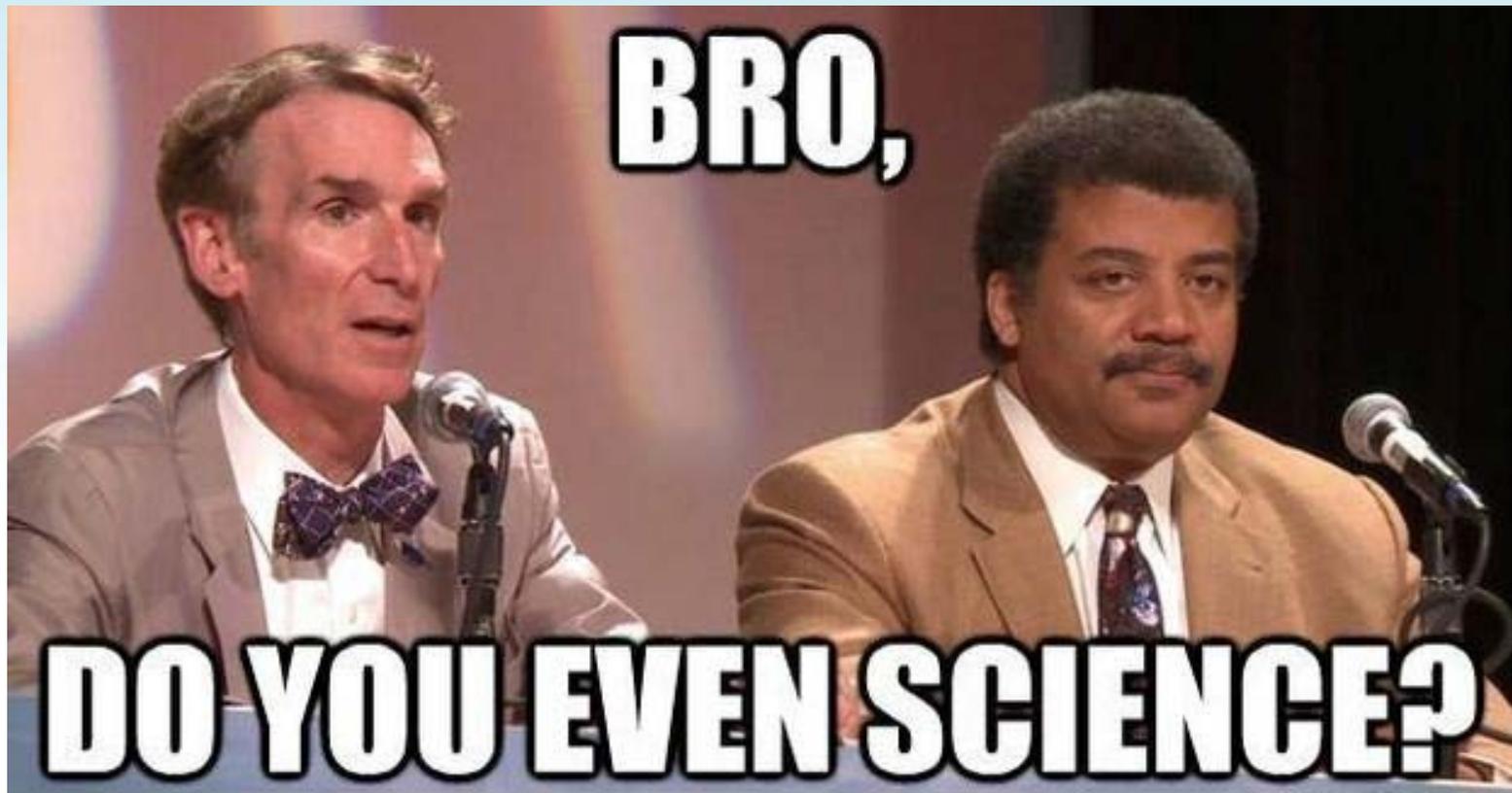




# Germ Warfare: The Work of an Infection Preventionist

Lynae Granzow-Kibiger, MPH, CIC

# We Need You in STEM Careers





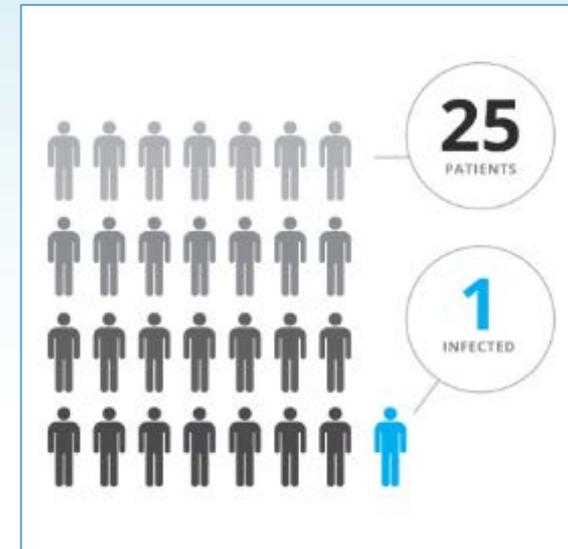
# What is an Infection Preventionist (IP)?

Using medical science and peer reviewed research, an IP observes and recommends specific healthcare practice to prevent transmission of infectious organisms. IPs collect and analyze data to follow prevention practices and outcomes.

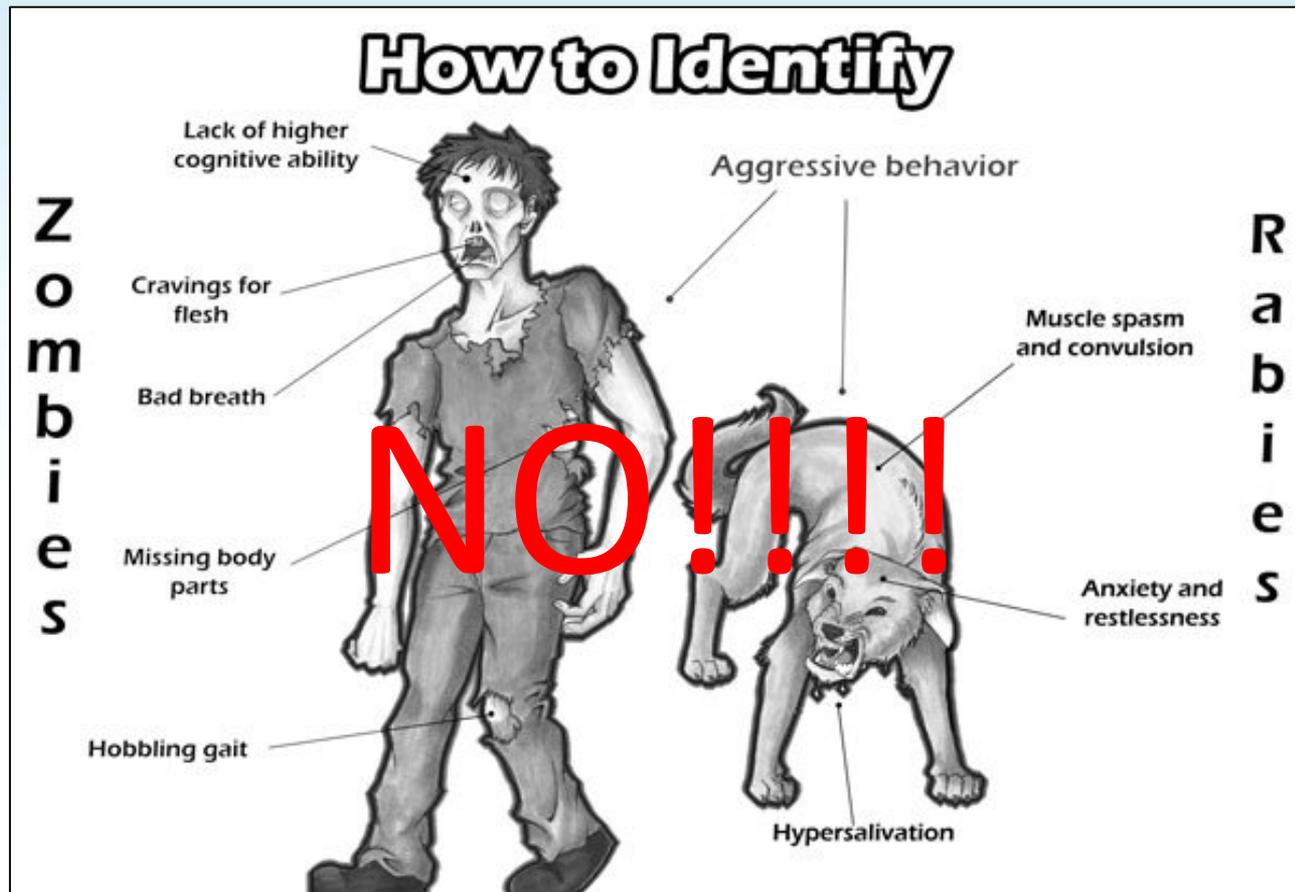
# Is There a Need for an IP?

The Centers for Disease Control and Prevention reports that approximately **1 in 25** hospital patients has had at least one healthcare-associated infection and **75,000** hospital patients died from healthcare-associated infections in 2011.

- **4<sup>th</sup>** leading cause of death in the US after heart disease, cancer, and stroke



# Do We Prevent a Zombie Apocalypse?



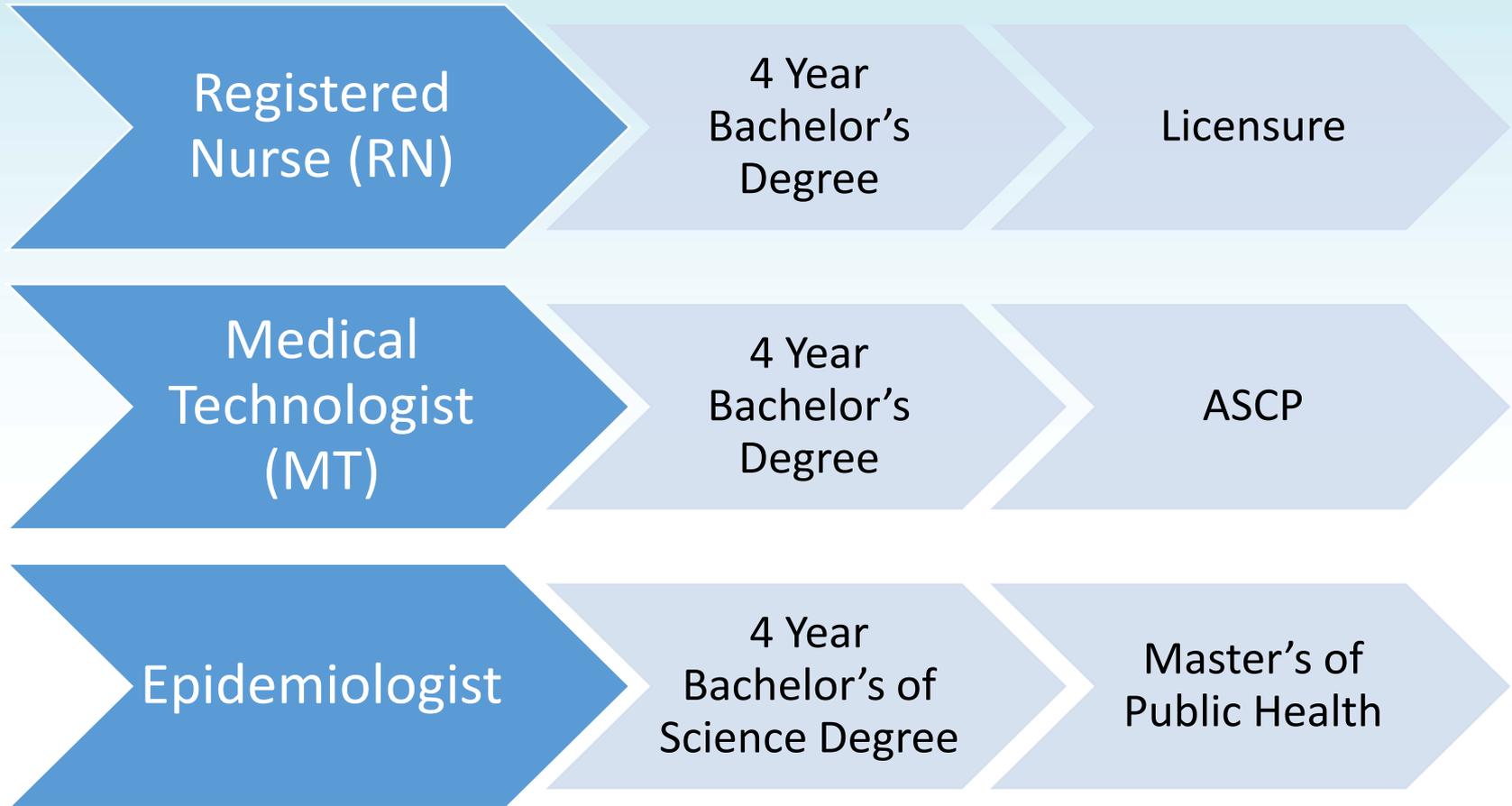


# Career Growth Potential

- The BLS projects overall growth for epidemiologists, whether nurses or others employed in hospitals and non-hospital settings, to be between **20%** and **28%** in the next 10 years.
- Demand for Infection Preventionists is projected to grow faster than other occupations.



# Three Education Paths



# Career Data

## Duration of employment in infection control and prevention

- Less than 2 years — 10%
- 2-5 years — 32%
- 6-10 years — 24%
- 11-15 years — 13%
- 16-20 years — 7%
- More than 20 years — 14%

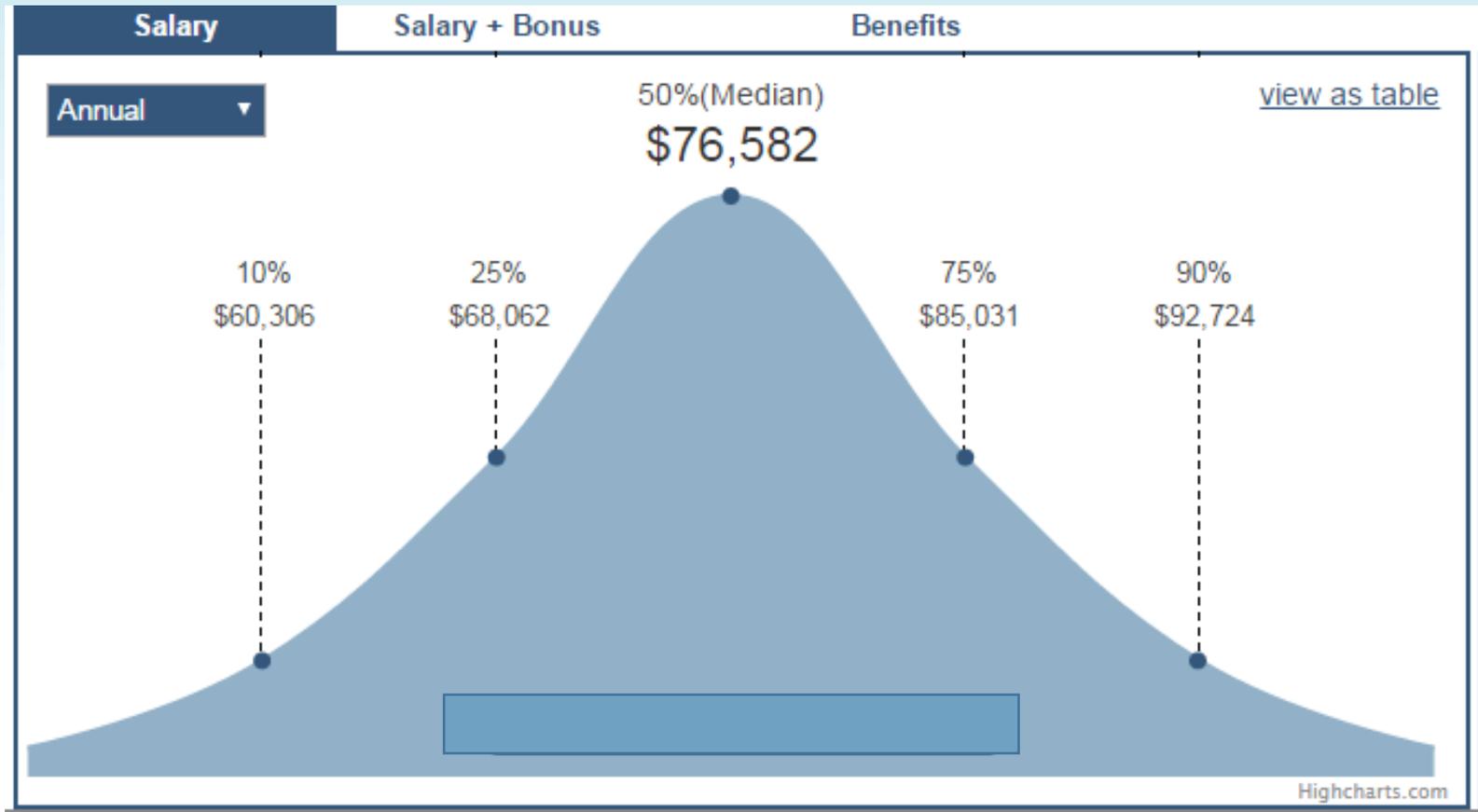
## Degrees and certifications in infection control

- Baccalaureate degree — 45%
- Master's degree or above — 32%
- CIC certified — 50%
  - Of those not certified, 77% are planning on becoming certified

## Professional background

- Nursing — 82%
- Microbiology/laboratory — 11%

# Career Growth Potential

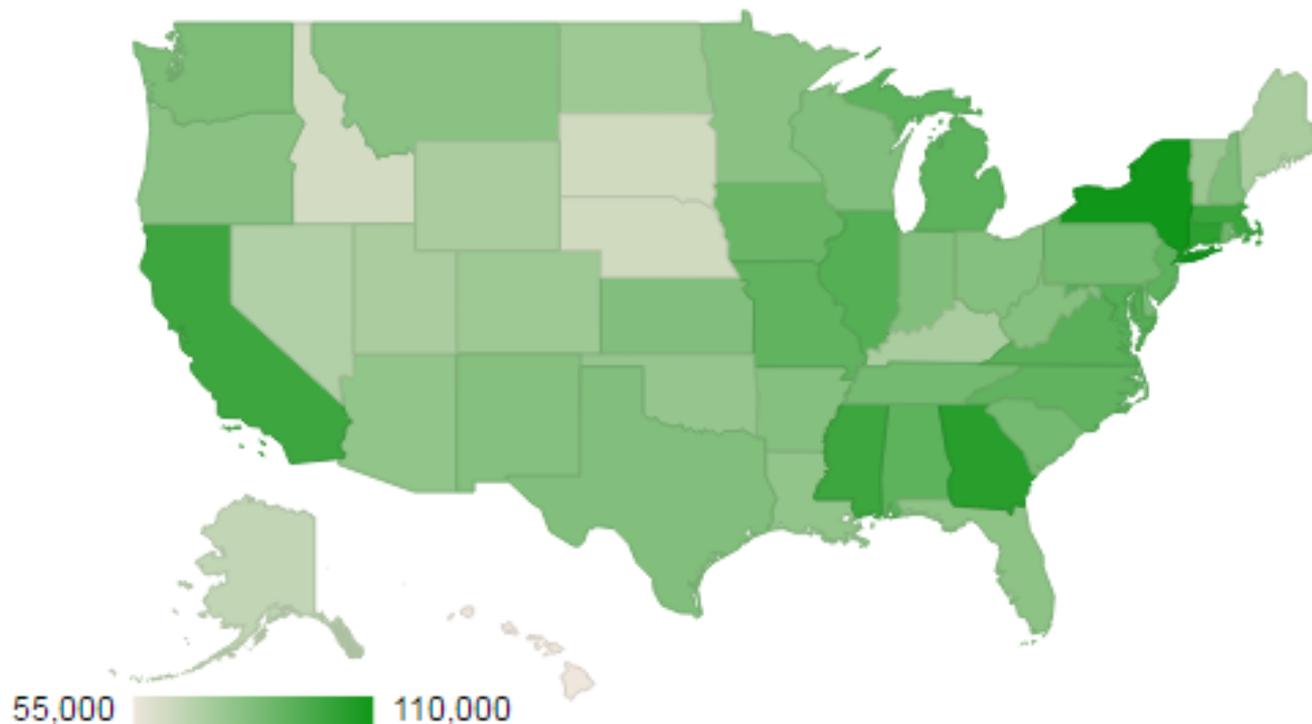




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# Career Growth Potential

## Average Salaries Across The Country



<http://www.careersinpublichealth.net/careers/infection-preventionist>

# To Love Your Job as an IP

- Have an interest in:
  - Infectious Disease
  - Statistics
  - Investigation
  - Immunization
  - Public Health
  - Food Safety
  - Laboratory
  - Cleanliness
  - Education
  - Definitions (black and white)
  - Non-patient care
    - But still talking with patients and families
  - Addressing all staff in the hospital, from C-suite administration to housekeeping



# Job Satisfaction

1

- Flexibility: work/life balance

2

- Satisfactory salary/benefits

3

- Job security

4

- Work itself – sense of accomplishment

5

- Working conditions

6

- Career advancement

7

- Career transition

8

- Decision making opportunities



# Where can you be an IP?



Indiana State  
Department of Health



CENTERS FOR DISEASE™  
CONTROL AND PREVENTION



# My Personal Career Path



## Microbiologist

- 2 Years
- Contract with Lab Support
- Marion County Health Dept.
- Indiana State Health Dept.



## Immunization Educator

- 2 Years
- Indiana State Health Dept.



## Epidemiologist

- 2 Years
- Indiana State Health Dept.

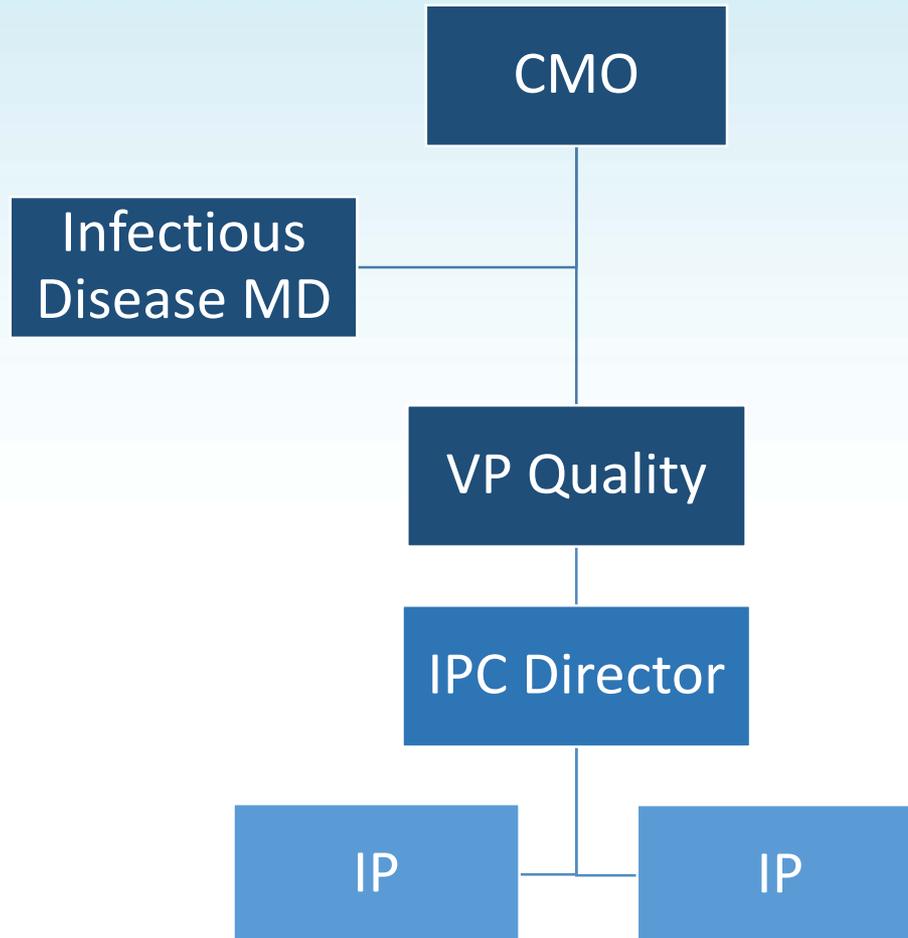


## Infection Preventionist

- 8+ Years
- Eskenazi Health



# The Infection Prevention & Control Department



# Basic Skills



- Microsoft Office Suite
  - Word
  - Excel
  - PowerPoint
  - Access
  - Outlook
  - Publisher
- SharePoint
- Statistical software
- Webpage design
- Public speaking
  - Educating healthcare workers, patients, and visitors
  - Health fairs – internal and external

# Development and Certification



- You have a post-secondary degree (e.g. associates'\* or baccalaureate degree) from an accredited academic facility.

**AND**

- You have had sufficient experience (recommended: two years) in infection prevention and control which includes all three (3) of the following:
  - Identification of infectious disease processes
  - Surveillance and epidemiologic investigation
  - Preventing and controlling the transmission of infectious agents
  - And at least two (2) of the remaining five (5) components:
    - Employee/occupational health
    - Management and communication
    - Education and research
    - Environment of care
    - Cleaning, sterilization, disinfection, and asepsis



# Daily Surveillance - EPIC

Hyperspace - EH IP ISOLATION/INFECTION VIR - Eskenazi PRD

Epac - Patient Lookup Isolation/Infection Census My Reports

### Infection Prevention

#### Surveillance

High Priority Organisms - 14m ago  
Data collected: Wed 4/5 09:21 AM

Report Title	Results
All C. diff Patients	7
All CRE Patients	0
All ESBL Patients	2
All MDR A.baumannii Patients	0
All MRSA Patients	24
All P. aeruginosa Patients	2
All VRE Patients	1
Possible AFB	16
Possible HAI MDRO (3 days)	2

#### Possible Device Associated Infections

Data collected: Wed 4/5 09:21 AM

Report Title	Results
Possible CAUTI	0
Possible CLABSI	0

**0** NHSN Total

#### Procedure Abstraction & Possible SSIs

Data collected: Wed 4/5 09:21 AM

Report Title	Result
Abstracted Procedures	19
Possible SSIs	
Procedures to Abstract	

#### VAE Cases

Data collected: Wed 4/5 09:21 AM

#### Abstraction

##### Open Cases

Report Name	Results
SSI Cases - In Progress	1
CAUTI Cases - In Progress	0
CLABSI Cases - In Progress	1
Internal MDRO Cases - In Progress	1
VAE Cases - In Progress	0

##### Infection Metrics

Data collected: Wed 4/5 09:21 AM

Report Title	Results
All Cauti Cases	10
All Clabsi Cases	7
C. diff Cases - Exported (last month)	12
CAUTI Cases - Exported (last month)	0
CLABSI Cases - Exported (last month)	0
Infection Cases Documentation	51
Internal MDRO Cases - Completed (Last 4 Months)	6
MDRO Denominator Metrics	
MRSA Cases - Exported (last month)	2
My infection Cases (Last 4 Months)	0
OR NHSN - Denominator Data (Last Month)	
Respiratory Virus	8
SSI Cases - Exported (last month)	0
SSI infection Cases (YTD)	0
VAE Cases - IVAC (last month)	1
VAE Cases - PVAP (last month)	0
VAE Cases - VAC (last month)	4
VAE Infection Cases (YTD)	18

**119** Total

#### Exports and Tools

##### State Reporting

RW: Favorites and Saved Results 5 - 4m ago

##### Lab Identified Organisms

Data collected: Wed 4/5 09:21 AM

Report Title	Results
Clostridium difficile	60
ask ip Lynae blood	319
MRSA Blood	26

**405** Total

##### NHSN CDA Exports

Data collected: Wed 4/5 09:21 AM

Report Title	Results
CAUTI Cases - Ready to Export (last 4 months)	2
CLABSI Cases - Ready to Export (last 4 months)	3
Department-Level ICU Denominator Data (last month)	20
Department-Level NICU Denominator Data (last month)	1
LabID Events - Ready to Export (last 4 months)	31
SSI Cases - Ready to Export (last 4 months)	0
SSI Cases: COLO - Ready to Export (last 4 months)	0
SSI Cases: HYST - Ready to Export (last 4 months)	0

**57** NHSN Total

#### Infection Control Common Links

- Hyperspace Links
- Trace Patient

# Internal Partnerships

- Occupational Health
- Environmental Services
- Facilities
- Laboratory
- Dietary
- Inpatient Units
- Outpatient Clinics
- Surgery
- Ancillary Services



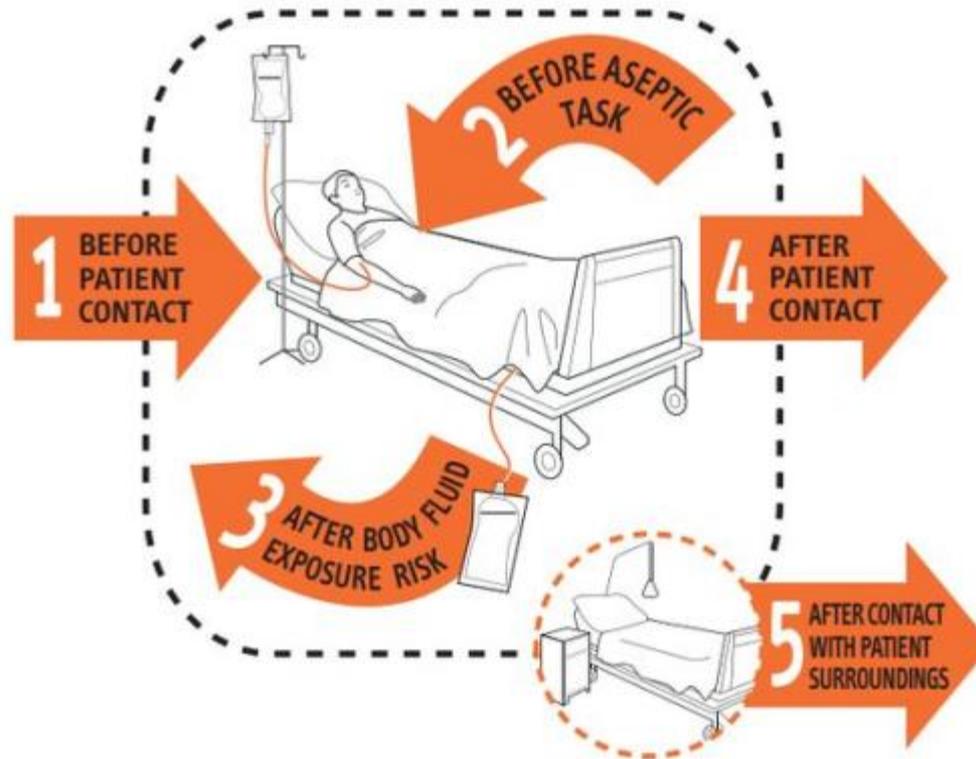
# External Partnerships

- Joint Commission
- CMS
- CDC – NHSN
- State Health Department
- County Health Departments
- Other area hospitals
- Reference Laboratories
- Coalition for Patient Safety



# Hand Hygiene

## Your 5 moments for HAND HYGIENE





# Looming Threat of Antibiotic Resistance

**ANTIBIOTIC RESISTANCE THREATS  
in the United States, 2013**



# Antibiotic Resistance

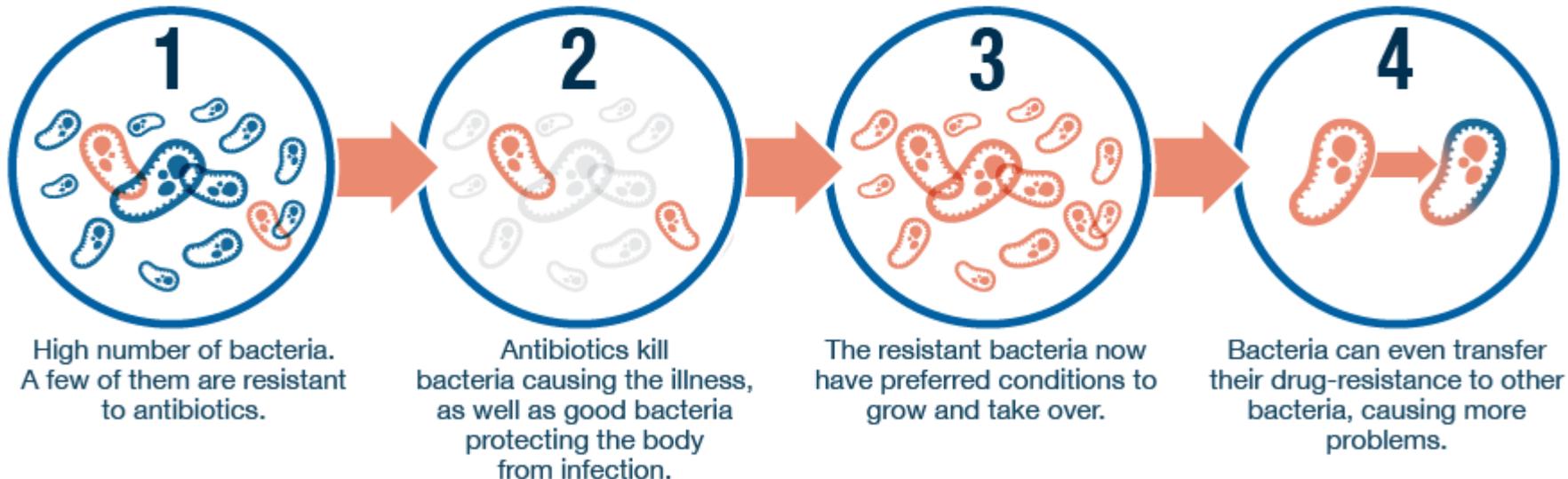
Estimated minimum number of illnesses and deaths caused by antibiotic resistance\*:

At least  **2,049,442** illnesses,  
 **23,000** deaths

*\*bacteria and fungus included in this report*

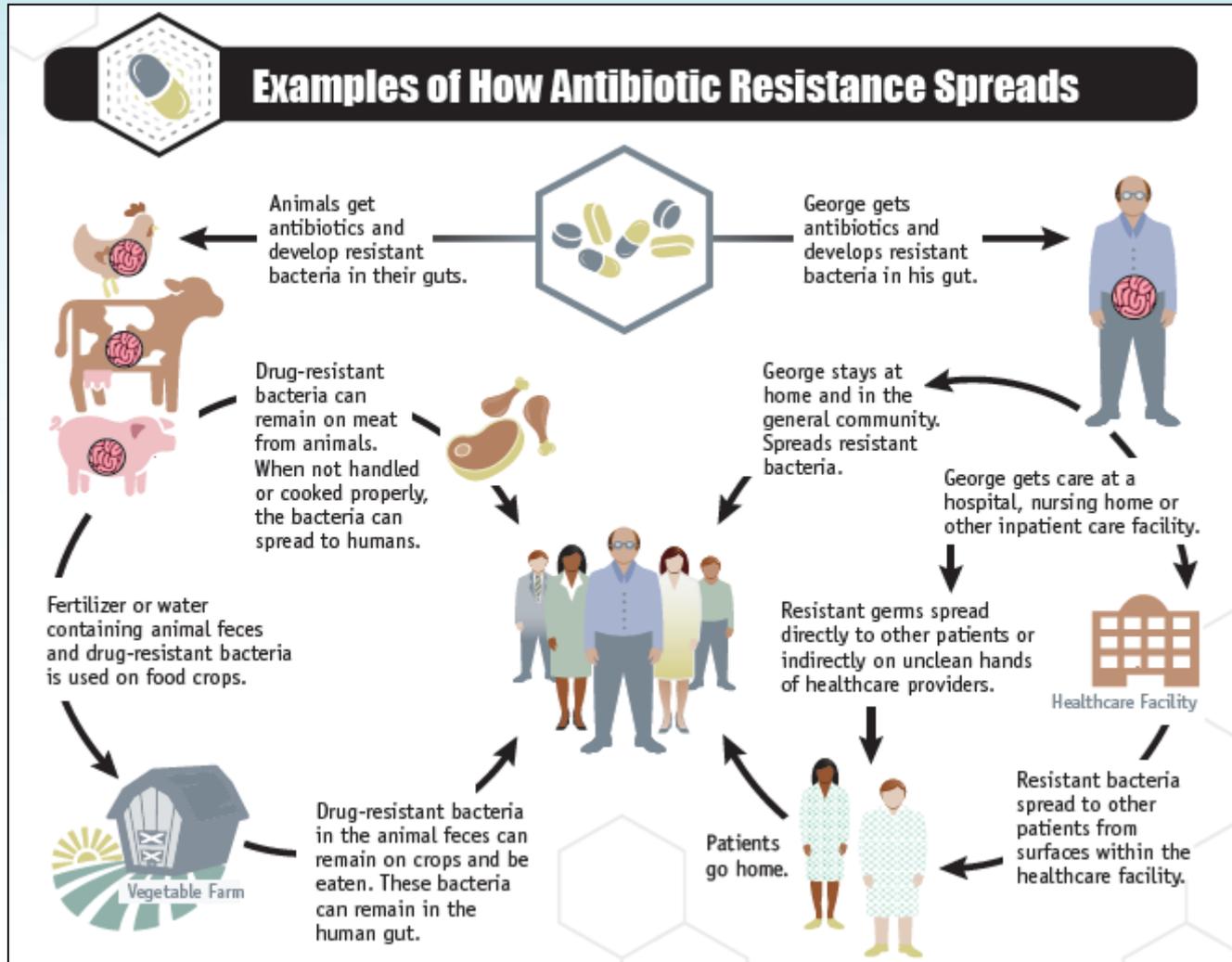
# Multi-drug Resistant Organisms (MDROs)

## How does antibiotic resistance occur?



Play Video

# Antibiotic Resistance





# Antibiotic Resistance



## CANCER CHEMOTHERAPY

People receiving chemotherapy are often at risk for developing an infection when their white blood cell count is low. For these patients, any infection can quickly become serious and effective antibiotics are critical for protecting the patient from severe complications or death.

## COMPLEX SURGERY

Patients who receive cardiac bypass, joint replacements, and other complex surgeries are at risk of a surgical site infection (SSI). These infections can make recovery from surgery more difficult because they can cause additional illness, stress, cost, and even death. For some, but not all surgeries, antibiotics are given before surgery to help prevent infections.



## RHEUMATOID ARTHRITIS

Inflammatory arthritis affects the immune system, which controls how well the body fights off infections. People with certain types of arthritis have a higher risk of getting infections. Also, many medications given to treat inflammatory arthritis can weaken the immune system. Effective antibiotics help ensure that arthritis patients can continue to receive treatment.

## DIALYSIS FOR END-STAGE RENAL DISEASE

Patients who undergo dialysis treatment have an increased risk for getting a bloodstream infection. In fact, bloodstream infections are the second leading cause of death in dialysis patients. Infections also complicate heart disease, the leading cause of death in dialysis patients. Infection risk is higher in these patients because they have weakened immune systems and often require catheters or needles to enter their bloodstream. Effective antibiotics help ensure that dialysis patients can continue to receive life-saving treatment.



## ORGAN AND BONE MARROW TRANSPLANTS

Transplant recipients are more vulnerable to infections. Because a patient undergoes complex surgery and receives medicine to weaken the immune system for a year or more, the risk of infection is high. It is estimated that 1% of organs transplanted in the United States each year carry a disease that comes from the donor—either an infection or cancer. Effective antibiotics help ensure that organ transplants remain possible.



# Antibiotic Safety



ANTIBIOTICS ARE RESPONSIBLE  
FOR ALMOST

**1** OUT OF **5**

EMERGENCY DEPARTMENT VISITS  
FOR ADVERSE DRUG EVENTS



ANTIBIOTICS ARE THE  
**MOST COMMON CAUSE OF  
EMERGENCY DEPARTMENT VISITS  
FOR ADVERSE DRUG EVENTS  
IN CHILDREN UNDER  
18 YEARS OF AGE.**



# Antibiotic Resistance

## GAPS IN KNOWLEDGE OF ANTIBIOTIC RESISTANCE

### LIMITED NATIONAL, STATE, AND FEDERAL CAPACITY TO DETECT AND RESPOND TO URGENT AND EMERGING ANTIBIOTIC RESISTANCE THREATS



Even for critical pathogens of concern like carbapenem-resistant Enterobacteriaceae (CRE) and *Neisseria gonorrhoeae*, we do not have a complete picture of the domestic incidence, prevalence, mortality, and cost of resistance.

### CURRENTLY, THERE IS NO SYSTEMATIC INTERNATIONAL SURVEILLANCE OF ANTIBIOTIC RESISTANCE THREATS



Today, the international identification of antibiotic resistance threats occurs through domestic importation of novel antibiotic resistance threats or through identification of overseas outbreaks.

### DATA ON ANTIBIOTIC USE IN HUMAN HEALTHCARE AND IN AGRICULTURE ARE NOT SYSTEMATICALLY COLLECTED



Routine systems of reporting and benchmarking antibiotic use wherever it occurs need to be piloted and scaled nationwide.

### PROGRAMS TO IMPROVE ANTIBIOTIC PRESCRIBING ARE NOT WIDELY USED IN THE UNITED STATES



These inpatient and outpatient programs hold great promise for reducing antibiotic resistance threats, improving patient outcomes, and saving healthcare dollars.

### ADVANCED TECHNOLOGIES CAN IDENTIFY THREATS MUCH FASTER THAN CURRENT PRACTICE



Advanced molecular detection (AMD) technologies, which can identify AR threats much faster than current practice, are not being used as widely as necessary in the United States.



# Antibiotic Resistance

ANTIBIOTIC RESISTANCE IDENTIFIED	ANTIBIOTIC INTRODUCED
penicillin-R <i>Staphylococcus</i> 1940	1943 penicillin 1950 tetracycline 1953 erythromycin
tetracycline-R <i>Shigella</i> 1959	
methicillin-R <i>Staphylococcus</i> 1962	
penicillin-R pneumococcus 1965	
erythromycin-R <i>Streptococcus</i> 1968	1967 gentamicin
	1972 vancomycin

gentamicin-R <i>Enterococcus</i> 1979	1985 Imipenem and ceftazidime
ceftazidime-R <i>Enterobacteriaceae</i> 1987	
vancomycin-R <i>Enterococcus</i> 1988	1996 levofloxacin
levofloxacin-R pneumococcus 1996	
Imipenem-R <i>Enterobacteriaceae</i> 1998	2000 linezolid
XDR tuberculosis 2000	
linezolid-R <i>Staphylococcus</i> 2001	2003 daptomycin
vancomycin-R <i>Staphylococcus</i> 2002	
R- <i>Acinetobacter</i> and <i>Pseudomonas</i> 2004/5	2010 ceftaroline
ceftriaxone-R <i>Neisseria gonorrhoeae</i> 2009	
PDR- <i>Enterobacteriaceae</i> 2009	
ceftaroline-R <i>Staphylococcus</i> 2011	



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# Antibiotic Resistance

**1 PREVENTING INFECTIONS, PREVENTING THE SPREAD OF RESISTANCE**



Avoiding infections in the first place reduces the amount of antibiotics that have to be used and reduces the likelihood that resistance will develop during therapy. There are many ways that drug-resistant infections can be prevented: immunization, safe food preparation, handwashing, and using antibiotics as directed and only when necessary. In addition, preventing infections also prevents the spread of resistant bacteria.

---

**2 TRACKING**



CDC gathers data on antibiotic-resistant infections, causes of infections and whether there are particular reasons (risk factors) that caused some people to get a resistant infection. With that information, experts can develop specific strategies to prevent those infections and prevent the resistant bacteria from spreading.

---

**3 IMPROVING ANTIBIOTIC PRESCRIBING/STEWARDSHIP**



Perhaps the single most important action needed to greatly slow down the development and spread of antibiotic-resistant infections is to change the way antibiotics are used. Up to half of antibiotic use in humans and much of antibiotic use in animals is unnecessary and inappropriate and makes everyone less safe. Stopping even some of the inappropriate and unnecessary use of antibiotics in people and animals would help greatly in slowing down the spread of resistant bacteria. This commitment to always use antibiotics appropriately and safely—only when they are needed to treat disease, and to choose the right antibiotics and to administer them in the right way in every case—is known as antibiotic stewardship.

---

**4 DEVELOPING NEW DRUGS AND DIAGNOSTIC TESTS**

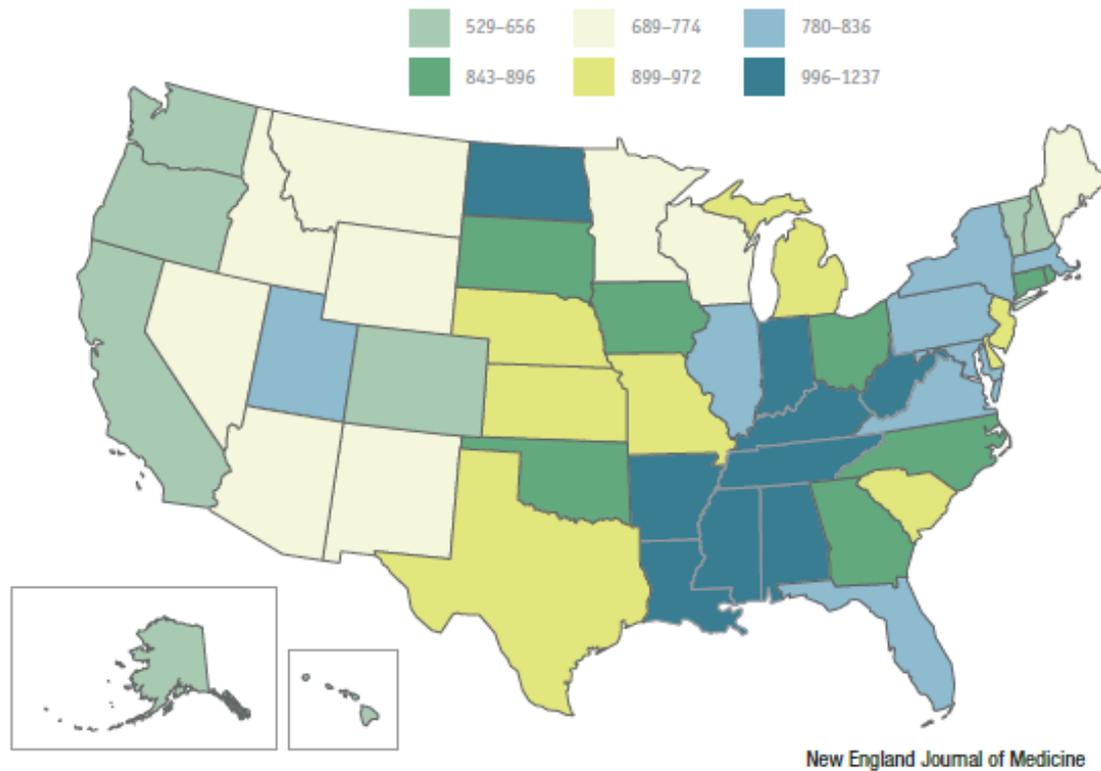


Because antibiotic resistance occurs as part of a natural process in which bacteria evolve, it can be slowed but not stopped. Therefore, we will always need new antibiotics to keep up with resistant bacteria as well as new diagnostic tests to track the development of resistance.



# Antibiotic Resistance

Antibiotic Prescriptions per 1000 Persons of All Ages According to State, 2010



The frequency with which doctors prescribe antibiotics varies greatly from state to state. The reasons for this variation are being studied and might suggest areas where improvements in antibiotic prescribing (fewer unnecessary prescriptions) would be most helpful.



# Antibiotic Resistance

HAZARD LEVEL

**URGENT**



These are high-consequence antibiotic-resistant threats because of significant risks identified across several criteria. These threats may not be currently widespread but have the potential to become so and require urgent public health attention to identify infections and to limit transmission.

*Clostridium difficile* (*C. difficile*), Carbapenem-resistant Enterobacteriaceae (CRE), Drug-resistant *Neisseria gonorrhoeae* (cephalosporin resistance)

3



# Antibiotic Resistance



## CLOSTRIDIUM DIFFICILE

THREAT LEVEL  
**URGENT**



This bacteria is an immediate public health threat that requires urgent and aggressive action.



**250,000**  
INFECTIONS PER YEAR



**14,000**  
DEATHS



**\$1,000,000,000**

IN EXCESS MEDICAL COSTS PER YEAR





# Antibiotic Resistance



## CARBAPENEM-RESISTANT ENTEROBACTERIACEAE

**THREAT LEVEL URGENT** ○○○○○

This bacteria is an immediate public health threat that requires urgent and aggressive action.

 **9,000** DRUG-RESISTANT INFECTIONS PER YEAR

 **600** DEATHS

CARBAPENEM-RESISTANT *KLEBSIELLA* SPP. **7,900**  **1,400** CARBAPENEM-RESISTANT *E. COLI*

 **CRE HAVE BECOME RESISTANT TO ALL OR NEARLY ALL AVAILABLE ANTIBIOTICS** 



# Antibiotic Resistance



## DRUG-RESISTANT NEISSERIA GONORRHOEAE

THREAT LEVEL  
**URGENT**



This bacteria is an immediate public health threat that requires urgent and aggressive action.



**246,000**

DRUG-RESISTANT  
GONORRHEA INFECTIONS



**188,600** RESISTANCE TO  
TETRACYCLINE

**11,480** REDUCED SUSCEPTIBILITY  
TO CEFIXIME

**3,280** REDUCED SUSCEPTIBILITY  
TO CEFTRIAXONE

**2,460** REDUCED SUSCEPTIBILITY  
TO AZITHROMYCIN



**820,000**

GONOCOCCAL INFECTIONS  
PER YEAR



# Antibiotic Resistance

HAZARD LEVEL

**SERIOUS**



These are significant antibiotic-resistant threats. For varying reasons (e.g., low or declining domestic incidence or reasonable availability of therapeutic agents), they are not considered urgent, but these threats will worsen and may become urgent without ongoing public health monitoring and prevention activities.

Multidrug-resistant *Acinetobacter*, Drug-resistant *Campylobacter*, Fluconazole-resistant *Candida* (a fungus), Extended spectrum  $\beta$ -lactamase producing Enterobacteriaceae (ESBLs), Vancomycin-resistant *Enterococcus* (VRE), Multidrug-resistant *Pseudomonas aeruginosa*, Drug-resistant Non-typhoidal *Salmonella*, Drug-resistant *Salmonella* Typhi, Drug-resistant *Shigella*, Methicillin-resistant *Staphylococcus aureus* (MRSA), Drug-resistant *Streptococcus pneumoniae*, Drug-resistant tuberculosis (MDR and XDR)

12



# Antibiotic Resistance

HAZARD LEVEL  
**CONCERNING**

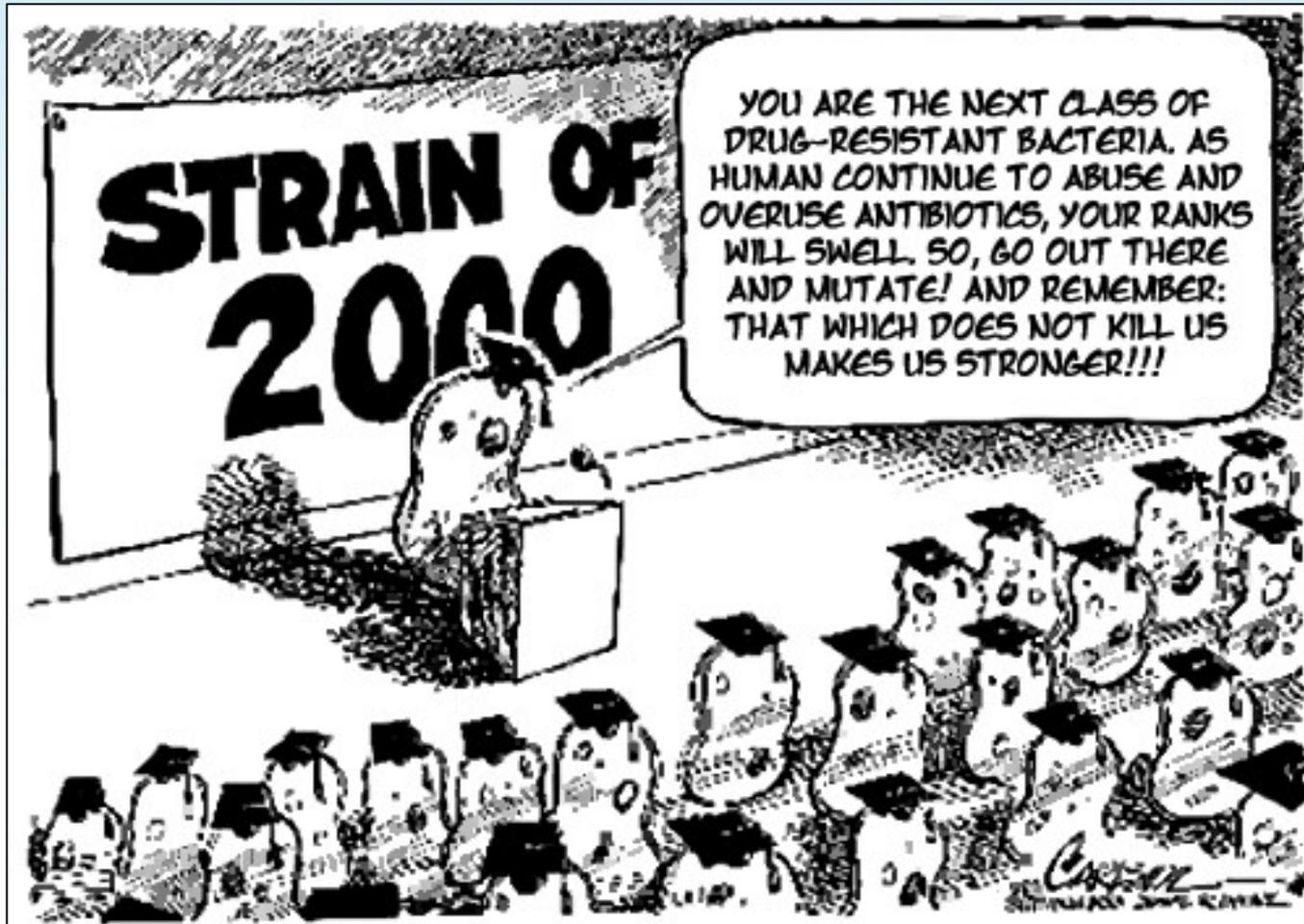


These are bacteria for which the threat of antibiotic resistance is low, and/or there are multiple therapeutic options for resistant infections. These bacterial pathogens cause severe illness. Threats in this category require monitoring and in some cases rapid incident or outbreak response.

Vancomycin-resistant *Staphylococcus aureus* (VRSA), Erythromycin-resistant *Streptococcus* Group A, Clindamycin-resistant *Streptococcus* Group B

3

# Resistance



# Required HAI Surveillance

## NHSN – CDC’s National Healthcare Safety Network

- NHSN now serves over 17,000 medical facilities tracking HAIs.
- Current participants include acute care hospitals, long-term acute care hospitals, psychiatric hospitals, rehabilitation hospitals, outpatient dialysis centers, ambulatory surgery centers, and nursing homes.
  - Hospitals and dialysis facilities represent the majority of facilities.
- NHSN is the conduit for facilities to comply with Centers for Medicare and Medicaid Services (CMS) infection reporting requirements.



### About NHSN

CDC's NHSN is the largest HAI reporting system in the U.S.



### Data and Reports

See national and state reports using NHSN data.



### Guidelines and Recommendations

Review CDC HAI prevention guidelines.



### Reporting and Surveillance for Enrolled Facilities

Training, protocols, forms, support materials, analysis resources and FAQs.

# Device Associated Infections

## BSI - Surveillance for Bloodstream Infections

Central Line-Associated Bloodstream Infection (CLABSI) and non-central line-associated Bloodstream Infection

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs



More >

- 28% of acute care patients had a central line
- Estimated 41,000 CLABSI annually hospital-wide
  - 18,000 CLABSI in ICU
- 46% decrease in CLABSIs has occurred in hospitals across the U.S. from 2008-2013
- Cost varies: \$7,000 to \$29,000

# Device Associated Infections

Date	Device	LOC	
May 1 Admit	CLine	ED/CCU	
2	CLine	CCU	
3	CLine	CCU	
4	CLine	CCU	
5	CLine	CCU	
6	CLine	CCU	
7	CLine	CCU	
8	CLine	CCU	
9	CLine D/C	CCU/4 East	
10		4 East	WBC = 15,000 Blood Culture: =S. aureus Urine Culture : No Growth
11		4 East	
12		4 East	
13		4 East	
14		4 East	
15		4 East	
16		4 East	
17		4 East	
18		4 East	

## Rationale

- Date of event is May 10<sup>th</sup>
- Device removed day of or day before
- Central line in place >2 days CLABSI
- Attributed to CCU - all elements are present on the day after transfer, therefore it is attributed to the location that transferred the patient.

# Device Associated Infections

## UTI - Surveillance for Urinary Tract Infections

Catheter-Associated Urinary Tract Infection (CAUTI) and non-catheter-associated Urinary Tract Infection (UTI) and Other Urinary System Infection (USI)

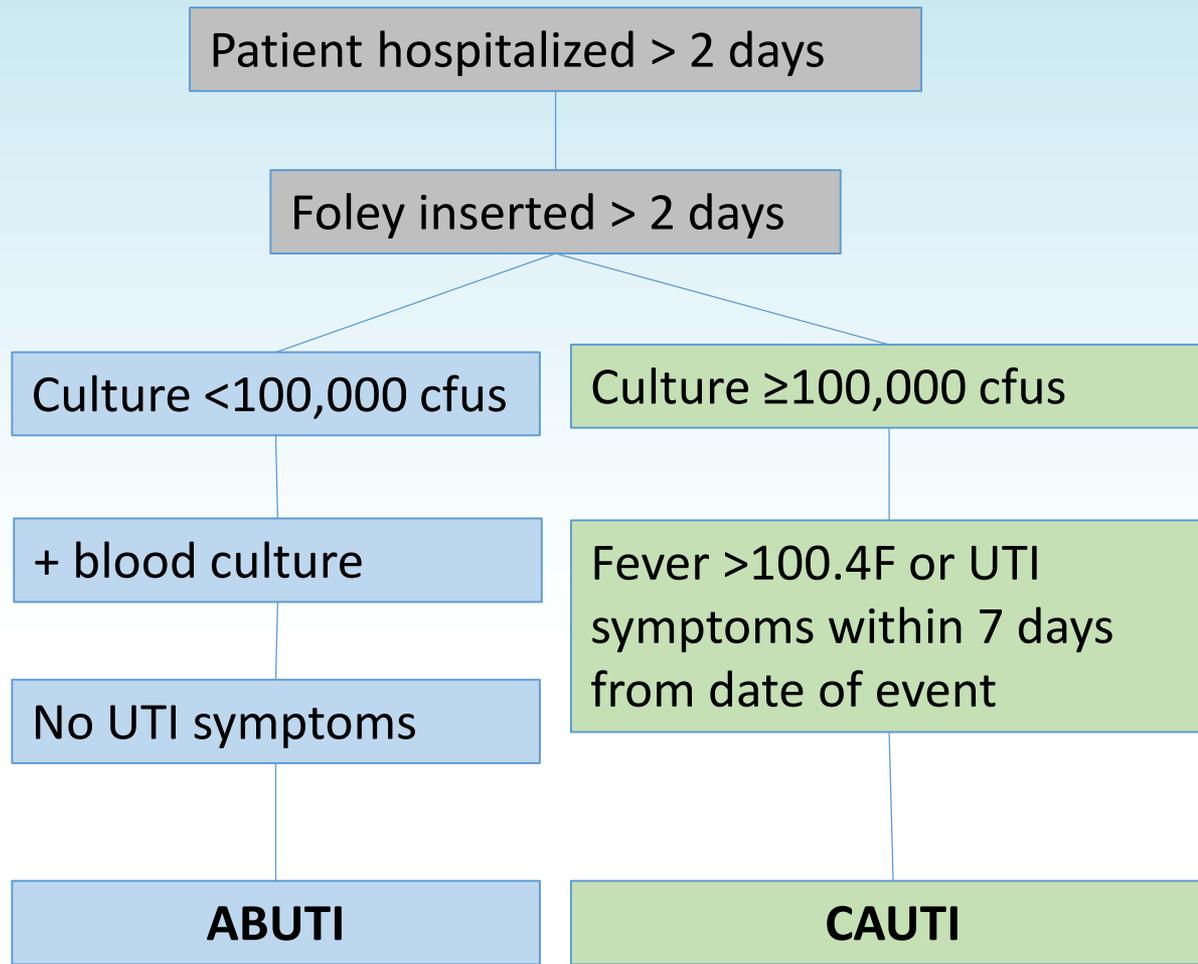
- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs



[More >](#)

- 4<sup>th</sup> most common type of HAI
- Estimated 93,300 UTIs in hospitals 2011
- Approximately 12%-16% of adult hospital inpatients will have an indwelling urinary catheter at some time during their hospitalization
- Each day of an indwelling urinary, a patient has a 3%-7% increased risk of acquiring a CAUTI
- Estimated 13,000 deaths each year
- Cost varies: \$7,000 to \$29,000

# Device Associated Infections



# Device Associated Infections

## VAE - Surveillance for Ventilator-associated Events

\* In Plan Adult Locations  
Only

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs



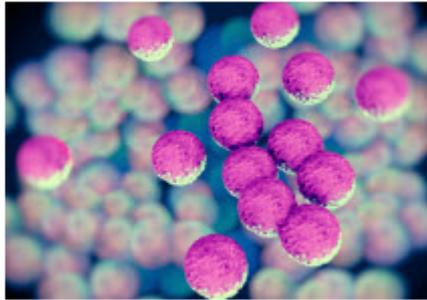
More >

- There is currently no valid, reliable definition for VAP, and even the most widely-used VAP criteria and definitions are neither sensitive nor specific
- Estimated more than **300,000** patients receive mechanical ventilation in the United States each year

# Lab ID Infections

## MDRO/C.Diff - Surveillance for *C. difficile*, MRSA, and other Drug-resistant Infections

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs



More >

## Multi-drug Resistant Organisms (MDROs)

- LabID Event reporting option allows laboratory testing data to be used without clinical evaluation of the patient, and therefore is a much less labor-intensive
- Treatment is extremely limited
- MDRO infections are associated with increased lengths of stay, costs, and mortality
- **Clostridium difficile (C. diff)** is responsible for a spectrum of *C. diff* infections (CDI), including uncomplicated diarrhea, pseudomembranous colitis, and toxic megacolon, sepsis and even death
- **Methicillin-resistant Staphylococcus aureus (MRSA)** can cause cellulitis, sepsis, osteomyelitis and even death

# Surgical Site Infections

## SSI - Surveillance for Surgical Site Infection Events

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs



More >

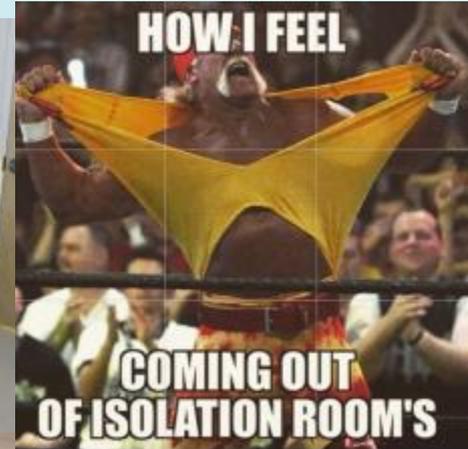
- Colo-rectal surgeries
- Hysterectomies

- In 2010, an estimated **16 million** operative procedures were performed in acute care
- SSIs were the most common healthcare-associated infection, accounting for **31%** of all HAIs among hospitalized patients
- Estimated inpatient **157,500** surgical site infections associated with (2011)
- NHSN data included 16,147 SSIs following 849,659 operative procedures, for an overall SSI rate of **1.9%** between 2006-2008
  - A **19%** decrease in SSI related to 10 select procedures was reported between 2008 - 2013

# Bundle Measure Auditing



# Audits and Rounding



**STOP**

**\*CONTACT PLUS\* PRECAUTIONS**

Visitors, please see for Orange Information Sheet  
Before entering, perform hand hygiene  
and follow instructions below

Requires Additional Housekeeping  
Door may remain open

- Gown and Gloves**
  - Must be worn to enter the room
- Equipment**
  - Disinfect when possible
  - Decontam to patient
  - Clean and disinfect all equipment before re-entring from the room
- Patient Transport**  
(Essential Personnel Only)
  - Person must perform hand hygiene and wear a gown/gloves
  - If in direct contact with patient wear a gown and gloves
  - Equip cleaning staff
- Before Leaving This Room**
  - Remove Gown and Glove
  - Perform Hand Hygiene





# Bundle Measure Auditing

Instructions: 1. Chart review section is not required. 2. RN should be educated on any problem found. 3. Fax to IPC 880-0300 or enter on Sharepoint by end of the month. 3. If not audited, leave blank. 01.2016

Auditor:			IN ROOM	*NA if CBI									CHART REVIEW	Criteria met at time of survey	Met today (1-10)	Type of Indication (see below)	Comments
#	Date	Room #		Tamper-evident seal (TES) Intact	Foley secured to body	Foley swab cap	No dependent loop observed	Drainage tubing clip is being used	Drain tubing and bag below bladder	Bag/Meter not touching floor	Bag/Meter filled < 50%						
1			IN ROOM	Y N N/A	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N		
2			IN ROOM	Y N N/A	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N		

- Approved Indications for Foley usage:**
1. Perioperative use for surgical procedures (remove by post-op day 2, except under circumstances listed below);
  2. Hourly measurement of urine volume required to provide treatment (Ex: management of hemodynamic instability, hourly titration of fluids, drips (e.g., vasopressors, inotropes), or life-supportive therapy);
  3. Daily (not hourly) measurement of urine volume that is required to provide treatment and cannot be assessed by other volumes and urine collection strategies  
(Ex: acute renal failure work-up, or acute IV or oral diuretic management, IV fluid management in respiratory or heart failure). Anuria is NOT an indication for a Foley;
  4. Management of acute urinary retention, neurogenic bladder, or bladder outlet obstruction; 5. Urologic surgeries and procedures;
  6. Stage III or IV or unstageable pressure ulcers or similarly severe wounds of other types that cannot be kept clear of urinary incontinence despite wound care and other urinary management strategies;
  7. Reduce acute, severe pain with movement when other urine management strategies are difficult (Ex: acute unrepaired fracture or pelvic surgery); 8. Comfort care in terminally ill patients;
  9. Post-traumatic injury to permit urethral/bladder healing or to ensure immobilization;
  10. For **ventilated** patients, the Foley will be considered appropriate if (1) the patient meets an above indication, or (2) if the patient's urinary output cannot be managed through other means and one of the following criteria are met: a. Weight  $\geq$  300 lbs, b. On paralytic agents, c. RASS -3 or lower, d. High ventilator requirements, e. Respiratory/hemodynamic instability with turning



# Bundle Measure Auditing

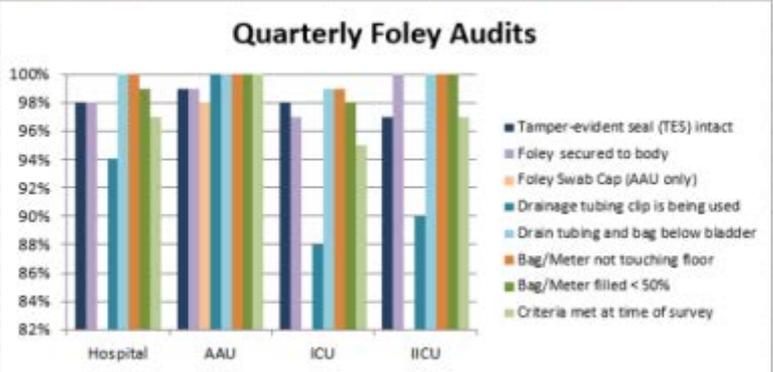
Browser: <https://collab.eskenazihealth.edu/dept/handhygienr> | File: Foley Audit Summary.xlsx

Microsoft Excel Web App

Foley Audits	Total Audits	Nursing Driven								Physician Driven										
		Tamper-evident seal (TES) intact	Foley secured to body	Foley Swab Cap (AAU only)	No dependent loop observed	Drainage tubing clip is being used	Drain tubing and bag below bladder	Bag/Meter not touching floor	Bag/Meter filled < 50%	Criteria met at time of survey	Approved Foley Criteria									
		#1 Perioperative	#2 Hourly urine	#3 Daily urine	#4 Urology mgmt	#5 Urologic surgeries	#6 Severe pressure ulcers	#7 Severe pain	#8 Comfort care		#9 Urethral/bladder healing	#10 Vented patients								
Hospital	241	98%	98%		95%	94%	100%	100%	99%	97%	28	62	47	60	22	14	6	3	3	12
AAU	117	99%	99%	98%	99%	100%	100%	100%	100%	100%	9	3	21	54	16	11	5	0	2	0
ICU	94	98%	97%		91%	88%	99%	99%	98%	95%	11	52	20	4	3	2	1	2	1	12
IICU	30	97%	100%		90%	90%	100%	100%	100%	97%	8	7	6	2	3	1	0	1	0	0

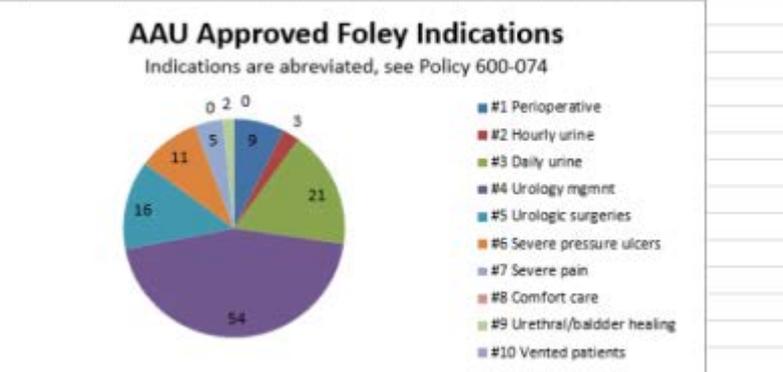
Note: not all fields may have been audited due to patient availability or auditor choice

### Quarterly Foley Audits



### AAU Approved Foley Indications

Indications are abbreviated, see Policy 600-074



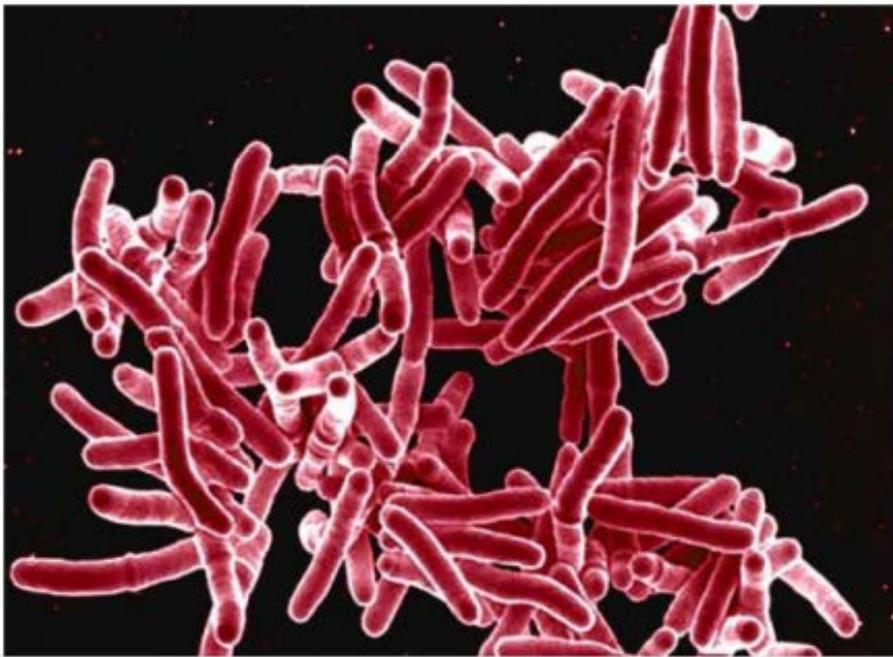
Criteria	Count
#1 Perioperative	0
#2 Hourly urine	2
#3 Daily urine	0
#4 Urology mgmt	3
#5 Urologic surgeries	9
#6 Severe pressure ulcers	11
#7 Severe pain	5
#8 Comfort care	16
#9 Urethral/bladder healing	21
#10 Vented patients	54

Navigation: 4Q2016 | **3Q2016** | 2Q2016 | 1Q2016 | 3Q2015 | Data2Q2015 | Print | Data1Q2015 | DataQ42014 | DataQ32014 | DataQ22014 | DataQ

# Exposures

## **150 Harborview staff, 45 patients may have been exposed to tuberculosis**

Originally published January 26, 2017 at 10:36 am | Updated January 26, 2017 at 3:15 pm



# State Reportable Diseases

Report incidences of the following infections, diseases, or conditions to the  
Local Health Department — Phone Number:

Reportable Communicable Diseases and Conditions for  
Health Care Providers, Hospitals, and Medical Laboratories  
Effective December 25, 2015

410 IAC 1-2.5-75 & 76

Report immediately on suspicion (!). Report within 24 hours (\*). All others report within 72 hours or as noted.

Acquired Immunodeficiency Syndrome (AIDS)	! <b>Hantavirus pulmonary syndrome</b>	Rabies, postexposure treatment
*Animal Bites	! <b>Hemolytic uremic syndrome</b> , postdiarrheal	Rocky Mountain spotted fever ( <i>Rickettsia</i> species)
Anaplasmosis ( <i>Anaplasma</i> species)	! <b>Hepatitis, viral, Type A</b>	! <b>Rubella</b> (German Measles)
! <b>Anthrax</b> ( <i>Bacillus anthracis</i> )	Hepatitis, viral, Type B	! <b>Rubella congenital syndrome</b>
! <b>Arboviral</b> (Eastern Equine, St. Louis, La Crosse, West Nile, California, Western Equine, Powassan, Japanese)	! <b>Hepatitis, viral, Type B, pregnant woman</b> (acute and chronic) or perinatally exposed infant	Salmonellosis, non-typhoidal ( <i>Salmonella</i> species)
Babesiosis ( <i>Babesia</i> species)	Hepatitis, viral, Type C (acute), within five (5) business days	! <b>Shigellosis</b> ( <i>Shigella</i> species)
! <b>Botulism</b> ( <i>Clostridium botulinum</i> )	Hepatitis, viral, Type Delta	! <b>Smallpox</b> (Variola infection) Adverse events or complications due to smallpox vaccination (vaccinia virus infection) or secondary transmission to others after vaccination.
! <b>Brucellosis</b> ( <i>Brucella</i> species)	! <b>Hepatitis, viral, Type E</b>	! <b>St. Louis encephalitis</b> (SLE)
Campylobacteriosis ( <i>Campylobacter</i> species)	Hepatitis, viral, unspecified	<i>Staphylococcus aureus</i> , vancomycin resistance level of MIC $\geq$ 8 $\mu$ g/mL or severe <i>Staphylococcus aureus</i> in a previously healthy person
<i>Carbapenemase-producing Carbapenem-resistant Enterobacteriaceae</i> (CP-CRE)	Histoplasmosis ( <i>Histoplasma capsulatum</i> )	<i>Streptococcus pneumoniae</i> , invasive disease and antimicrobial susceptibility testing
Chancroid ( <i>Haemophilus ducreyi</i> )	HIV infection/disease (The following conditions related to HIV are laboratory reportable) <i>Cryptococcus neoformans</i> Kaposi's sarcoma (biopsies) <i>Pneumocystis carinii</i>	<i>Streptococcus</i> , Group A, invasive disease ( <i>Streptococcus pyogenes</i> )
! <b>Chikungunya virus</b>	! <b>HIV infection/disease</b> , pregnant woman or perinatally exposed infant	Syphilis ( <i>Treponema pallidum</i> )
<i>Chlamydia trachomatis</i> , genital infection	Influenza-associated death (all ages)	Tetanus ( <i>Clostridium tetani</i> )
! <b>Cholera</b> ( <i>Vibrio cholerae</i> )	! <b>Japanese encephalitis</b>	Toxic shock syndrome (streptococcal or staphylococcal)
Coccidioidomycosis	! <b>La Crosse encephalitis</b> (California serogroup viruses)	Trichinosis ( <i>Trichinella spiralis</i> )
Cryptosporidiosis ( <i>Cryptosporidium</i> species)	Legionellosis ( <i>Legionella</i> species)	*Tuberculosis, cases, suspects, and latent infection ( <i>Mycobacterium tuberculosis</i> ) For latent infection, a positive screening test, negative or normal chest x-ray, no evidence of extra-pulmonary disease, and provider diagnosis are necessary. Report latent infection within five (5) business days.
Cyclosporiasis ( <i>Cyclospora cayetanensis</i> )	Leptospirosis ( <i>Leptospira</i> species)	! <b>Tularemia</b> ( <i>Francisella tularensis</i> )
Cysticercosis ( <i>Taenia solium</i> )	Listeriosis ( <i>Listeria monocytogenes</i> , invasive)	! <b>Typhoid and paratyphoid fever</b> , cases and carriers ( <i>Salmonella</i> Typhi or Paratyphi)
! <b>Dengue</b>	Lyme disease ( <i>Borrelia burgdorferi</i> )	Typhus, endemic (flea-borne)
! <b>Diphtheria</b> ( <i>Corynebacterium diphtheriae</i> )	<i>Lymphogranuloma venereum</i>	Varicella (chicken pox)
! <b>Eastern equine encephalitis</b> (EEE)	Malaria ( <i>Plasmodium</i> species)	Vibriosis ( <i>Vibrio</i> species)
Ehrlichiosis ( <i>Ehrlichia</i> species)	! <b>Measles</b> (Rubeola)	! <b>West Nile Virus</b> (WNV)
! <b>Escherichia coli</b> infection (Shiga toxin-producing <i>E. coli</i> (STEC)) including, but not limited to: <i>E. coli</i> O157; <i>E. coli</i> O157:H7; Shiga toxin detected; or Non-O157 <i>E. coli</i>	! <b>Meningococcal disease</b> ( <i>Neisseria meningitidis</i> , invasive)	! <b>Western equine encephalitis</b> (WEE)
Giardiasis ( <i>Giardia</i> species)	*Mumps	! <b>Yellow fever</b>
Gonorrhea ( <i>Neisseria gonorrhoeae</i> )	*Novel influenza A	Yersiniosis ( <i>Yersinia</i> species)
Granuloma inguinale ( <i>Calymmatobacterium granulomatis</i> )	*Pertussis ( <i>Bordetella pertussis</i> )	
* <i>Haemophilus influenzae</i> , invasive disease	! <b>Plague</b> ( <i>Yersinia pestis</i> )	
Hansen's disease (leprosy) ( <i>Mycobacterium leprae</i> )	! <b>Poliomyelitis</b>	
	! <b>Powassan virus</b>	
	Psittacosis ( <i>Chlamydia psittaci</i> )	
	! <b>Q Fever</b> ( <i>Coxiella burnetii</i> )	
	! <b>Rabies in humans or animals</b> , confirmed and suspect animal with human exposure	

# Outbreaks

## Watch Out for Endoscopes Linked to Superbug Outbreak, FDA Says

by MAGGIE FOX

Uemberg, Germany in a 2012 file photo.  Isa Foltin / Getty Images, file

A medical device linked to an [outbreak of drug-resistant superbugs](#) at a UCLA hospital is particularly hard to clean, the Food and Drug Administration said Thursday.

UCLA has contacted **179 people** who may have been treated using a contaminated endoscope. Seven people were infected with a drug-resistant bacteria called **CRE** and two of them died after being treated using the devices.

The scopes — flexible tubes that carry a camera and other equipment into the body through the mouth — are specifically designed for procedures called endoscopic retrograde cholangiopancreatography (ERCP).

"Some parts of the scopes may be extremely difficult to access and effective cleaning of all areas of the duodenoscope may not be possible," the FDA said in a notice to medical professionals.

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# Responsibility to Report Outbreaks

**Report incidences of the following infections, diseases, or conditions to the Local Health Department — Phone Number: \_\_\_\_\_**

**Immediately report ~~outbreaks~~ of any of the following upon suspicion:**

1. Any disease required to be reported under this section
2. Newborns with diarrhea in hospitals or other institutions
3. Foodborne or waterborne diseases in addition to those specified by name in this rule
4. Streptococcal illnesses
5. Conjunctivitis
6. Impetigo
7. Nosocomial disease within hospitals and health care facilities
8. Influenza-like-illness
9. Viral meningitis
10. Unusual occurrence of disease
11. Any disease (e.g. anthrax, plague, tularemia, *Brucella* species, smallpox, or botulism) or chemical illness considered a bioterrorism threat, importation, or laboratory release.





# Resistance

**In the end, there is no winning the germ war, it is only resistance.**



# Hope to See You in the Field!

## Epidemiologists



What my friends think I do



What my parents think I do



What society thinks I do



What grandma thinks I do



What I think I do



What I really do