

2017 UPDATE

INFECTION PREVENTION and CONTROL

ISOLATION PRECAUTIONS & BLOODBORNE PATHOGENS

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*Which pathogen causes the most serious hospital assoc'd infections?

- A. MRSA (methicillin resistant Staph aureus)
- B. VRE (vancomycin resistant Enterococcus)
- C. CDIFF (Clostridium difficile)
- D. ESBL (extended spectrum beta lactamase bacteria)
- E. CRE (carbapenem resistant enteric bacteria)

Infections in the NEWS...

Dangerous infections now spreading outside hospitals

Liz Szabo, USA TODAY 7:27 p.m. EST February 25, 2015

Peter Elster, USA TODAY

By JESSICA FIRGER / CBS NEWS / March 26, 2014, 5:39 PM

Understand
superbug

In U.S., hospital-acquired infections run rampant

The infections at York Hospital, explained

Dylan Segelbaum, dsegelbaum@ydr.com

5:37 p.m. EST November 10, 2015

OUTBREAK
CDIFF
pre

Peter Elster, USA TODAY 4:40 p.m. EST March 6, 2013

A USA TODAY review finds that deadly CRE bacteria are showing up in hospitals and other health care facilities across the country and there is virtually nothing to stop these "superbugs" at this point.

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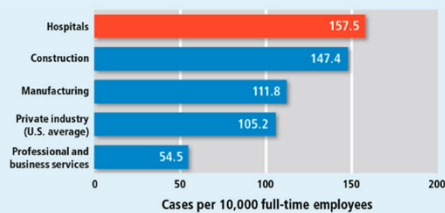
*Cases of nonfatal occupational injury and illness in healthcare workers are among the highest of any industry sector.

- A. True
- B. False
- C. Don't know

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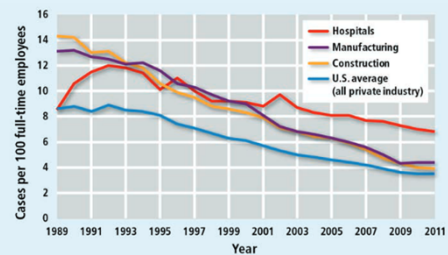
Figure 2. Injuries and Illnesses Resulting in Days Away from Work, 2011¹



Data source: Bureau of Labor Statistics

Facts About Hospital Worker Safety
September 2013
U.S. Department of Labor
www.osha.gov

Figure 1. Injury and Illness Rates by Industry, 1989–2011²



Facts About Hospital Worker Safety
September 2013
U.S. Department of Labor
www.osha.gov

WORKING IN HEALTHCARE...

...can be more dangerous than you think.



13,700,000 healthcare workers = **11%** of the U.S. workforce in 2010

9.1 million employees are outside of hospitals, with less health and safety support	Hospitals reported 258,200 injuries/illnesses, highest of any sector	Private healthcare incident rate = 1.5X general industry average	Private hospitals injuries/illnesses rate = almost double the national average	Private nursing homes injuries/illnesses rate = more than 2.2X the national average
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Employees in the healthcare industry are more likely to be injured on the job than workers in:

- CONSTRUCTION
- TRANSPORTATION
- MINING
- UTILITIES

HEALTHCARE WORKERS

- 3X more likely to incur a workplace illness
- 9.3% more likely to suffer a skin condition from exposure than the national average
- More than 1.6X more likely to be injured at work than the national average
- Healthcare respiratory conditions are almost 2X the national average
- 13.7% of ALL workplace illnesses were suffered by healthcare workers
- 92,000 ILLNESSES
- 716,800 INJURIES
- 15% of ALL workplace injuries were suffered by healthcare employees

UL LLC © 2013




1996 CDC ISOLATION GUIDELINES STANDARD PRECAUTIONS

Reduce risk to HCP & patients of transmissible infectious agents.

Apply to any healthcare encounter:

- blood
- body fluids
- secretions
- excretions (except sweat)
- nonintact skin
- mucous membranes

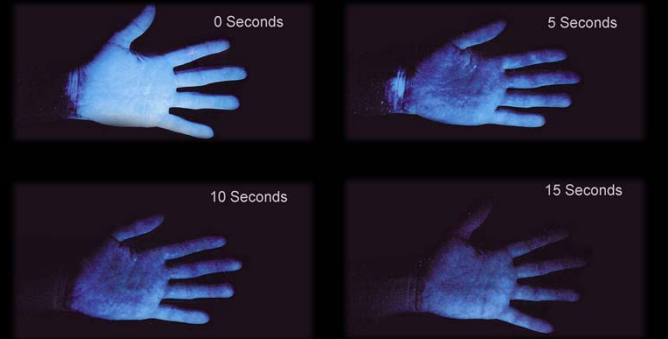


The Centers for Disease Control & Prevention says

“the most common mode of transmission of pathogens is via the hands”



Take The Time To Wash Your Hands



Seconds Count - Save A Life

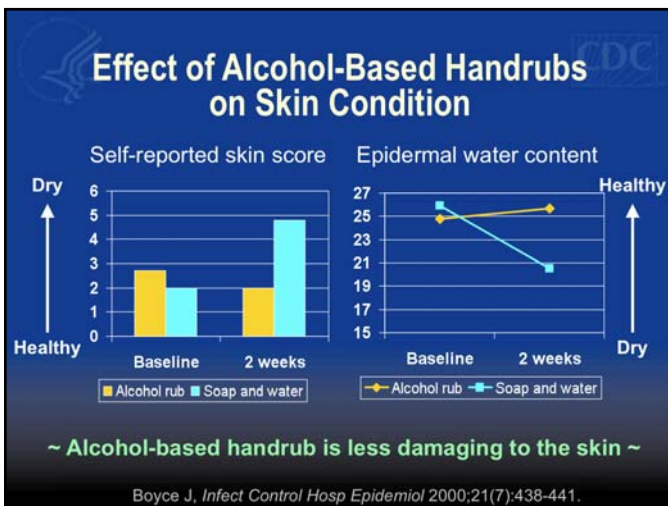
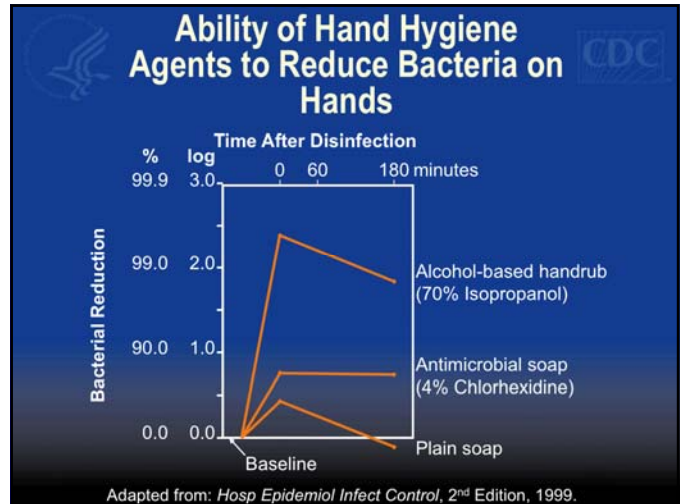


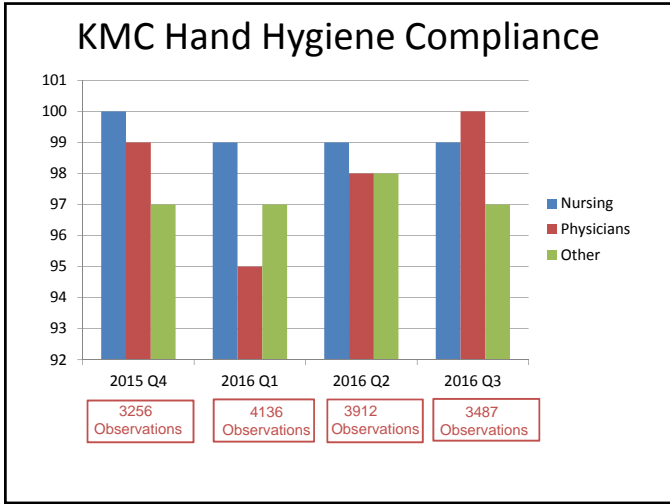
*What is the most important reason for healthcare workers to practice good hand hygiene?

1. To remove visible soiling from hands
2. To prevent transfer of bacteria from patient to physician
3. To prevent infections that patients can acquire in the hospital
4. To prevent bacterial colonization of the hands of physicians

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Dozens of studies indicate, hand hygiene is only achieved 50% of the time

Gemba Walk
Observe, Engage, Improve

November 2016 KMC Gemba Walk showed 58% Hand Hygiene Compliance.

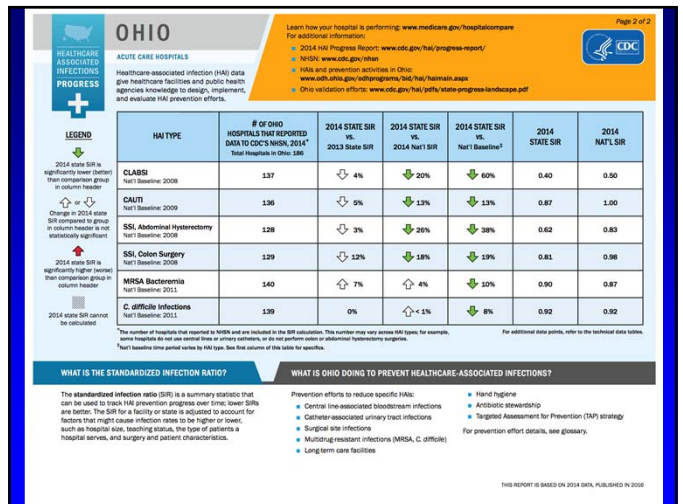
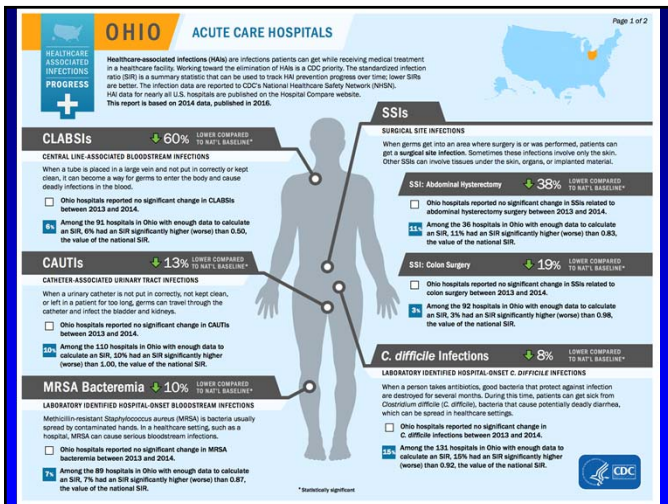
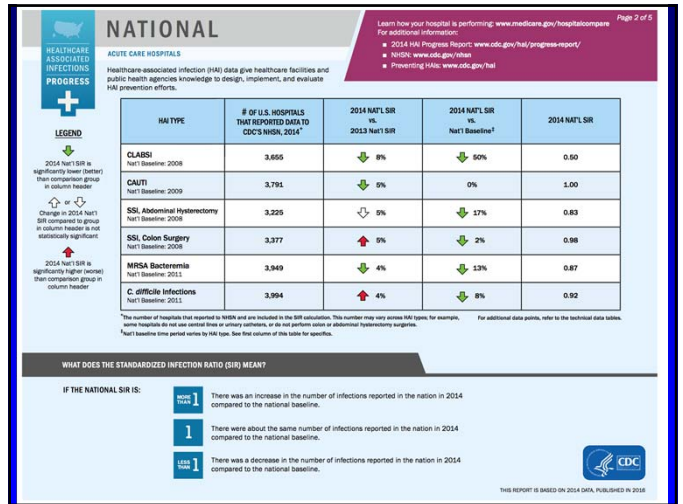
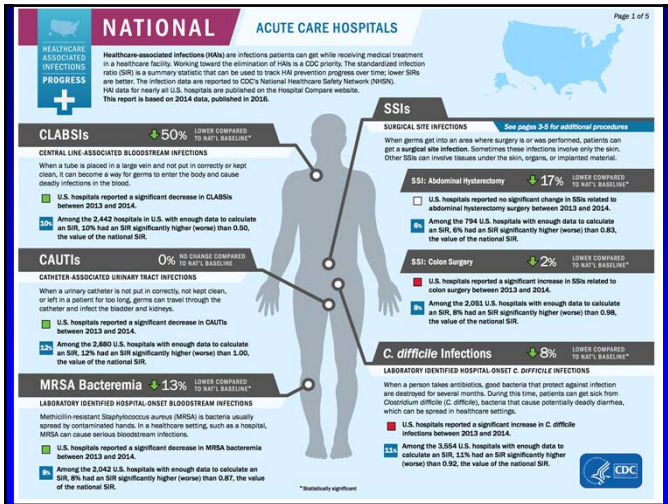
HAIs are:

1. 4th leading cause of death in America.
2. Cost the US healthcare system between \$30 – 40 billion dollars each year.
3. Every year, an estimated 2,000,000 patients get a hospital-related infection.
4. 90,000 people die from their infection.
5. The HAI problem is closely related to Hand Hygiene.

NATIONAL AND STATE HEALTHCARE ASSOCIATED INFECTIONS PROGRESS REPORT

THIS REPORT IS BASED ON 2014 DATA, PUBLISHED IN 2016

CDC Centers for Disease Control and Prevention
National Center for Emerging and Zoonotic Infectious Diseases





Personal protective equipment

Work practice controls

Engineering controls

Housekeeping controls

PERSONAL PROTECTIVE EQUIPMENT



gloves

gowns

masks

goggles

face shields

shoe covers

hair covers

CPR resuscitator masks

Gowns



- Gowns are single use only.
- Dispose of in appropriate container.
- To remove, grasp around top and pull off turning inside out as it is removed so your clothing doesn't become contaminated.

Gloves



- Are single-use only.
- Must fit properly and cover wrist.
- Change gloves and wash hands if going from a dirty to a clean activity.
- Remove by grasping at wrist and turn inside out.
- Discard in regular trash, or in biohazard trash (red bag) if appropriate.
- Wash hands after gloves are removed.

WORK PRACTICE CONTROLS

Handle sharps with care

Practice good hygiene

- avoid splashing potentially infectious fluids
- keep food/beverages away from patient areas
- wash hands frequently
- change white coat or scrubs if soiled



ENGINEERING CONTROLS

...are designed to eliminate hazards at the source.



Sharps Safety

- Use sharps containers.
- Do not overfill containers.
- Do not recap needles.
- Use forceps to remove needle from syringe.
- Do not bend, break, cut or manipulate sharps.
- Never handle broken glass--use forceps, or a dust pan and broom...



HOUSEKEEPING CONTROLS

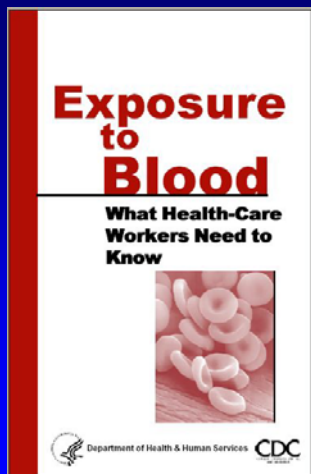
- Do not push trash down in to container with your hands or feet.
- Do not over fill trash containers.
- Hold trash away from your body when transporting.
- Discard all infectious waste in biohazard containers.
- Decontaminate work surfaces with an appropriate disinfectant.



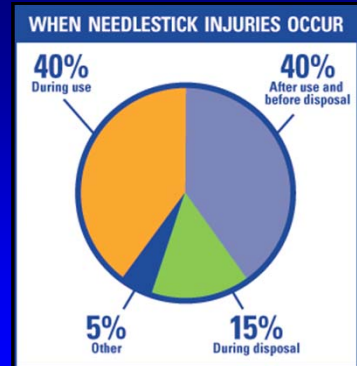
Hepatitis B

Hepatitis C

Human
Immunodeficiency
Virus



*I was infected
courtesy of a
lapse in
concentration.*



Risk of Infection following exposure:

HBV (30%)

Percutaneous 1-43%
Mucocutaneous 1-6%

HCV (3%)

Percutaneous 0.3-1.8%
Mucocutaneous unknown (very small)

HIV (0.3%)

Percutaneous 0.3%
Mucocutaneous < 0.1%

Document the Injury...



- Report immediately for evaluation and testing to:
Employee Health or
Emergency Department
- EARLY PEP most effective!

PEP Recommended:



HBV

- If source HBsAg+ and HCP HBsAb <10 mIU/mL
- use of HBIG and/or HBV vaccine

HCV

- followup HCV testing
- No current recommendations for prophylaxis with immune globulin or antiviral agents

HIV

- 4weeks antiretroviral drug protocol
- consider possible HIV resistance of source

PEP FOLLOWUP

HCP to report:

- Any PEP medication side effects
- Signs or symptoms of possible acute HIV infection within 12 weeks of exposure

Recommended laboratory testing:

- Anti-HIV at baseline, 6 weeks, 3 months, and 6 months (for all HIV-exposed HCP)
- CBC, renal & hepatic panels at baseline and 2 weeks to monitor for toxicity

TRANSMISSION
BASED
PRECAUTIONS



Case 1



What's wrong with her?

Droplet Transmission



Droplets are generated by talking, coughing, and sneezing.

Microorganisms in droplets (10um) are propelled a short distance through the air and deposited on conjunctiva, nose, and mouth mucosa.

STOP DROPLET PRECAUTIONS STOP
(In addition to Standard Precautions)

VISITORS: For your safety, we strongly recommend that you wear an isolation mask in the room. If you need assistance, please check with a patient care provider before entering the room.

Clean hands before and after patient care.

Staff & Visitors: Mask when entering room.
Patient: Mask when out of room.

• Use dedicated or disposable equipment when possible.
• Gown & Glove if contact with secretions likely. Eye protection as appropriate.

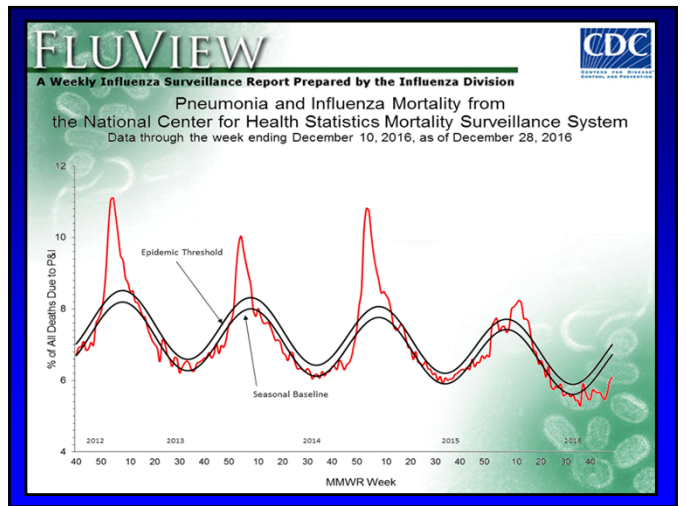
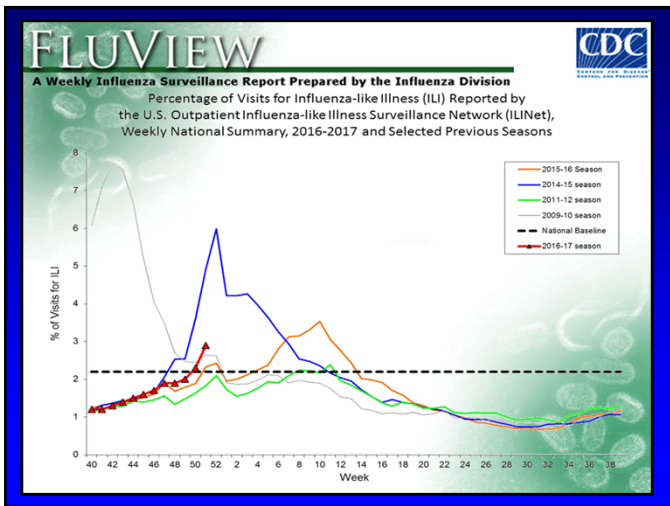
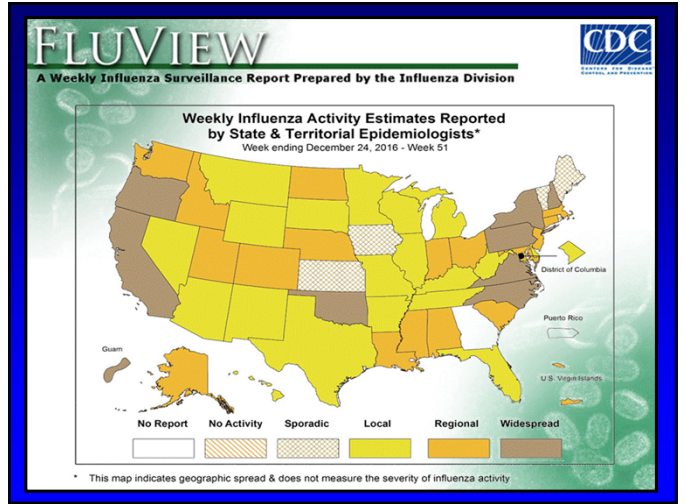
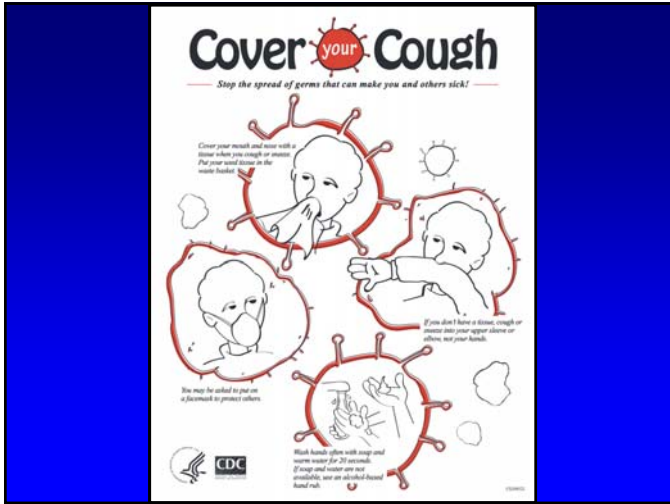
KETTERING HEALTH NETWORK
Revised 01/2012

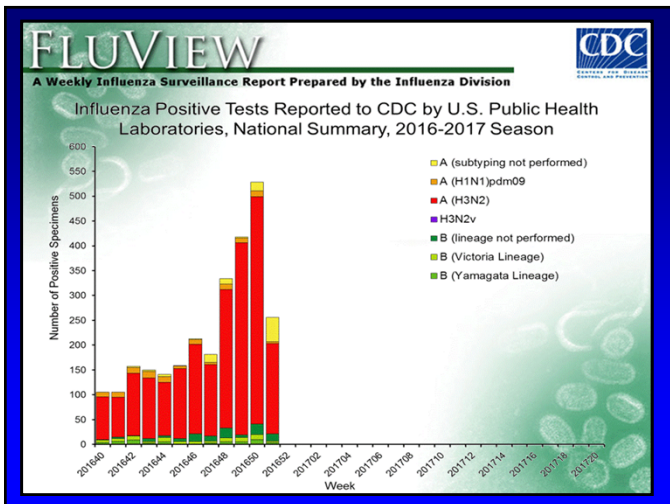
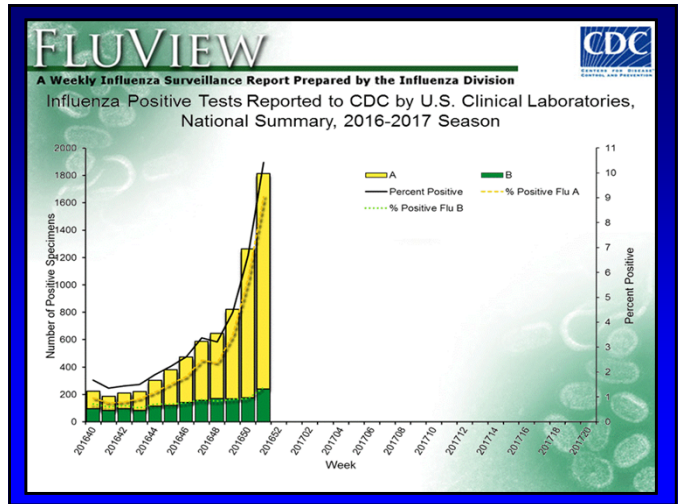
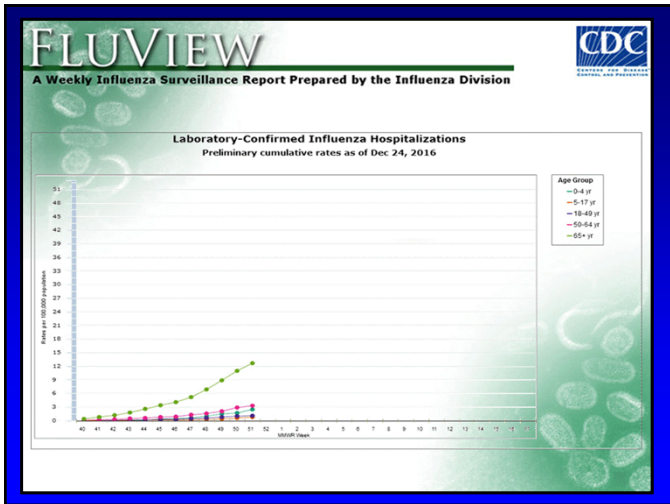
*Which statement is NOT true about Droplet Precautions?

- A. Use of dedicated patient equipment is recommended
- B. PPE requires mask when entering room
- C. Room door must remain closed
- D. PPE includes gown and gloves only if potential contact with secretions or possible contaminated environment

*Which statement is NOT true about Droplet Precautions?

- A. Use of dedicated patient equipment is recommended
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Test Performed: Diatherix Viral Respiratory Panel – DECEMBER
(Total 200 samples)

Virus	Positive Percentage (%)	# samples positive
Adenovirus	1.5	3
Bocavirus	0.5	1
Coronavirus	8.5	17
Enterovirus	5.0	10
Metapneumovirus	0.0	0
Influenza A	3.0	6
Influenza A – H1N1-09	0.0	0
Influenza B	0.0	0
Parainfluenza	4.0	8
RSV	7.0	14
Rhinovirus	5.0	10

Case 2

A 80 yo smoker presented to KMC with 6 months worsening dyspnea, cough with frequent hemoptysis, night sweats, poor appetite, and 20lb weight loss. You are the on call physician for admission.

CXR: Apical lung infiltrate.

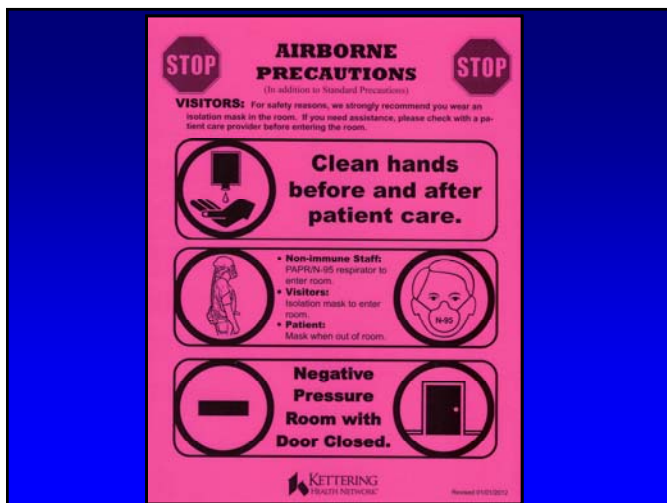
LABS: CBC & CHEM pending.

What infection control measures should you consider when admitting this patient?

Airborne Transmission



- Microbes eg, AFB in small droplet nuclei (<5um) or dust particles.
- Dispersed widely by air currents and remain suspended for prolonged periods of time.
- Requires special PPE respiratory protection.
- Requires special air handling and ventilation: negative pressure room or portable HEPA filter



STOP AIRBORNE PRECAUTIONS STOP
(In addition to Standard Precautions)

VISITORS: For safety reasons, we strongly recommend you wear an isolation mask in the room. If you need assistance, please check with a patient care provider before entering the room.

Clean hands before and after patient care.

Non-immune Staff: PAPR/N-95 respirator to enter room.
Visitors: Isolation mask to enter room.
Patient: Mask when out of room.

Negative Pressure Room with Door Closed.

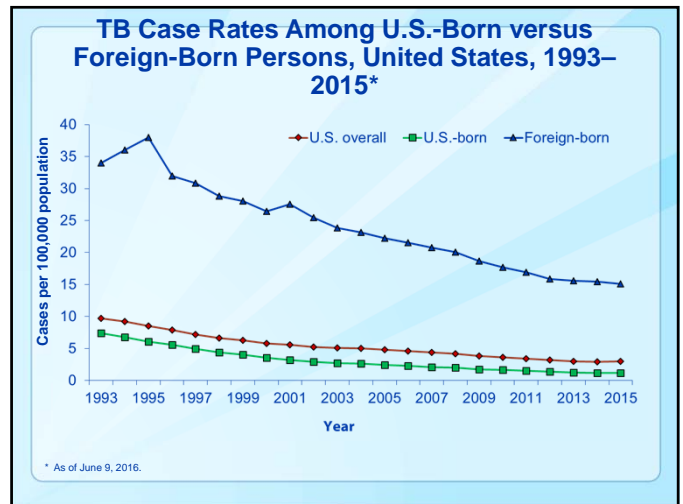
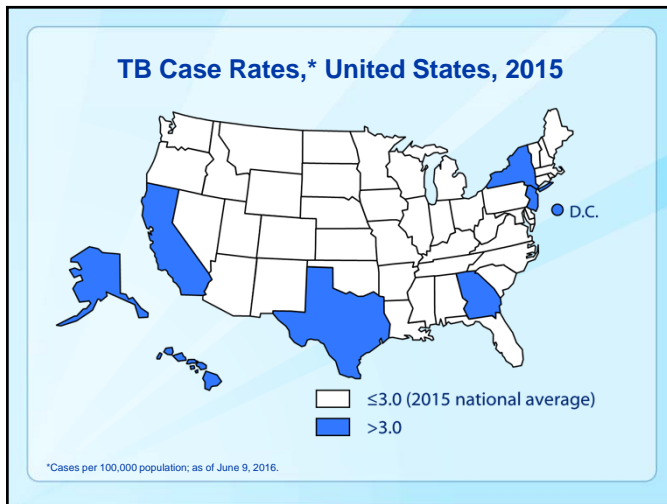
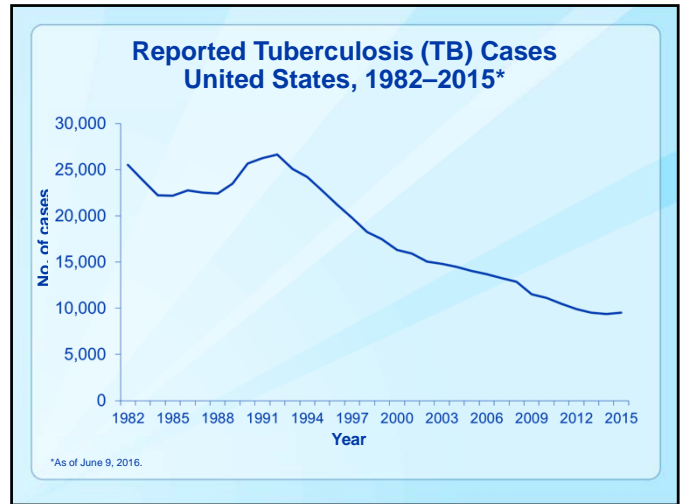
KETTERING HEALTH NETWORK
Revised 01/01/2015

*Airborne Precautions include all of the following except:

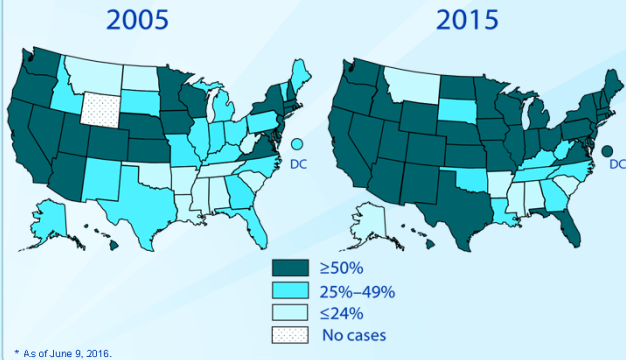
- A. Negative pressure room with door closed
- B. No PAPR or N-95 mask for immune HCP with disseminated Zoster (shingles) patient
- C. PAPR or N-95 mask for immune HCP with suspected or confirmed primary Varicella (chickenpox) patient
- D. PAPR or N-95 mask for HCP with any suspected or confirmed TB patient

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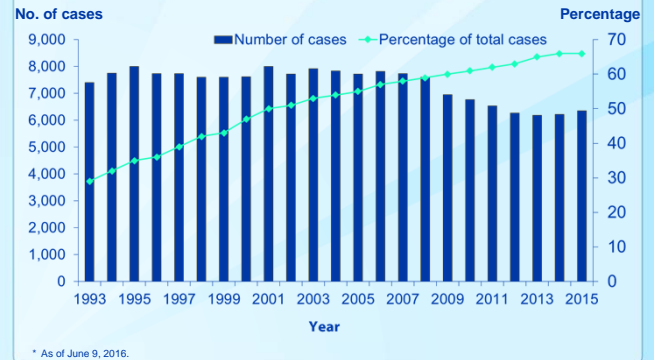
- A. Negative pressure room with door closed
- B. No PAPR or N-95 mask for immune HCP with disseminated Zoster (shingles) patient
- C. PAPR or N-95 mask for immune HCP with suspected or confirmed primary Varicella (chickenpox) patient**
- D. PAPR or N-95 mask if available for HCP with any suspected/confirmed TB patient



Percentage of Foreign-Born Persons Among TB Cases, United States,* 2005 and 2015



Trends in TB Cases Among Foreign-Born Persons, United States, 1993-2015*



Case 3

A 25M presented to ED for extremely painful swollen red forearm with fever 101.5F and suspected abscess with purulent drainage. Patient was admitted for I&D.

When questioned, he admitted to IVDA with progressive symptoms over several days at most recent injection site. What antibiotic coverage is needed pending cultures?

What if any isolation is indicated?

Contact Transmission

Direct:

Between body surfaces resulting in transfer of microorganisms

Indirect:

Between a susceptible host and a contaminated intermediate object



STOP CONTACT PRECAUTIONS STOP
 (In addition to Standard Precautions)

VISITORS: For safety reasons, we strongly recommend that you wear gown & gloves in the room. If you need assistance, please check with a patient care provider before entering the room.

 **Clean hands before and after patient care.**

 **Gown and gloves when entering beyond view only zone in room.** 




- Use dedicated or disposable equipment when possible.
- Clean and disinfect shared equipment.

KETTERING HEALTH NETWORK Revised 01/01/2012


At KMC/SMC, what percentage of Staph aureus isolates are MRSA?

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



At KMC/SMC, what percentage of Staph aureus isolates are MRSA?

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



**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

Why is *Staph aureus* so important?

2nd most common cause of HAIs reported to NHSN
CNS (15%), *Staph aureus* (14%)

Most common cause of SSIs (30%) and VAPs (24%)

MRSA first identified in the 1960s in hospitalized patients

MRSA has become a predominant cause of *S. aureus* infections in both healthcare and community settings

- Primarily due to transmission of relatively few ancestral clones rather than the de novo development of methicillin- resistance among susceptible strains

Recent estimates:

- 49-65% of *S. aureus* HAIs reported to NHSN are caused by MRSA
- 86% of all invasive MRSA infections are healthcare-associated

Hidron et al. Infect Control Hosp Epidemiol 2008;29:996-1011 Klevens et al. JAMA 2007;298:1763-71

Why is the Emergence of MRSA so important?

- MRSA treatment options limited
 - increased morbidity & mortality
- Antibiotic misuse can spread resistance
 - prevalent MRSA >> more vancomycin use >> more vancomycin resistance (VRE and VRSA) >> more linezolid/daptomycin use > > more resistance
- Preventing MRSA infections reduces all *S. aureus* infections
- MRSA is a marker for ability to contain transmission of important pathogens
- Programs that prevent MRSA transmission will likely reduce patient-to- patient transmission of other epidemiologically important healthcare pathogens

Hidron et al. Infect Control Hosp Epidemiol 2008;29:996-1011 Klevens et al. JAMA 2007;298:1763-71

*Contact Precautions when entering the patient's room:

- A. No PPE after hand hygiene if staying in "view only zone."
- B. Hand hygiene, use gloves but no gown unless CRE patient.
- C. Hand hygiene, use gloves and gown plus mask if MRSA patient.
- D. Hand hygiene, use gloves & gown if anticipated contact with the patient who has ESBL.

*Contact Precautions when entering the patient's room:

- A. No PPE after hand hygiene if staying in "view only zone."
- B. Hand hygiene, use gloves but no gown unless CRE patient.
- C. Hand hygiene, use gloves and gown plus mask if MRSA patient.
- D. Hand hygiene, use gloves & gown if anticipated contact with the patient who has ESBL.

The Inanimate Environment Can Facilitate Transmission

X represents VRE culture positive sites



~ Contaminated surfaces increase cross-transmission ~

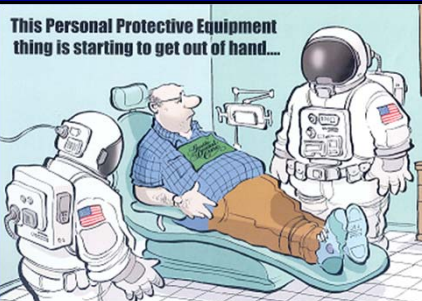
Abstract: The Risk of Hand and Glove Contamination after Contact with a VRE (+) Patient Environment. Hayden M, ICAAC, 2001, Chicago, IL.

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 VRE¹
- VRE were recovered from a number of environmental surfaces in patient rooms
- VRE survived on a countertop for up to 7 days²

¹ Hayden MK, *Clin Infect Diseases* 2000;31:1058-1065.

² Noskin G, *Infect Control and Hosp Epidemiol* 1995;16:577-581.



Case 4

80 WF was admitted with several days of progressive weakness, poor oral intake, abdominal cramping and diarrhea. One month earlier she had completed a 7day course of Levofloxacin for pneumonia.

Exam: abdomen fairly soft but tender, BS diminished.
Xray: distended loops of bowel with air fluid levels

What specific diagnostic test should be done?

Does this patient need isolation?

If so, what precautions should be instituted?

STOP CONTACT PRECAUTIONS WITH HANDWASHING STOP
(In addition to Standard Precautions)

VISITORS: For your safety, we strongly recommend that you wear gown and gloves in the room. If you need assistance, please check with a patient care provider before entering the room.

Clean hands before patient care AND wash hands with soap and water after patient care.

Gown and gloves when entering beyond view only zone in room.

- Use dedicated or disposable equipment when possible.
- Clean and disinfect shared equipment with approved bleach product.

KETTERING
UNIVERSITY HOSPITAL

Revised: 11/01/2012

Estimated Annual U.S. Burden

453,000 CDI cases¹

- 293,000 healthcare-associated
 - 107,000 hospital-onset
 - 104,000 nursing home-onset
 - 81,000 community-onset, healthcare-facility associated
- 160,000 community-associated
 - 82% associated with outpatient healthcare exposure

Overall, 94% of CDI cases related to healthcare

- 29,000 deaths
- \$4.8 billion in excess healthcare costs²

Estimated U.S. Burden of CDI, According to the Location of Stool Collection and Inpatient Health Care Exposure, 2011.

CO-HCA: Community onset healthcare-associated
NHO: Nursing home onset
HO: Hospital onset

¹ Lessa et al. *N Engl J Med* 2015; 372(9):825-834. ² Dubberke et al. *Clin Infect Dis* 2012; 55:S88-92.

Healthcare Burden

- *C. difficile* most commonly reported pathogen in 2011 multistate prevalence survey of healthcare-associated infections (HAI)¹
 - 12.1% of 452 HAIs caused by CDI
 - Rates of CDI per 1,000 discharges have risen through 2013²

¹ Magill et al. *N Engl J Med* 2014; 370:1198-1208. ² Steiner et al. HCUP Projections Report 2014-01.

Epidemiology: Host Factors

Advanced age

- Incidence higher among females, whites, and persons > 65 years¹
- Death more common in persons > 65 years (5x greater risk)²

Underlying illness and medical history

- 79% of 7421 patients with CDI had a comorbid condition²
- 38% of 585 patients with NAP1 strain had ED visit in previous 12 weeks²
- Tube feeds³

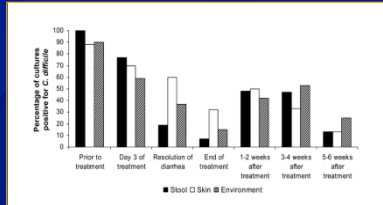
Immunosuppression

- Inflammatory bowel disease²
- Immune-suppressive treatment²
- Hematological malignancy/stem cell transplant (15-25x greater risk)⁴

¹ Lessa et al. *N Engl J Med* 2015; 372(9):825-834. ² Sells et al. *Clin Infect Dis* 2014; 58(10):1304-1400. ³ Bliss et al. *Ann Intern Med* 1998; 129:1012-1019. ⁴ Kombay et al. *Infect Control Hosp Epidemiol* 2016; 37:8-15.

Contact Precautions (CP)

- Contamination of the environment is highest prior to treatment¹
- Presumptive CP**, while CDI test results are pending, may be used as a special approach whenever indicated by risk assessment²
- Patients who have been treated may have asymptomatic shedding³
- Prolonging the duration of CP** until discharge is a special approach based on evidence of continued shedding of spores after diarrhea resolves (especially up to 4 weeks after treatment ends)²



1. Rutensky et al. Clin Infect Dis 2008; 46(3):447-450

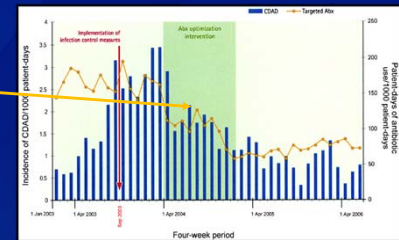
3. Sethi et al. Infect Control Hosp Epidemiol 2010; 31(1):21-27

2. Dubosky et al. Infect Control Hosp Epidemiol 2014; 35(6):628-645

Stewardship Approach: Feedback

Non-restrictive feedback resulted in statistically significant reductions in incident CDI.

Reductions in CDI attained through antimicrobial stewardship surpassed those attained through infection control measures.

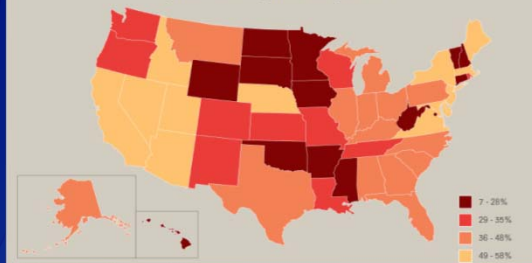


Tertiary Hospital in Quebec, 2003-2006

Valliquette et al. Clin Infect Dis 2007; 45:112-121

Percent of Hospitals with Antibiotic Stewardship Programs by State, 2014*

Antibiotic stewardship programs ensure patients get the right antibiotics at the right time for the right duration



Currently 39% (1,642/4,184) of U.S. hospitals have an antibiotic stewardship program with all 7 core elements.

The national goal is 100% of hospitals by 2020.

<http://www.cdc.gov/opioidmain/healthcare/providers.html>

*Hand Hygiene appropriate for C. difficile patients:

- Alcohol foam before and after patient care.
- Soap and water wash before and after patient care.
- Alcohol foam when entering room, but soap & water on exiting room.
- B and C

***Hand Hygiene appropriate for C.difficile patients:**

- A. Alcohol foam before and after patient care.
- B. Soap and water wash before and after patient care.
- C. Alcohol foam when entering room, but soap & water on exiting room.
- D. B and C**



***Neutropenic Precautions include all except:**

- A. ANC of <500 or 1000 and dropping.
- B. Mask before entering the room.
- C. Hand hygiene for everyone who enters the room.
- D. No plants, fresh fruit, or flowers.
- E. Gown and gloves not required for possible contact with the patient.

***Neutropenic Precautions include all except:**

- A. ANC of <500 or 1000 and dropping.
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- C. Hand hygiene for everyone who enters the room.
- D. No plants, fresh fruit, or flowers.
- E. Gown and gloves not required for possible contact with the patient.

CONTACT w/HANDWASHING **AIRBORNE**

STOP **CONTACT w/HANDWASHING/
AIRBORNE PRECAUTIONS** **STOP**

(In addition to Standard Precautions)

VISITORS: For your safety, we strongly recommend that you wear an isolation mask, gown and gloves in the room. If you need assistance, please check with a patient care provider before entering the room.

**Clean hands before patient care
AND
wash hands with soap and water
after patient care.**

- Staff:** Gown, gloves & PAPR or N-95 Respirator to enter room.
- Visitors:** Gown, gloves & isolation mask to enter room.
- Patient:** Mask when out of room.

- Negative Pressure Room with door closed.
- Use dedicated or disposable equipment when possible.
- Clean and disinfect shared equipment with alcohol product.

KETTERING HEALTH NETWORK Revised 08-07-12

CONTACT **DROPLET**

STOP **CONTACT/DROPLET
PRECAUTIONS** **STOP**

(In addition to Standard Precautions)

VISITORS: For your safety, we strongly recommend that you wear an isolation mask, gown and gloves in the room. If you need assistance, please check with a patient care provider before entering the room.

**Clean Hands
Before and After
Patient Care.**

- Staff & Visitors:** Gown, gloves & mask to enter room.
- Patient:** Mask when out of room.

- Use dedicated or disposable equipment when possible.
- Clean and disinfect shared equipment.
- Eye protection as appropriate.

KETTERING HEALTH NETWORK Revised 08-07-12

CONTACT **AIRBORNE**

STOP **CONTACT/AIRBORNE
PRECAUTIONS** **STOP**

(In addition to Standard Precautions)

VISITORS: For your safety, we strongly recommend that you wear an isolation mask, gown and gloves in the room. If you need assistance, please check with a patient care provider before entering the room.

**Clean Hands
Before and After
Patient Care**

- Staff:** Gown, gloves & PAPR or N-95 Respirator to enter room.
- Visitors:** Gown, gloves and isolation mask to enter room.
- Patient:** Mask when out of room.

- Negative Pressure Room with door closed.
- Use dedicated or disposable equipment when possible.
- Clean and disinfect shared equipment with approved disinfectant.

KETTERING HEALTH NETWORK Revised 08-07-12

CONTACT **CONTACT w/HANDWASHING**

STOP **CONTACT/CONTACT
w/HANDWASHING PRECAUTIONS** **STOP**

(In addition to Standard Precautions)

VISITORS: For your safety, we strongly recommend that you wear gown and gloves in the room. If you need assistance, please check with a patient care provider before entering the room.

**Clean hands before patient care
AND
wash hands with soap and water
after patient care.**

- Gown and gloves when entering beyond view only zone in room.**

- Use dedicated or disposable equipment when possible.
- Clean and disinfect shared equipment with bleach product.

KETTERING HEALTH NETWORK Revised 08-07-12

CONTACT **NEUTROPENIC**

STOP CONTACT/NEUTROPENIC PRECAUTIONS STOP
(In addition to Standard Precautions)

VISITORS: For your safety and the patient's safety, we strongly recommend that you wear an isolation mask if you have cold-like symptoms and wear gown and gloves in the room. If you need assistance, please check with a patient care provider before entering the room.

Clean Hands Before and After Patient Care.

- Staff & Visitors:** Gown & gloves when entering room. Add mask if you have cold-like symptoms.
- Patient:** Mask when out of room.

- No fresh or dried plants/flowers.
- Use dedicated or disposable equipment when possible.
- Clean and disinfect shared equipment.

KETTERING HEALTH NETWORK Revised: 09-27-12

CONTACT w/HANDWASHING **NEUTROPENIC**

STOP CONTACT w/ HANDWASHING/ NEUTROPENIC PRECAUTIONS STOP
(In addition to Standard Precautions)

VISITORS: For your safety and the patient's safety, we strongly recommend that you wear an isolation mask if you have cold-like symptoms and wear gown and gloves in the room. If you need assistance, please check with a patient care provider before entering the room.

Clean hands before patient care AND wash hands with soap and water after patient care.

- Staff & Visitors:** Gown and gloves to enter room. Add mask if you have cold-like symptoms.
- Patient:** Mask when out of room.

- No fresh or dried plants/flowers.
- Use dedicated or disposable equipment when possible.
- Clean and disinfect shared equipment with approved bleach product.

KETTERING HEALTH NETWORK Revised: 09-27-12

DROPLET **NEUTROPENIC**

STOP DROPLET/NEUTROPENIC PRECAUTIONS STOP
(In addition to Standard Precautions)

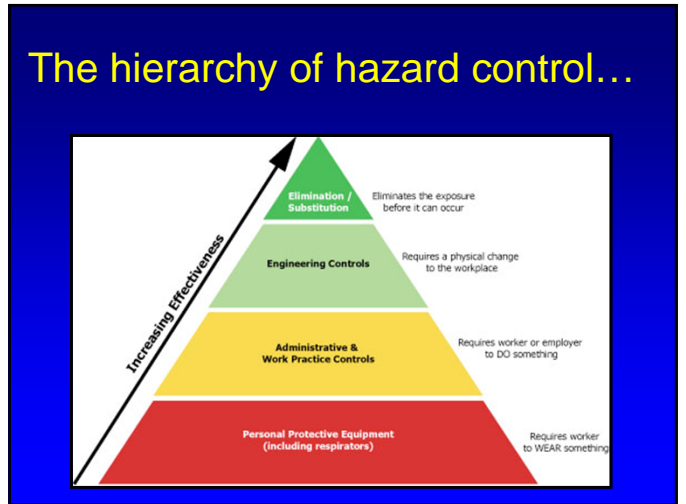
VISITORS: For your safety and the patient's safety, we strongly recommend that you wear an isolation mask in the room. If you need assistance, please check with a patient care provider before entering the room.

Clean Hands Before and After Patient Care.

- Staff & Visitors:** Mask to enter room.
- Patient:** Mask when out of room.

- Use dedicated or disposable equipment when possible.
- Gowns and gloves if contact with secretions likely.
- Eye protection as appropriate.

KETTERING HEALTH NETWORK Revised: 09-27-12





Dial hospital operator 24/7 to reach
Infection Prevention and Control