Valley Hospital in California.

1.

**80% of all infectious diseases are transmitted by touch.**



According to experts, without a vaccine, the single most important thing you can do to prevent getting the flu is to wash your hands.

2.

**The Solution to Pollution is Dilution.**

While soap may not kill all viruses, thorough hand washing will decrease the viral counts to a point below the infectious threshold.

3.

**Caught in the act (or lack of).**

95% of the population says that they wash their hands after using a public toilet. However when 8,000 people were monitored across five large cities in the US, they found the actual number to be more like 67%.



Chicago topped the list at 83%. New York was the worst at less than half.

## 4.

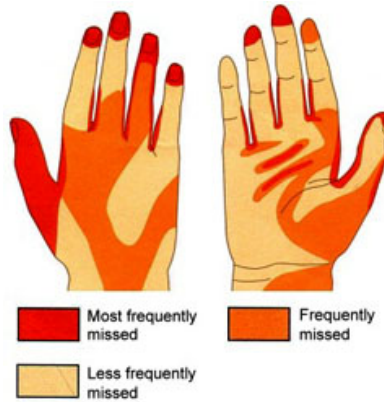
Do as I say, not as I do...



A poll of pediatric ICU physicians showed that they **claimed** their rate of hand washing between patients was 73%, but when followed and observed, the hand washing rate was found to be less than 10%. Listen carefully and you can hear [Dr. Semmelweis](#) rolling over in his grave. The top excuses for not hand washing among doctors? Too busy and dry skin.

## 5.

Where's the dirt?



CDC studies show that the number of bacteria per square centimeter on the human body are as follows:

- Scalp – 1,000,000
- Forearm – 10,000
- Arm pit – 500,000
- Abdomen – 40,000
- Hands of medical personnel – 40,000 to 500,000

When it comes to hands, fingernails and the surrounding areas harbor the most microorganisms.

## 6.

Who has it?

A recent study showed that 21% of the health care workers in ICU had varying counts of *Staphylococcus aureus* on their hands.

## 7.

Too busy?

One study demonstrated that hand washing guidelines were followed 25% of the time during times when the floor was overcrowded and understaffed. Compliance rose to 70% when the floor was properly staffed and not overcrowded with patients.

## 8.

And the winner is...



Many studies have shown that [alcohol rubs](#) are more effective than plain or even antimicrobial soaps, unless the hands are heavily soiled. However we can't get overconfident with alcohol rubs. Despite its effectiveness against many organisms, alcohols have very poor activity against bacterial spores, protozoan oocysts, and certain non-enveloped (nonlipophilic) viruses. In addition, alcohol has no residual effect as some antimicrobial soaps do.

# 9.

## How long is enough?



The CDC recommends at least 15 seconds. However, studies show that the reduction of skin bacteria is nearly ten times greater by washing with soap for 30 seconds rather than 15. Even so, remember that [alcohol gels](#) are even more effective than soap.

The average wash time for health care workers? 9 seconds.

Children (and why not adults?) are taught to sing “Yankee Doodle Dandy” start to finish before rinsing. This takes about 15 seconds. If you don’t know the words to Yankee Doodle, the Happy Birthday song sung twice will suffice.

# 10.

## Some like it hot.



But if they do, hot water can increase the chance of dermatitis. Hot or warm water has not been proven to increase the effectiveness of hand washing. Cold water, though not as comfortable, produces less skin damage from detergents especially with repeated washings.

# 11.

## The two layers of bacteria.

The outer layer of bacteria found on your hands is termed “**Transient Flora**”. This layer is potentially the most dangerous for transmitting disease from one person to another. Fortunately, it is also the most easily eliminated by hand washing. The deeper layer is called “**Resident Flora**”. This bacterial population is more likely to be made up of innocuous bacteria such as *Staphylococcus epidermidis* and *Corynebacteria* spp. (diphtheroids); and is more resistant to washing, since they occupy the deeper layers of skin cells.

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