


## Colonized or Infected: What is the Difference?



- People who carry bacteria without evidence of infection (fever, increased white blood cell count) are **colonized**
- If an infection develops, it is usually from bacteria that colonize patients
- Bacteria that colonize patients can be transmitted from one patient to another by the hands of healthcare workers

~ Bacteria can be transmitted even if the patient is not infected ~

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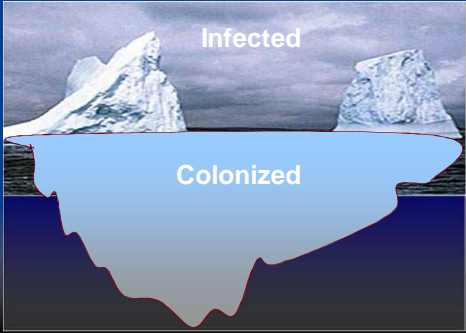
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## The Iceberg Effect

The diagram shows an iceberg floating in the ocean. The tip of the iceberg, which is above the water line, is labeled 'Infected'. The much larger part of the iceberg, which is submerged below the water line, is labeled 'Colonized'. This illustrates that the number of colonized individuals is significantly higher than the number of infected individuals.

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## Recovery of VRE from Hands and Environmental Surfaces



- Up to 41% of healthcare worker's hands sampled (after patient care and before hand hygiene) were positive for VRE<sup>1</sup>
- VRE were recovered from a number of environmental surfaces in patient rooms
- VRE survived on a countertop for up to 7 days<sup>2</sup>

<sup>1</sup> Hayden MK, *Clin Infect Diseases* 2000;31:1058-1065.  
<sup>2</sup> Noskin G, *Infect Control and Hosp Epidemiol* 1995;16:577-581.

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**The Inanimate Environment Can Facilitate Transmission**

X represents VRE culture positive sites

~ Contaminated surfaces increase cross-transmission ~

Abstract: The Risk of Hand and Glove Contamination after Contact with a VRE (+) Patient Environment. Hayden M, ICAAC, 2001, Chicago, IL.

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**What is the single most important reason for healthcare workers to practice good hand hygiene?**

1. To remove visible soiling from hands
2. To prevent transfer of bacteria from the home to the hospital
3. To prevent transfer of bacteria from the hospital to the home
4. To prevent infections that patients acquire in the hospital

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**What is the single most important reason for healthcare workers to practice good hand hygiene?**

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How often do you clean your hands after touching a **PATIENT'S INTACT SKIN** (for example, when measuring a pulse or blood pressure)?

1. Always
2. Often
3. Sometimes
4. Never



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Estimate how often **YOU** clean your hands after touching a patient or a contaminated surface in the hospital?

1. 25%
2. 50%
3. 75%
4. 90%
5. 100%



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 **Now, estimate how often YOUR CO-WORKERS clean their hands after touching a patient or a contaminated surface in the hospital?** 

1. 25%
2. 50%
3. 75%
4. 90%
5. 100%



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 **Which method do you use to clean your hands at work?** 

1. Plain soap and water
2. Antimicrobial soap and water
3. Alcohol-based handrub



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 **Which hand hygiene method is best at killing bacteria?** 

1. Plain soap and water
2. Antimicrobial soap and water
3. Alcohol-based handrub

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**Which of the following hand hygiene agents is LEAST drying to your skin?**

1. Plain soap and water
2. Antimicrobial soap and water
3. Alcohol-based handrub

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1. Plain soap and water
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 **It is acceptable for healthcare workers to supply their own lotions to relieve dryness of hands in the hospital.** 

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



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 **It is acceptable for healthcare workers to supply their own lotions to relieve dryness of hands in the hospital.** 

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



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 **How much time would an ICU nurse save during an 8 hour shift by using an alcohol-based handrub instead of soap and water?** 

1. 15 minutes
2. 30 minutes
3. 1 hour
4. 2.5 hours



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 **How much time would an ICU nurse save during an 8 hour shift by using an alcohol-based handrub instead of soap and water?**

1. 15 minutes
2. 30 minutes
3. 1 hour
4. 2.5 hours



\* Based on 12 opportunities/hour, handwashing time=60 seconds, alcohol-based handrub time=20 seconds

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 **Healthcare-associated organisms are commonly resistant to alcohol.**

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree

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 **Healthcare-associated organisms are commonly resistant to alcohol.**

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
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 When a healthcare worker touches a patient who is **COLONIZED**, but not infected with resistant organisms (e.g., MRSA or VRE) the HCW's hands are a source for spreading resistant organisms to other patients.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree




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 When a healthcare worker touches a patient who is **COLONIZED**, but not infected with resistant organisms (e.g., MRSA or VRE) the HCW's hands are a source for spreading resistant organisms to other patients.

1. Strongly agree
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3. Don't know
4. Disagree
5. Strongly disagree




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 A co-worker who examines a patient with VRE, then borrows my pen without cleaning his/her hands is likely to contaminate my pen with VRE.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree




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- 4. Disagree
- 5. Strongly disagree



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How often do you clean your hands after touching an ENVIRONMENTAL SURFACE near a patient (for example, a countertop or bedrail)?

- 1. Always
- 2. Often
- 3. Sometimes
- 4. Never



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**Use of artificial nails by healthcare workers poses no risk to patients.**

1. Strongly agree  
 2. Agree  
 3. Don't know  
 4. Disagree  
 5. Strongly disagree




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**Use of artificial nails by healthcare workers poses no risk to patients.**

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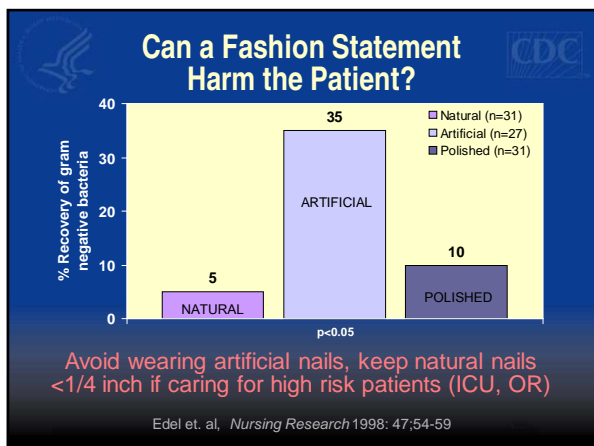
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**Glove use for all patient care contacts is a useful strategy for reducing risk of transmission of organisms.**

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



CDC

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**Glove use for all patient care contacts is a useful strategy for reducing risk of transmission of organisms.**

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



CDC

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**Hand Hygiene Options at Hospital X**

**liquid soap**

Wet hands, apply soap and rub for  $\geq 15$  seconds. Rinse, dry & turn off faucet with paper towel.

**alcohol handrub**

Apply to palm; rub hands until dry

~ Use soap and water for visibly soiled hands ~  
~ Do not wash off alcohol handrub ~

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## What is the Story on Moisturizers and Lotions?

**ONLY USE facility-approved and supplied lotions**

Because:

- Some lotions may make medicated soaps less effective
- Some lotions cause breakdown of latex gloves
- Lotions can become contaminated with bacteria if dispensers are refilled

*~ Do not refill lotion bottles ~*

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## hand hygiene saves lives

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION  
SAFER • HEALTHIER • PEOPLE

**SAFER • HEALTHIER • PEOPLE™**

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