



# WAVE GOODBYE TO GERMS

REDUCING THE SPREAD OF GERMS  
THROUGH TOUCHLESS DOOR ACTIVATION



## REDUCING THE SPREAD OF GERMS THROUGH TOUCHLESS DOOR ACTIVATION ▾

Ebola. MRSA. Sars. Pneumonia. Influenza. The common cold.

Some infections make national headlines, some make you miss work and others just make you miserable. No matter what the ailment, they should all make you think twice about the importance of hand-hygiene.

It's no secret, the more time you spend in a hospital, the more likely you are to pick up an unwanted germ or two (million). Couple this with studies that show nearly 80 percent of infectious diseases are transmitted by touch and you make a strong case to reduce the number of "touch points" within a medical facility.

NEARLY  
**80%** OF SICKNESS  
CAUSING GERMS SPREAD VIA HANDS



## THE CATCH 22 ▽

For those who contract an infectious disease that's serious enough, they'll eventually seek medical attention. Unfortunately, the germs lurking in a medical center can be more dangerous than the ones that sent a person there in the first place. The influx of sick people coming in and out almost guarantees the dispersion of germs – and as the doctors, staff, patients, visitors and equipment matriculate through the building, so do the germs. A particularly susceptible point of infection in this scenario is door handles.

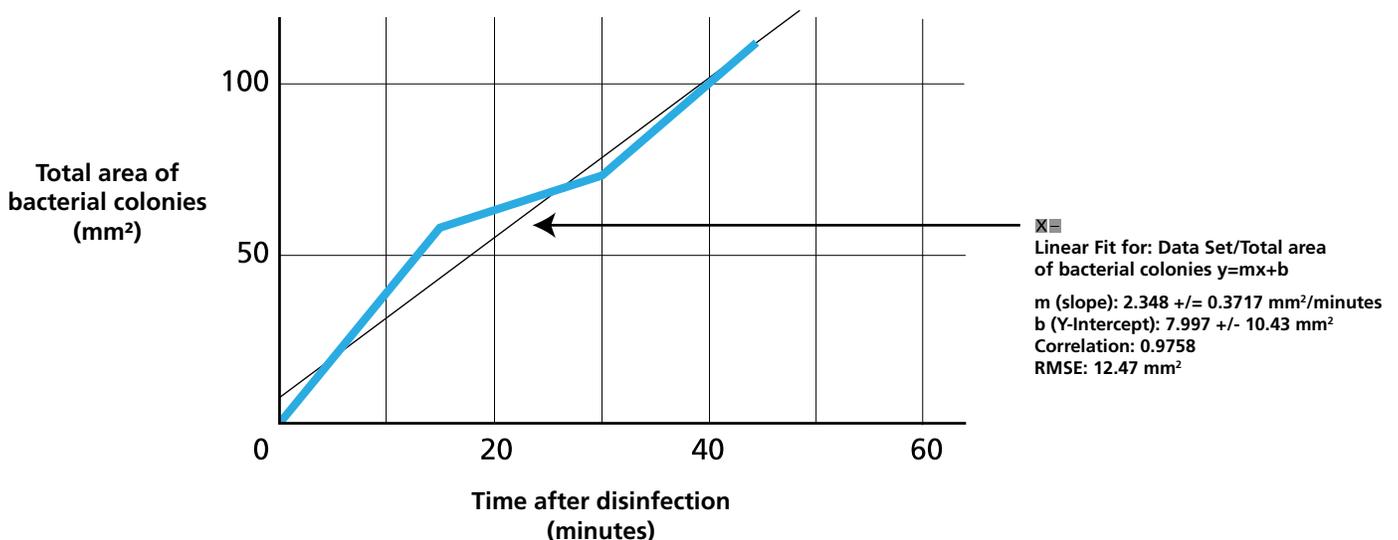
A study by the University of Massachusetts-Amherst demonstrated the vulnerability of door handles by showing the accumulation

of bacteria on a door handle only 15 minutes after it was disinfected. The colonies of bacteria rose sharply in the hour following disinfection as the door handle,

“ THE COLONIES OF BACTERIA ROSE SHARPLY IN THE HOUR FOLLOWING DISINFECTION...”

located at the entrance to a dining hall, was a commonly used access point by students. Now imagine this door handle is located at a busy hospital.

**Graph: The Accumulation of Bacteria Colonies formed/found on door handles at 0, 15, 30 and 45 minutes after disinfection**



## THE SCARY FACTS ▾

Healthcare-Associated Infections (HAIs) are infections that patients develop during the course of receiving healthcare treatment for other conditions. Every year, hundreds of millions of people contract HAIs worldwide. These infections lead to significant mortality rates for health centers. In addition, they are a huge financial burden to the healthcare system. Along with patients, hospital workers and visitors are also at risk of contracting or spreading an HAI during a visit.

Taking appropriate hand hygiene measures is a key recommendation for preventing three of the five types of HAIs classified by the CDC. These types are as follows:

**1**

**CATHETER-ASSOCIATED  
URINARY TRACT INFECTIONS  
(CAUTIS)**

**2**

**CENTRAL LINE-ASSOCIATED  
BLOODSTREAM INFECTIONS  
(CLABSI) TRANSMITTED  
THROUGH PATIENT  
INTRAVENOUS TUBES**

**3**

**METHICILLIN-RESISTANT  
STAPHYLOCOCCUS AUREUS  
(MRSA) INFECTIONS  
RELATED TO A STRAIN OF  
BACTERIA THAT HAS BECOME  
RESISTANT TO ANTIBIOTICS**

A hospital study cited by the CDC reports that of the 2,834 observed opportunities for hand hygiene, on average, healthcare workers complied with hand hygiene requirements only 48% of the time. A separate study of intensive care units cited by the World Health Organization found that adherence to hand hygiene practices was 70% during less busy periods and was 25% during busier periods.

**FLU GERMS CAN  
SPREAD AN ENTIRE  
DAY BEFORE  
SYMPTOMS BEGIN**

**A SINGLE GERM CAN  
MULTIPLY TO MORE  
THAN 8 MILLION  
GERMS IN ONE DAY**

**NUMBER OF GERMS  
ON FINGERTIPS  
DOUBLES AFTER  
USING THE TOILET**

## REDUCING CROSS CONTAMINATION ▾

Whether from patients coming in contact with contaminated equipment or from a person touching a contaminated surface and then transmitting those germs to another person; it is evident that the fewer points of contact, the better.

While healthcare providers spend countless amounts of time and money to develop better solutions to combat HAIs, they often overlook simple and effective solutions such

as touchless door activation.

Access points and door handles are some of the most vulnerable areas in healthcare facilities for the spread of HAIs. Entrances and exits, bathrooms, patient rooms, waiting rooms, surgical rooms, cafeterias—all of these have doors. Most patient rooms have at least two doors (entrance and bathroom). One contaminated touch can set off a chain reaction of cross contamination.



**Touchless Activation Devices for doors, activation switches, restroom applications, water fountains and other areas play a key role in reducing the spread of diseases in vulnerable areas.**

GERMS CAN SURVIVE  
ON HANDS FOR UP  
TO THREE HOURS

A SNEEZE PROPELS  
UP TO 100,000  
BACTERIA INTO THE  
AIR AT 100 MPH

DAMP HANDS  
SPREAD 1,000 TIMES  
MORE GERMS  
THAN DRY HANDS



## 1. MAINTAINING SANITARY WORKFLOW

In surgical rooms, HAIs can be an extremely serious issue. When a medical team is scrubbed and fully prepped for surgery, it is imperative that the room and people in it remain sanitary. Wave to Open activation devices provide a simple, and effective means of egress into these rooms, eliminating the need for physical touch and removing a possible point of contamination.

## 2. CREATE TRAINED TRAFFIC

Wave to Open activation provides added benefit to those who frequently use a specific door. The traffic becomes accustomed to the activation process and “waving a door open” becomes second nature. In essence, the act of signaling the door to open becomes part of their routine.

### 3. DURABLE AND PROFESSIONALLY RATED

While Wave to Open plates do not need to be touched, they still must be capable of withstanding the daily rigors of a busy hospital. Carts, beds and other wheeled objects can easily break plastic switches. Cleaning agents can further corrode the internal and external components of a plastic switch. When choosing touchless activation, strongly consider a plate that is stainless steel with a NEMA 4 rated enclosure.

### 4. VISIBLE AND AUDIBLE

In modern hospitals, ADA compliant push plates are necessary solutions for door automation. For maximum effectiveness, touchless plates should be accompanied with both visible and audible alerts to further aid in the successful signaling of a door's

activation. In dimly-lit areas, lighted touch plates help improve both visibility and accessibility. Adjustable audible alerts can be turned on to confirm activation or turned off to comply with guidelines requiring hospitals to reduce ambient noise.

### 5. ADJUSTABLE TOUCHLESS DETECTION ZONE

Touchless "zones" can be adjusted to create desirable ranges a person must be within to achieve activation. Having choice in touchless plates, or being able to tune touchless plates to the right sensitivity is critical. For instance, in a surgical room, it is important that the door is not inadvertently or constantly opened in error. In this environment, a "short range" touchless solution should be employed. In a corridor, where patients are constantly being moved, a longer detection zone would represent convenience.

## THE CONCLUSION ▾

Touchless activation devices are effective and intelligent ways to safeguard your facility, your employees and your customers. By installing touchless door activation devices on your doors, you're eliminating the need to touch extremely vulnerable and commonly touched items such as handles, push bars and other access methods. This helps eliminate cross contamination and reduce the spread of healthcare-associated infections.

As germs grow more aggressive and resistant to antibiotics and other treatments, it's imperative to safeguard your facility as much as possible. Touchless activation plates are an extremely effective way to do this.

## PRODUCT SERIES ▾



### MS31

Microwave touchless actuator with adjustable range and relay hold time.



### MS41

Stainless steel, touchless actuator with adjustable range and relay hold time.



### MS09

IP65 rated, microwave touchless actuator.



### MS21

Short-range, capacitive touchless actuator.

## SOURCES

### **HAI info:**

[http://whqlibdoc.who.int/publications/2011/9789241501507\\_eng.pdf?ua=1](http://whqlibdoc.who.int/publications/2011/9789241501507_eng.pdf?ua=1)

### **Lack of Hand washing during busy times:**

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5116a1.htm>

### **CDC hand hygiene study:**

[http://whqlibdoc.who.int/publications/2009/9789241597906\\_eng.pdf](http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf)

### **80 percent of sickness germs spread via hand:**

<http://www.webmd.com/cold-and-flu/cold-guide/cold-prevention-hand-washing>

### **More Germs on Phone and keyboard:**

<http://www.telegraph.co.uk/news/uknews/10313619/Smartphones-and-tablets-harbourmore-germs-than-toilet-seats.html>

### **Germs on hands doubles after using toilet:**

<http://www.siphidaho.org/comhealth/pdf/remember.pdf>

### **Flu for a day without symptoms:**

<http://www.cdc.gov/flu/about/disease/spread.htm>

### **Sneeze at 100mph:**

<http://www.loc.gov/rr/scitech/mysteries/sneeze.html>

### **Damp Hands Spread 1000 times more germs:**

<http://www.siphidaho.org/comhealth/handwashing.php>

### **Bacteria Growth on Door handle:**

<http://bcrb.bio.umass.edu/courses/spring2010/biol/biol312section3/content/bacterial-growth-over-time-after-disinfection-door-handle>

### **Germs live on hands for three hours:**

<http://www.stmaryhealthcare.org/whytowashyourhands>

### **One germ grows to 8 million in a day:**

<http://www.webmd.com/food-recipes/germs-in-kitchen>



To learn more, visit  
**WaveToOpen.com**

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