

About the Alabama Nursing Home and Long-Term Care Facility Strike Team (LTC Strike Team)

The goal of the LTC Strike Team is to provide nursing homes and long-term care facilities in Alabama with up-to-date guidance and technical assistance for the prevention and surveillance of infectious disease outbreaks including COVID-19.

- Established in Spring 2022 through funding from the Alabama Department of Public Health (ADPH) Bureau of Communicable Disease Infectious Diseases & Outbreaks Division via the CDC's Epidemiology and Laboratory Cooperative Agreement (ELC CoAg).
- The ADPH Bureau of Communicable Disease Infectious Diseases & Outbreaks Division is completely separate from Bureau of Health Provider Standards Long-Term Care Division
- Intent of the LTC Strike Team is to be a resource for all nursing homes and long-term care facilities in the state of Alabama.
- Funded until 6/30/2026

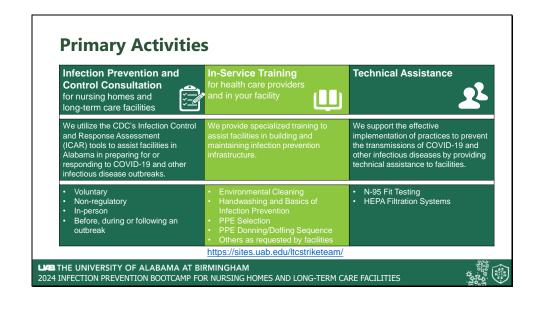




. 50°54	\wedge
4: 00 G	250
~\$\J{\z^2\}.	ピツ

-			

Meet the UAB LTC Strike Team Who We Are Infection Prevention Specialist, Medical Director, and Support Staff located across the State of Alabama; all employees of UAB. Who We Serve We serve the following facilities across the 8 Public Health Districts in Alabama: Assisted Living Facilities Specialty Care Assisted Living Facilities Skilled Nursing Facilities Long-Term Acute Care Hospitals Rehabilitation Centers * Jefferson County is split between Tameka Hines and Becky McKinney



ADPH/LTC Strike Team Partnership

ADPH's Bureau of Communicable Disease - Infectious Diseases & Outbreaks Division

- Disease surveillance/reporting
- Infectious disease outbreak investigations
 Work with facilities to implement plans to reduce the occurrence of infectious diseases
- Provide technical expertise, consultation, and assistance (may ask LTC Strike Team IP Specialist to offer outbreak ICAR)
- Education

Primary POC: Your District Investigator https://www.alabamapublichealth.gov/infectiousdisea ses/investigators.html

LTC Strike Team

- Preventative ICAR Consultations (COVID or general)
- In-service training on IPC topics
- N-95 Respirator Fit-testing for employees
- COVID-19 Line List Review and Outreach

Primary POC: Infection Prevention Specialist who serve your county https://sites.uab.edu/ltcstriketeam/about/leade

rship-and-staffing/



Free HEPA Air Purifiers Available - Available for resident and common rooms in your facility - Continuous use, portable units - Hospital grade filters - Lifetime warranty

Mini-Regional Infection Prevention Bootcamps for LTC Facilities

April 26, 2024 in Mobile County



https://sites.uab.edu/ltcstriketeam

Registration for the bootcamps will be available on our website at least one month prior to the bootcamp.

Learn More About the Alabama Nursing Home and Long-Term Care Facility Strike Team REQUEST A FREE IP CONSULTATION, TRAINING OR TECHNICAL ASSISTANCE ON OUR WEBSITE OR EMAIL US LEST THE UNIVERSITY OF ALABAMA AT BIRMINGHAM 2024 INFECTION PREVENTION BOOTCAMP FOR NURSING HOMES AND LONG-TERM CARE FACILITIES

About the Alabama Regional Center for Infection Prevention and Control Training and Technical Assistance (ARC IPC)

- The ELC CoAg tasked ADPH with the creation of a <u>regional center</u> for infection prevention and control consultation and <u>support</u> <u>services</u> in Alabama
- Purpose of this regional center:
 - Enhance capacity for infection control and prevention
 - · Build infection prevention and control and outbreak response expertise



Learn More About the Alabama Regional Center for Infection Prevention and Control Training and Technical Assistance













https://uab.edu/arcipc

https://uab.edu/arcipc

Thank You to Our Co-Sponsors



Learn more: https://sites.uab.edu/dsc/



Housekeeping

- Please make sure you signed in!
- CEs
- Training Evaluation
- Certificates of Participation
- Questions
- Restrooms

CEUs approved for this bootcamp:

Nursing: The Deep South Center for OH&S is an approved provider of continuing education units for nurses by the AL Board of Nursing (Provider ABNP0420 Expiration Date 12/16/2026) and has awarded this program 4.5 CEUs. All other professionals are awarded .38 CEU's

Nursing Home Administrator: The Board of Examiners of Nursing Home Administrators has reviewed and approved the seminar for continuing education credit for licensed nursing home administrators in the State of Alabama for 3.5 hours.

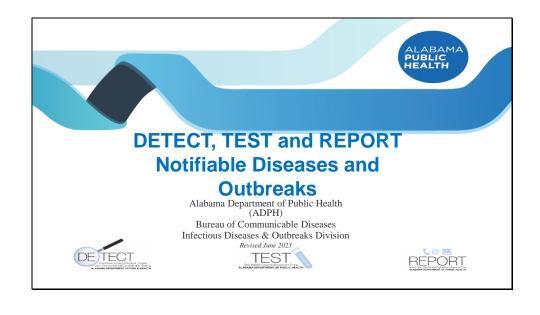


Lori Lloyd, BSN, RN

- Infectious Disease and Outbreaks Division
- Emergency Management Division



LAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	\$ 1 PM
2024 INFECTION PREVENTION BOOTCAMP FOR NURSING HOMES AND LONG-TERM CARE FACILITIES	.500 S.



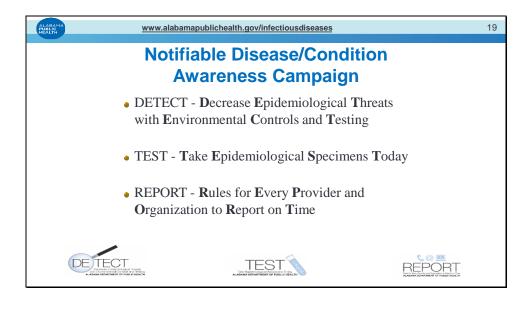
Important Information	
 You must attend the entire program. No partial credit will be awarded 	
There is no commercial support or sponsorship for the program	
There will be no endorsement of products displayed in conjunction with the activity	
DEJECT TEST BEPORT AND ADDRESS OF THE STREET ADDRESS OF THE STREET AND ADDRESS OF THE STREET ADD	

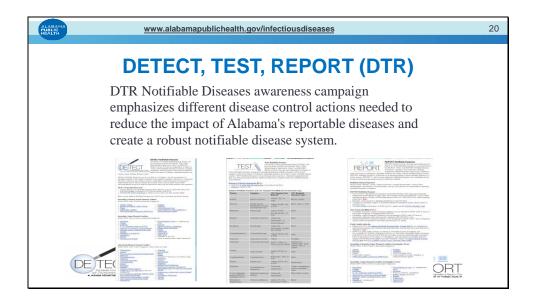
 $\underline{www.alabamapublichealth.gov/infectious diseases}$

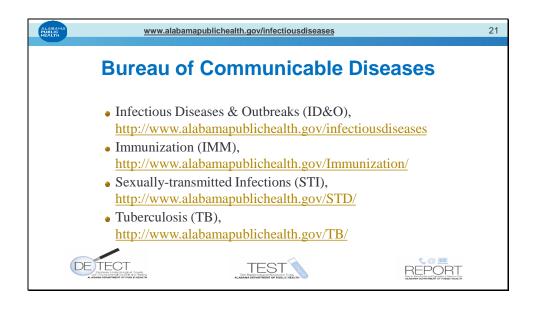
16

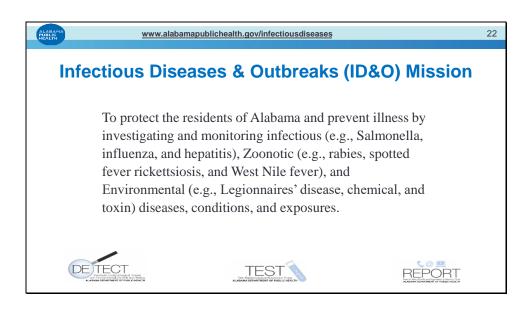
ALABAMA PUBLIC HEALTH	www.alabamapublichealth.gov/infectiousdiseases	17
	Purpose of this Presentation	
	To provide the audience knowledge of:	
	Divisions within the Bureau of Communicable Disease	
	Notifiable Disease Rules	
	Diseases and conditions	
	• When & how to report to public health	
	Identification of an outbreak and how reporting	
	protects the public	
	Healthcare-associated infections reporting &	
	surveillance	
	Reporting animal bites/exposures (rabies)	
DE JUSTINE ALABAMA	TEST TEST	

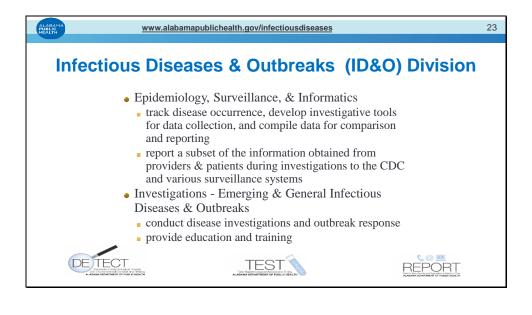
		Objectives		
	_	tion of the presentation the aud		
	_	geable of the Notifiable Disease		
		erbalize who should report, how report reportable diseases and	_	
		erbalize what constitutes an out		
	 Be knowledg 	geable of Alabama's healthcare	e-associated	
	infections rep	porting rules & surveillance pr	rogram	
(DE			% @ •	
DE	Usu manas Emilior resident il Provide with Emilior reprovement Corottile and Tending ALA DAMAS DEPARTMENT OF PUBLIC HEALTH	Sign Symbolic States States States States States ALABAMA DEPARTMENT OF PUBLIC HEALTH	REPORT	

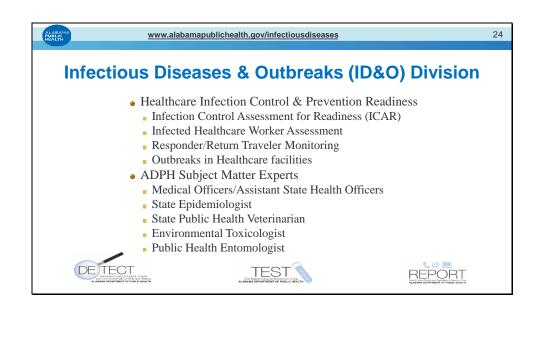


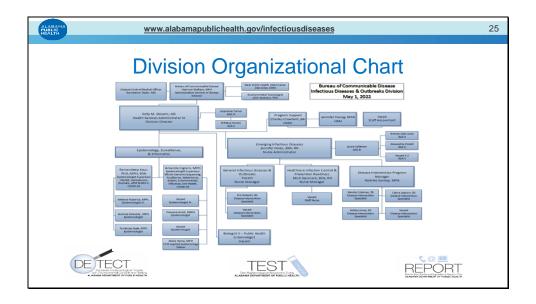


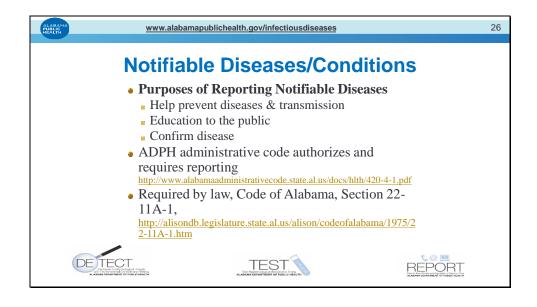


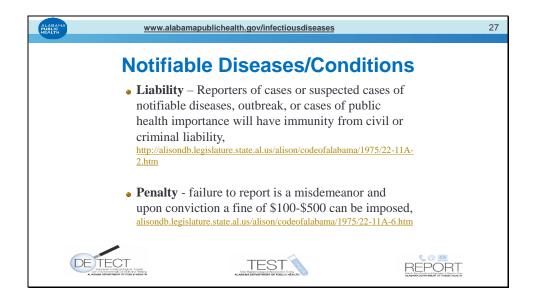


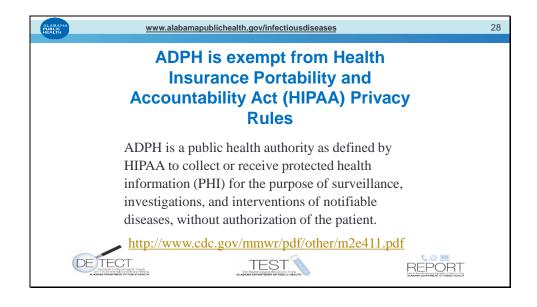




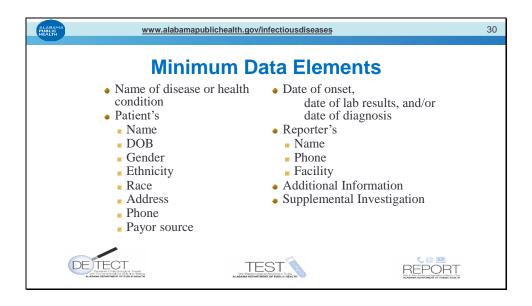


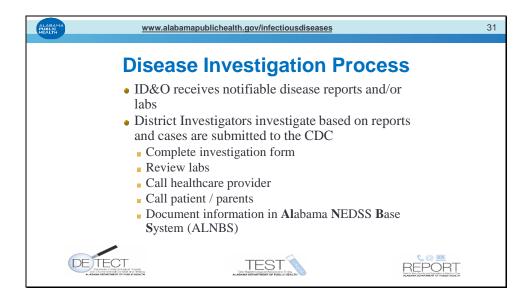


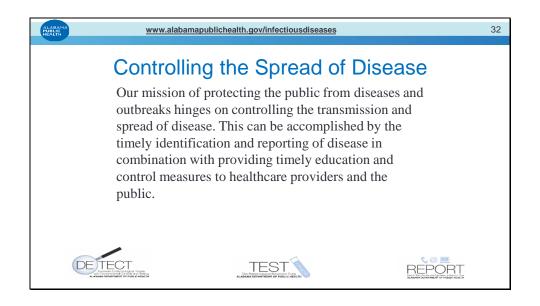








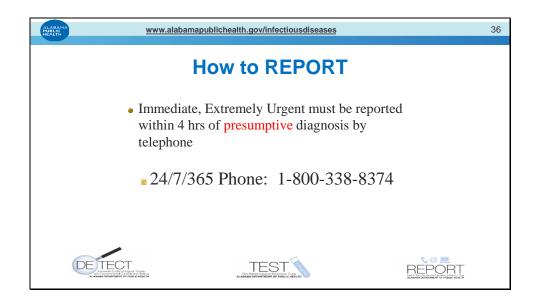


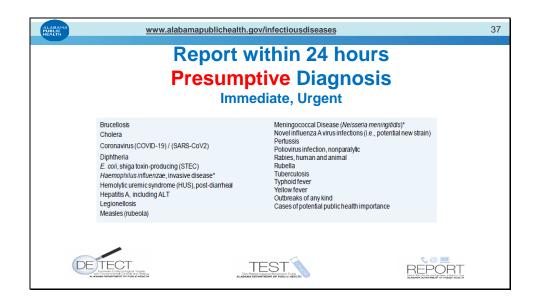


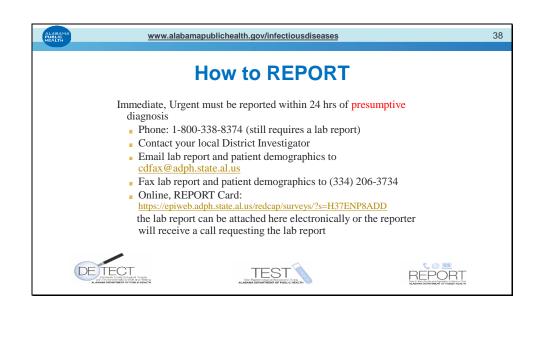
 Isolation vs. Quarantine Isolation relates to behavior of a person with a confirmed diagnosis / disease. This behavior separates people with an infectious disease from people who are not sick. Quarantine refers to the timeframe and behavior following exposure to an infectious disease or close contact with a person with a confirmed case of disease. This behavior separates non-ill persons exposed to an
 Isolation relates to behavior of a person with a confirmed diagnosis / disease. This behavior separates people with an infectious disease from people who are not sick. Quarantine refers to the timeframe and behavior following exposure to an infectious disease or close contact with a person with a confirmed case of disease.
infectious disease to see if they become sick.
Infectious disease to see if they become sick.

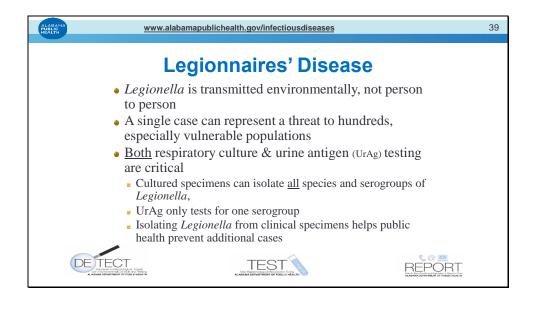


ALABAMA PUBLIC HEALTH	www.alabamapublichealth.gov/infectiousdiseases	35					
	Botulism						
	 Contact ADPH immediately upon suspicion 						
• Time is of the essence							
 Testing <u>must</u> be approved by Public Health 							
	• For infants, physician may contact California Public						
	Health directly						
	E (510) 231-7600						
	 Release of antitoxin will be coordinated by ADPH for patients ≥1 year old 						
	patients 21 year old						
DE	TECT TEST REPORT						
·	ALBAMA DEPARTMENT OF PURICIPATION ALBAMA DEPARTMENT OF PURICIPATION OF ALBAMA DEPARTMENT OF ALBAMA DEPARTMENT OF PURICIPATION OF ALBAMA DEPARTMENT OF ALB						

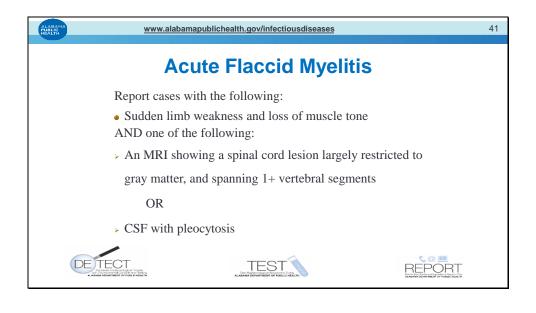


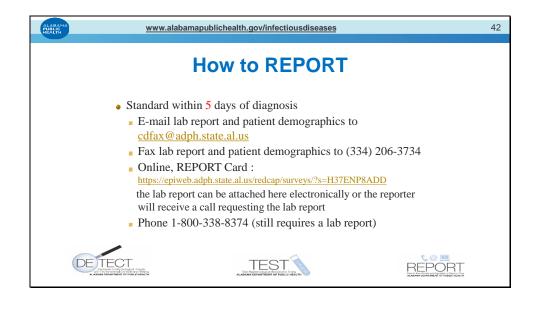


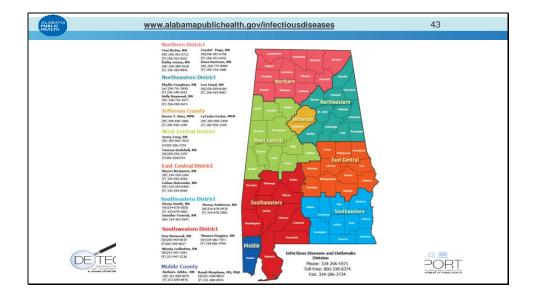




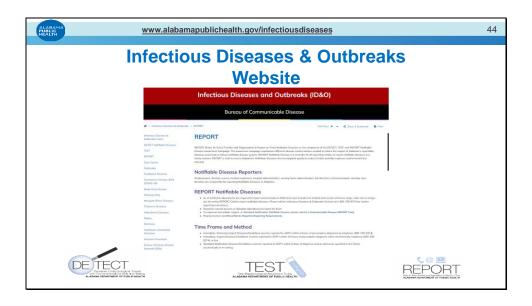








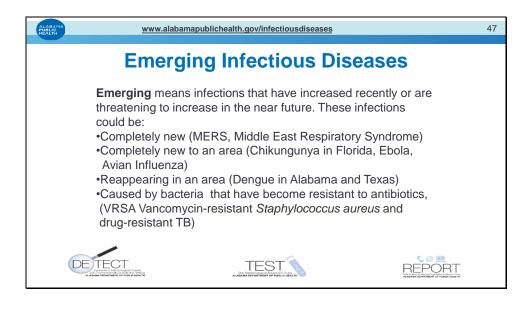
		·	

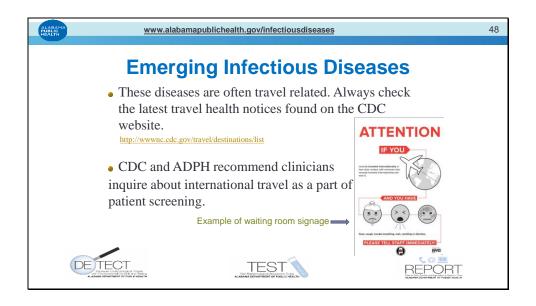


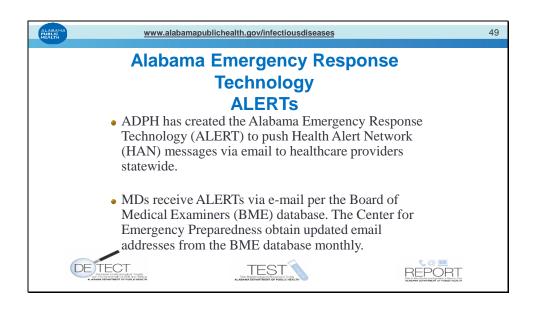
	-	

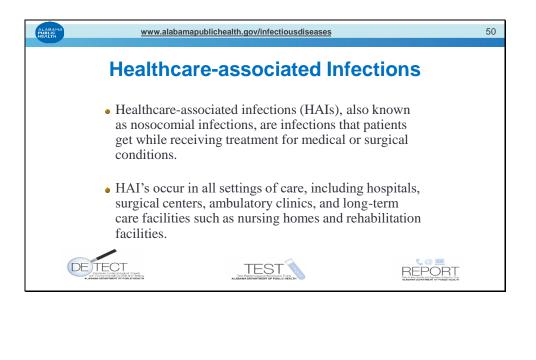
www.alabamapub	noncaringov/intec	J. I Cu			
ID&O Inve	estigatio	ns and	Case	S	
Disease	Inves	tigations		ses	
	2019	2021	2019	2021	
Acute Flaccid Myelitis	1	1	0	0	
Anthrax	2	0	0	0	
Arboviral	32	31	6	12	
Babesiosis	11	5	0	1	
Botulism	2	3	1	1	
Brucellosis	14	4	3	1	
Campylobacteriosis	747	804	745	783	
Chikungunya virus	2	0	0	0	
Cholera	3	1	0	0	
Coccidioidomycosis	14	16	0	0	
Cryptosporidiosis	236	130	233	129	
Cyclosporiasis	6	7	0	0	
Dengue	6	2	3	0	
E. coli, shiga toxin-producing	158	171	140	158	
Ehrlichiosis/Anaplasmosis	59	41	39	24	
Giardiasis	179	170	163	164	
Hansen's disease (Leprosy)	1	1	1	0	
Hantavirus pulmonary syndrome	1	0	0	0	
Hemolytic uremic syndrome (HUS)	6	6	5	5	
Hepatitis, other viral	3	3	0	1	$\exists \top$

www.alabamapul	olichealth.gov/ii	nfectiousdiseas	es		
ID&O Inv	estigat	ions ar	nd Case	es	
Disease		gations		ses	1
	2019	2021	2019	2021	
Influenza-associated pediatric mortality	2	0	2	0	
Legionellosis	114	162	72	90	
Listeriosis	11	16	9	10	
Lyme disease	259	180	67	51	
Malaria	9	10	9	10	
Novel Influenza A Virus Infections	4	2	0	0	
Paratyphoid fever	1	2	0	0	
Psittacosis	1	0	0	0	
Q fever	7	8	2	3	
Salmonellosis	1035	889	1025	877	
Shigellosis	507	107	497	98	
Spotted Fever Rickettsiosis	1480	493	470	130	
Trichinellosis (Trichinosis)	4	3	0	0	
Tularemia	13	3	4	0	
Typhoid fever	2	6	0	6	
VISA (Staph. aureus, vancomycin intermediate susceptible)	2	0	1	0	
VRSA (Staph. aureus, coag-pos, vancomycin- resistant)	4	1	3	1	
Vibriosis (non-cholera)	42	42	42	39	рт
Zika virus	138	1	0	0	OUCHEALT
Case totals	5259	3393	3592	2640	

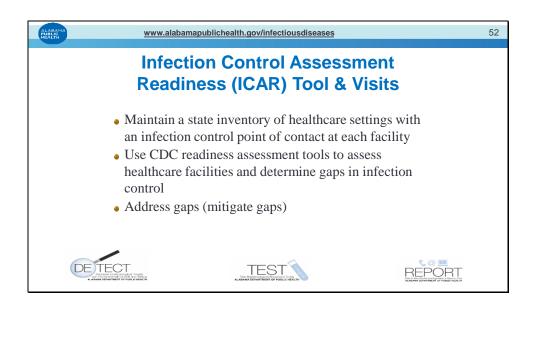


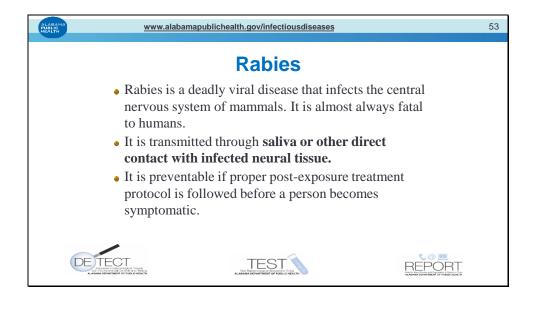


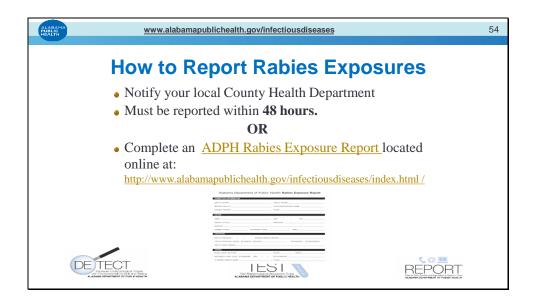


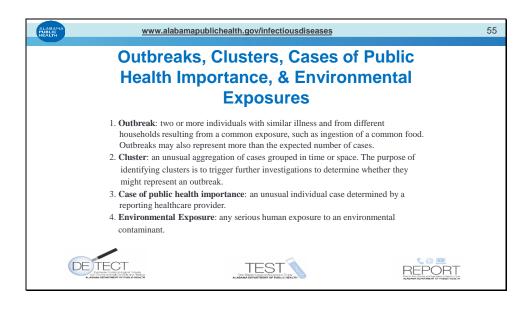


ALABAMA PUBLIC HEALTH	www.alabamapublichealth.gov/infectiousdiseases		51
	Healthcare-associated Infed	ctions	
	 The Healthcare Infection Reporting Rules mand Alabama hospitals to report certain HAIs to AE the National Healthcare Safety Network catheter-associated urinary tract infections (CAU central line-associated blood stream infections (Cau surgical site infections (SSIs) associated with colour surgeries and abdominal hysterectomies 	date DPH using UTI) CLABSI)	
	• For more information related to HAI visit our v	website at	
DE	TEST TEST TEST TEST TEST TEST TEST TEST	REPORT ALBIAN SEMPLE HEALTH	

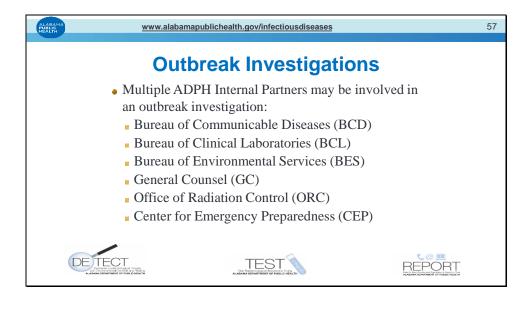




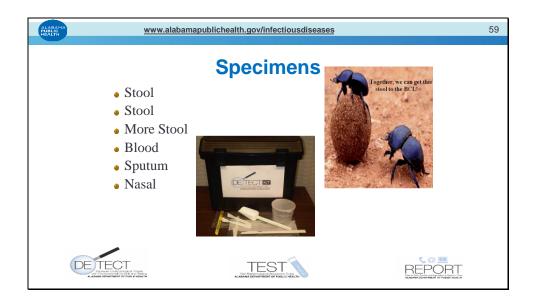


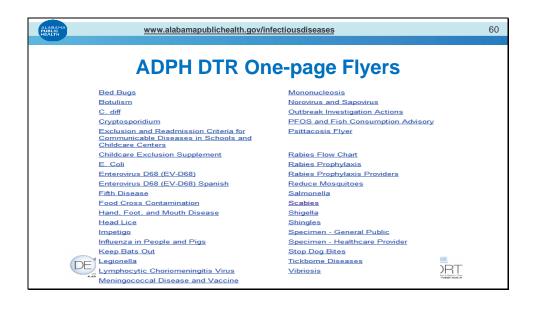


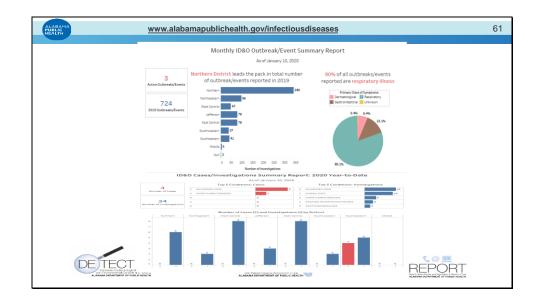
ALABAMA PUBLIC HEALTH	www.alabamapublichealth.gov/infectiousdiseases	56
	Outbreaks	
	 An outbreak is defined as 2 or more similarly ill people, from separate households, with a common exposure. 	
	 Single cases of certain rare and serious conditions will be investigated, such as gastrointestinal anthrax, botulism, or nosocomial legionella. 	
	Outbreaks of Any Kind are reportable within 24 hours and include both notifiable diseases and diseases not required individually to be reported (e.g., norovirus, head lice, flu).	
DE S	TEST Department of the first of	

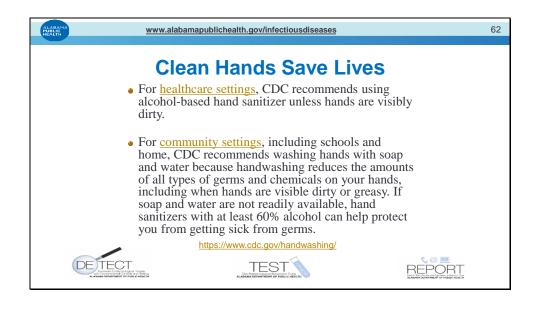


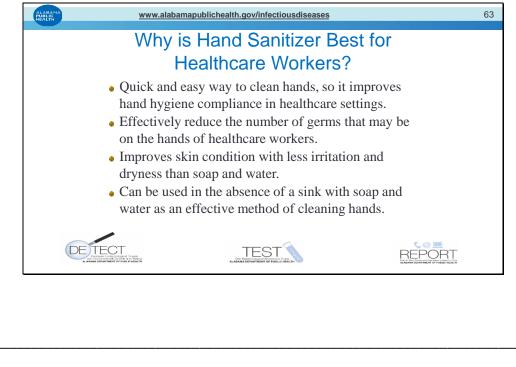
ALABAMA PUBLIC HEALTH	www.alabamapublichealth.gov/infectiousdiseases	58
	Surveillance Line List	
	Surveillance Line List Lat Nime Part Name Part Surveillance Surveillan	or o
	Facilities may be directed to complete a surveillance line list or the DI may request information to complete the line	
(DE JECO Laborato Conferencia (Treato and Today) TEST Tota Specialização (Special Production of Today) Tota Specialização (Special Production of Today)	PORT

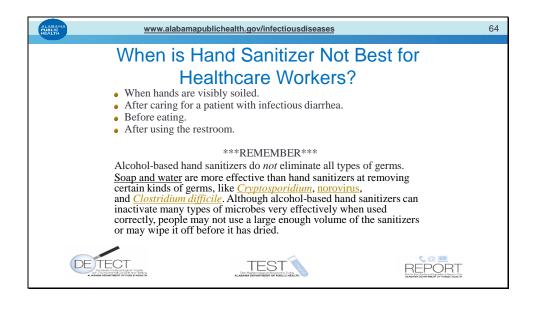






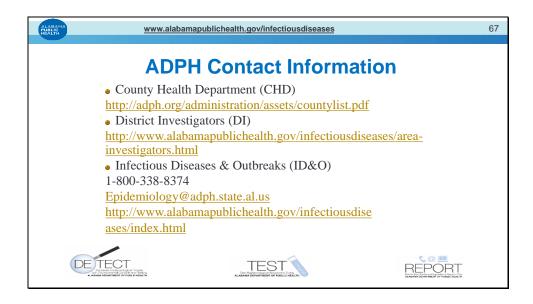














LIGHTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM 2024 INFECTION PREVENTION BOOTCAMP FOR NURSING HOMES AND LONG-TERM CARE FACILITIES	\$ 25 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
	W-0-1
_	



Objectives

- Identify the role of preventing HAIs through environmental surface disinfection
- Identify ways to interrupt the Chain of Infection
- Define cleaning, contact time, low level disinfection, and the Spaulding Scheme and its relation to disinfection
- Review why cleaning and disinfection are important in the long-term care facility
- **Describe Standard precautions and** indications on when it is utilized
- List potential modes of infection transmission within LTC settings

- List high touch surfaces in the LTC environment
- List important steps when performing cleaning and disinfection
- Discuss sequence and pattern for cleaning and disinfection of resident rooms
- Describe steps to clean and disinfect reusable equipment
- Describe the frequency the cleaning and disinfection should occur.
- Explain the importance of staff performing demonstrated competency List ways to perform continuous quality
- improvement

LIGHTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



According to Centers for Disease and Control

- Healthcare Associated Infections (HAIs)
 - 1 to 3 million serious infections occur every year in nursing homes, skilled nursing and assisted living facilities.
 - Infections include urinary tract infection, diarrheal diseases, antibiotic-resistant staph infections, and many others.
 - Infections are a major cause of hospitalization and death; as many as 380,000 people die of the infections in LTCFs every year.
- Reducing HAIs is critical to improving patient safety and controlling healthcare costs.

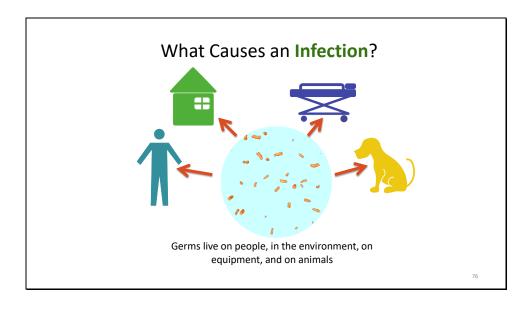
LAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM
Alabama Nursing Home and Long-Term Care Facility Strike Team



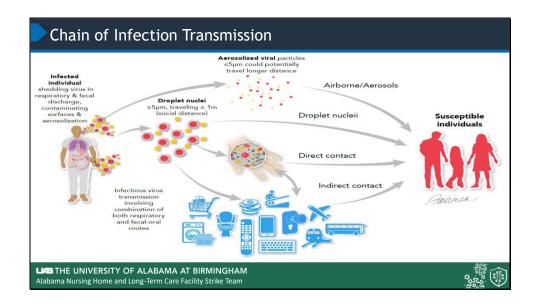
CHAIN OF INFECTION TRANSMISSION	

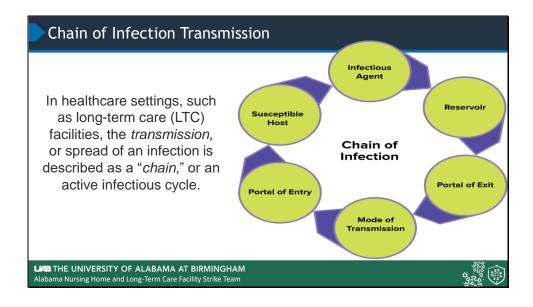


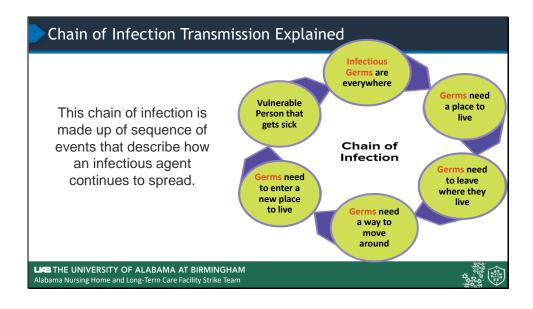


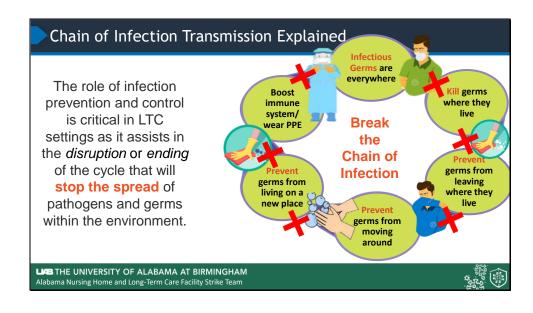


Germs Can Persist in the Environment Germs or pathogens of concern, such as C. difficile, E. coli, Enterococcus species, Hepatitis B virus, Norovirus, 1.5 hours to 16 months S. aureus, can survive for long periods of time if proper cleaning and disinfection are not performed. Enterococcus spp. 5 days to 4 months Susceptible residents can become infected or colonized with pathogens if they have direct or indirect contact with contaminated surfaces or 7 days to 7 months equipment. 8 hours to 7 days LASTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team









Break the Chain of the Infection Cycle

Germs are primarily spread through the hands of healthcare providers.

Therefore, hand hygiene remains the #1 way to prevent the spread of infection.

Hand hygiene includes:

- Hand sanitizing with an alcohol-based hand rub
- · Hand washing with soap and water





. K	$\overline{}$
# 9 a	
.જુજુ.	V

BASIC CONCEPTS OF CLEANING AND DISINFECTION IN LTC SETTINGS



 	·	

Importance of Cleaning and Disinfection

Contaminated surfaces alone are not directly associated with transmission of infections to either residents or staff.

The organisms from contaminated surfaces are spread through hand contact with the surfaces.

Cleaning and disinfection environmental surfaces is fundamental in reducing the potential to contribute to the incidence of healthcareassociated infections.

Fomites

- Fomites are inanimate objects that are most likely to transfer the pathogens deposited by the infected host into a susceptible host.
- Examples of fomites are door handles, faucet handles, and bedside tables.
- Examples of diseases caused by fomite transmission are the common cold, influenza, Meningitis, and COVID-19





Importance of Cleaning and Disinfection

Housekeeping surfaces require regular cleaning and removal of soil and dust.

- Dry conditions favor the persistence of gram-positive cocci in dust and on surfaces.
- Moist, soiled environments favor the growth and persistence of gram-negative bacilli.
- Fungi are also present on dust and grow in moist, fibrous material.

Environmental Surfaces

In the long-term care facility setting, environmental surfaces refer to:

- Surfaces of resident care equipment.
- Housekeeping surfaces, which are divided into two categories:
 - Surfaces with minimal hand contact (e.g., floors, ceilings, and windowsills).
 - Surfaces with frequent hand contact, also known as high-touch surfaces (e.g., frequently touched areas such as: doorknobs, bedrails, and light switches



- 550 mg.	\wedge
4 6	25
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	くずり


Characteristic	Selection guidance
Cleanable	Avoid items with hard-to-clean features (e.g., crevasses).
	Do not use carpet in patient care areas.
	Select material that can withstand repeated cleaning.
Easy to maintain and repair	Avoid materials that are prone to cracks, scratches, or chips, and quickly patch/repair if they occur.
	Select materials that are durable or easy to repair.
Resistant to microbial growth	Avoid materials that hold moisture, such as wood or cloth, because these facilitate microbial growth.
	Select metals and hard plastics.
Non <mark>porous</mark>	Avoid items with porous surfaces, such as cotton, wood and nylon.
	Avoid porous plastics, such as polypropylene, in patient care areas.
Seamless	Avoid items with seams.
	Avoid upholstered furniture in patient care areas.

#### Basic Infection Control Concepts in Cleaning

- Cleaning is not the same as disinfection or sanitization. Cleaning should occur <u>before</u> disinfecting or sanitizing surfaces.
- Cleaning is defined as the physical removal of all foreign material from objects
  - This may be achieved by using surfactants, detergents, soaps, enzymatic products, or mechanical action of washing or scrubbing the object.





#### Basic Infection Control Concepts in Disinfection

- The Spaulding Classification System is the strategy of disinfection of inanimate objects and surfaces based on the degree of risk involved in their use
- Per the Spaulding Classification System, environmental surfaces are considered a non-critical risk because they only contact intact skin.
- Non-critical resident equipment and environmental surfaces should be cleaned followed by either low- or intermediate-level disinfection.

Spaulding Classification of Objects	Application	Level of Germicidal Action Required
Critical	Entry or penetration into sterile tissue, cavity or bloodstream	Sterilization
Semi-critical	Contact with mucous membranes, or non-intact skin	Hgh-level Disinfection
Non-critical	Contact with intact skin or environmental surfaces	Low or Intermediate- level Disinfection

. 200	$\triangle$
4777	(肇)
. ~ O . ~	$\checkmark$


#### Basic Infection Control Concepts in Disinfection

Disinfection is a process that reduces the number of microorganisms (except for bacterial spores) on inanimate objects.

This is achieved by using hospital detergent and disinfectant or chemical sterilant.



#### **Low-level Disinfection:**

- Destroys all vegetative bacteria (except tubercle bacilli) and most viruses. Does not kill bacterial spores.
- Examples of low-level disinfectants include hospital disinfectants registered with the Environmental Protection Agency (EPA) with a HBV and HIV label claim.
- Generally appropriate for most environmental surfaces.



#### Intermediate-level Disinfection:

- Kills a wider range of pathogens than a low-level disinfectant. Does not kill bacterial spores.
- EPA-registered hospital disinfectants with a tuberculocidal claim are considered intermediate-level disinfectants.
- · Should be considered for environmental surfaces that are visibly contaminated with blood.

  - Low-level disinfectant with label claim



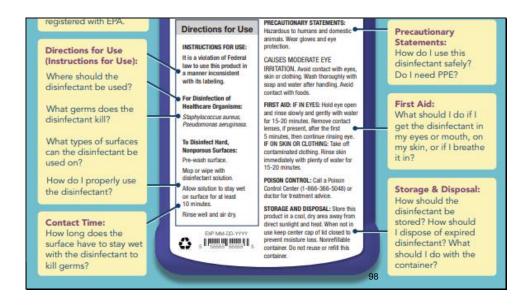
#### Disinfectant Selection SEPA : · Decisions about product Pesticide Registration selection should be made in Selected EPA-registered consultation with environmental About Pesticide Registration Disinfectants services staff. • Select and use disinfectants that are EPA-registered and labeled for use in healthcare o Typically have "hospitalgrade disinfectant" or "hospital disinfectant" on the label. About List N: Disinfectants for Coronavirus (COVID-19) | US EPA LAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team


Other Considerations in Disinfectant Selection				
Broad Spectrum Claims	Material Compatibility			
Safe - Nontoxic	Nonflammable			
Ease of Use	Nonflammable			
Acceptable Odor	Contact Time			
Economical/Low cost	Environmentally Friendly			
https://www.cdc.gov/hai/prevent/resource-limited/supplies-equipment.html#anchor_1586813879077				
LAGE THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team				


### PROPER USE OF CLEANERS AND DISINFECTANTS





#### Proper Use of Cleaners and Disinfectants

Follow the instructions for use included in the product labeling. This is important to ensure the pathogens specified on the label will be killed.

Below are a few instructions to be sure not to miss.



#### Is the disinfectant in a ready-to-use format?

- · Do not mix or dilute unless specified in the label.
- Follow instructions for how frequently fresh solution should be prepared.
  - Dilute solutions can be a reservoir for pathogens.
- Do not "top off" or add new solution to containers of old solution.



#### Proper Use of Cleaners and Disinfectants

Follow the instructions for use included in the product labeling. This is important to ensure the pathogens specified on the label will be killed.

Below are a few instructions to be sure not to miss.

#### Is a cleaning step required before application?

Even if you are using a one-step cleaner and disinfectant, if the surface is grossly soiled, a distinct cleaning step may be required before application of the disinfectant.






## Proper Use of Cleaners and Disinfectants Follow the instructions for use included in the product labeling. This is important to

ensure the pathogens specified on the label will be killed.

Below are a few instructions to be sure not to miss.



#### What is the contact time?

Read the label:

- How should the disinfectant be applied?
- · How long should it remain in contact with the surface?
- How many towelettes or how much disinfectant is required for the area you are disinfecting?






# Proper Use of Cleaners and Disinfectants Follow the instructions for use included in the product labeling. This is important to ensure the pathogens specified on the label will be killed. Below are a few instructions to be sure not to miss. Is the disinfectant compatible with the surface on which it will be used? Ensure staff know which disinfectants are intended to be used on which surfaces and under which circumstances.

#### CLEANING AND DISINFECTION REVIEW WITH RESIDENT EQUIPMENT



#### **Example of Reviewing the Instructions for Use**

#### (Per the Instructions for Use)

#### To reduce the chance of infection:

Before performing a blood glucose test, observe the following safety precautions:

- All components that contact blood samples should be treated as biohazards capable of transmitting viral diseases between patients and healthcare professionals.
- A new pair of clean gloves should be worn by the user before testing each patient.
- Wash hands thoroughly with soap and water before putting on a new pair of gloves and performing the next patient test.
- Use only an auto-disabling, single-use lancing device for each patient.
- The meter should be cleaned and disinfected after use on each patient.



#### **Reviewing the Instructions for Use**

- The meter should be cleaned and disinfected after use on each patient.
- The cleaning procedure is needed to **clean** dirt, blood and other bodily fluids off the exterior of the meter **before** performing the **disinfecting** procedure. The disinfecting procedure is needed to prevent the transmission of blood-borne pathogens.
- Always wear the appropriate protective gear, including disposable gloves.
- Select a wipe from the table below and carefully review the manufacturer's instructions.
- Clean and disinfect the meter following step-by-step instructions in this QA/QC Reference Manual. Use caution as to not allow moisture to enter the test strip port, data port or battery compartment, as it may damage the meter.
- ARKRAY has tested and validated the durability and functionality of the Assure
  Platinum meter with the most used EPA-registered wipes. Our testing confirmed the
  wipes listed below will not damage the functionality or performance of the meter
  through 3,650 cleaning and disinfecting cycles.

LABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



# Reviewing the Instructions for Use

#### MIFU LISTED ACCEPTABLE DISINFECTANTS

Manufacturer	Disinfectant Brand Name	EPA#
Clorox® Professional	Clorox® Healthcare Bleach Germicidal Wipes	67619-12
Products Company	Dispatch® Hospital Cleaner Disinfectant Towels with Bleach	56392-8
Professional Disposables International, Inc. (PDI)	Super Sani-Cloth® Germicidal Disposable Wipes	9480-4
Metrex® Research	CaviWipes™	46781-8

Clorox and Dispatch are trademarks or registered trademarks of Clorox. Sani-cloth is a trademark or registered trademark of PDI. Metrex and CaviWipes are trademarks or registered trademarks of Metrex.

### Reviewing the Instructions for Use

Additional options for cleaning and disinfecting the Assure Platinum meter. If you choose to follow Options 1 or 2 below, we recommend you create supporting documentation to justify your choice. Choosing a product not listed in the table above could shorten use life or affect performance of the Assure Platinum meter.

- Obtain a commercially available EPA-registered disinfectant detergent or germicide wipe.
   A list of EPA registered disinfectants can be found at the following website:
   www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants
- Carefully review the manufacturer's instructions.
- Remove wipe from the container and gently squeeze out excess liquid.
- Clean and disinfect the meter following step-by-step instructions listed below in this QA/QC Reference Manual.
- Use caution as to not allow moisture to enter the test strip port, data port or battery compartment, as it may damage the meter.


### Reviewing the Instructions for Use

• Option 2

. . . . . . . . . .

- Clean the outside of the blood glucose meter with a lint-free cloth dampened with soapy water or isopropyl alcohol (70-80%).
- Disinfect the meter by diluting 1mL of household bleach (5-6% sodium hypochlorite solution) in 9mL water to achieve a 1:10 dilution.
- Use a lint-free cloth dampened with the solution to thoroughly wipe down the meter.
- Use caution as to not allow moisture to enter the test strip port, data port or battery compartment, as it may damage the meter.

If you have any questions, please contact Technical Customer Service at 800.818.8877, option 5.


### Reviewing the Instructions for Use

CLEANING AND DISINFECTING PROCEDURES

Wear appropriate protective gear such as disposable gloves.

### Step 2

Open the cap of the disinfectant container and pull out 1 towelette and close the cap.

Step 3
Wipe surface of the meter to clean blood and other body fluids.
Carefully wipe around the test strip port by inverting the meter so that the test strip port is facing down. This prevents disinfectant liquid from entering the meter.

CAUTION

Do not let liquid from the wipe saturate the test strip port, data port or battery compartments.

Dispose of the used towelette in a trash bin. The meter should be cleaned prior to each disinfection step.







### Step 5 Pull out 1 new towelette and wipe the entire surface of the meter horizontally and vertically to remove bloodborne pathogens. Carefully wipe around the test strip port by inverting the meter so that the test strip port is facing down. This prevents disinfectant liquid from entering the meter.

Step 5

Do not let liquid from the wipe saturate the test strip port, data port or battery compartments.

### Step 6

Treated surface must remain wet for recommended contact time. Please refer to wipe manufacturer's instructions, DO NOT WRAP THE METER IN A WIPE.

### Step 7

Dispose of the used towelette in a trash bin.



### Reviewing the Instructions for Use

### **CLEANING AND DISINFECTING FAQ**

If a blood glucose meter is assigned to an individual resident and not shared, does it still need to be cleaned and disinfected?

To ensure compliance ARKRAY recommends that blood glucose meters be cleaned and disinfected after each use. Each meter in use is subject to QC testing per the facility's policy.

### Can cleaning and disinfecting be accomplished with one wipe?

Many wipes act as both a cleaner and disinfectant. If blood is visibly present on the meter, two wipes must be used; one wipe to clean and a second wipe to disinfect.

### What will happen if a blood glucose meter is not cleaned and disinfected after use?

Per the CMS F-Tag 880 guideline, surveyors may issue a citation if they observe no cleaning and disinfecting of meters after a blood glucose test as they would not follow CMS F-Tag 880.

It is important that an LTC facility establish a program for infection control and identify a key individual responsible for the overall program oversight. The program should include addressing the cleaning and disinfecting of blood glucose meters along with other equipment and environmental surfaces. The program should involve establishing goals and priorities, planning, strategy implementation, post-surveillance and more. Additionally, staff roles and responsibilities should be identified, and training should be documented. It is also important to provide education on infection control and the proper use of products. More information on establishing a comprehensive infection prevention and control program can be found in the CMS Infection Control Guidance Document.

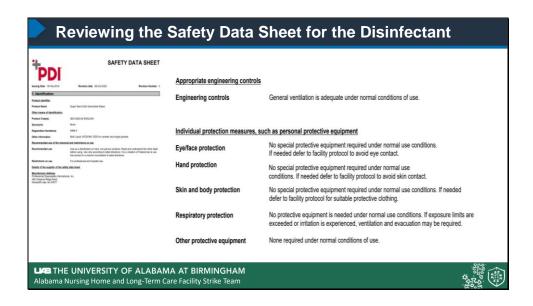
	Reviewing the Instructions for Use
assessment code 483.70	implemented phase 2 of cleaning and disinfecting standards in the facility
INFECTION	I CONTROL REQUIREMENTS FOR BLOOD GLUCOSE MONITORING
F-Tag 880 is an interpretion to prevent, recognize and	Medicare and Medicaid Services (CMS) F-Tag 880?  /e guideline for infection control programs in Long Term Care facilities. It is put in place control the onset and spread of infection. F-Tag 880 is used for guidance by CMS e Survey Agencies for [re-]certification and complaint investigations.
	oly to blood glucose meters? all resident care equipment and environmental surfaces, including blood glucose
Why is Cleaning and Dis Blood glucose meters are B Virus (HBV), Hepatitis 0 viruses from resident to re to the Centers for Disease	sinfecting of blood glucose meters such a high priority? at high risk of becoming contaminated with bloodborne pathogens such as Hepatitis C Virus (HCV) and Human Immunodeficiency Virus (HIV). Transmission of these esident has been documented due to contaminated blood glucose devices. According a Control and Prevention, cleaning and disinfecting of meters between resident use sion of these viruses through indirect contact.







11.1 May 1 (ACM) With Collection C. (10) of 10 (ACM) Microsoft State Col



### RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT FOR ENVIRONMENTAL CLEANING TASKS / CLEANING IN SPECIFIC AREAS





Type of cleaning task	Required personal protective equipment for cleaning staff
Routine cleaning (standard precautions)	None (unless spills or contamination risk—see below)
Terminal cleaning (standard precautions)	Reusable rubber gloves
Blood and body fluid spills and high contamination risk areas (e.g., cleaning bed of an incontinent patient, labor and delivery wards)	Gown and/or plastic apron Reusable rubber gloves Face mask with either goggles or face shield
Droplet precautions (routine and terminal cleaning)	Gown and/or plastic apron Reusable rubber gloves Face mask with either goggles or face shield
Contact precautions (routine and terminal cleaning)	Gown and/or plastic apron Reusable rubber gloves
Airborne precautions (routine and terminal cleaning)	Respirator (N95 or FPP2), fit tested Reusable rubber gloves
Preparation of disinfectant products and solutions	According to specifications in SDS (manufacturer instructions)  If SDS not available, then:  Chemical-resistant gloves (e.g., nitrile)  Gown and/or apron  Face mask with either goggles or face shield


### PROCESS FOR CLEANING AND DISINFECTION


# Develop a standardized process to ensure that you are cleaning and disinfecting surfaces appropriately. Always work from the cleanest surfaces to the dirtiest surfaces. Work from top to bottom. Consider establishing a consistent process or pattern for cleaning and disinfecting surfaces in the room. Wipe surfaces in a manner to prevent recontamination.


### Using Cleaning Equipment Appropriately Microfiber mops and cloths are preferred for most cleaning and disinfection in healthcare settings. Change cleaning cloths frequently. · Change microfiber mop heads after use in each room. • Environmental services carts should not enter resident rooms, and supplies brought into the room should be limited to the minimum necessary for that space. Microfiber mops Microfiber cloths Trajtman, A. N., Manickam, K., & Alfa, M. J. (2015). Microfiber cloths reduce the transfer of Clostridium difficile spores to environmental surfaces compared to cotton LIFE THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team

### Using Cleaning Equipment Appropriately



Routine cleaning and disinfection for resident rooms:
•High-touch surfaces are those most likely to be touched by residents and staff and therefore pose the highest risk for pathogen transmission.

• Examples include bedrails, doorknobs, light switches, call buttons, bedside tables, remote

controls and surfaces in the bathroom, particularly those around the toilet.

•Horizontal surfaces with infrequent hand contact, like floors and window sills, should be cleaned:

- On a regular basis (e.g., daily)When spills occur, and
- If the surfaces become visibly soiled

•Walls, blinds, and window curtains should be cleaned when visibly soiled.



### Terminal Cleaning

Terminal cleaning (also referred to as "deep cleaning") of a room is performed when a resident has been discharged or transferred and the room is being prepared for use by another resident.

- All high-touch surfaces should be cleaned and disinfected.
- Horizontal surfaces with infrequent hand contact, like floors and windowsills, should also be cleaned and disinfected.
- All linens, including sheets, towels, and privacy curtains, should be bagged and removed for laundering.




### Cleaning Disinfection of Invasive, Non-invasive and Commons Areas

Invasive procedure and treatment areas:

 High-touch surfaces in rooms where invasive procedures are performed should be cleaned and disinfected after each procedure.

Non-invasive procedure and treatment areas:

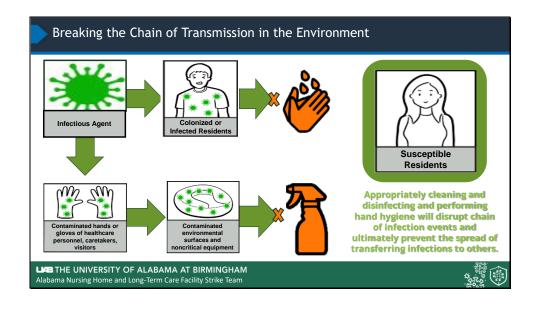
- High-touch surfaces in other common treatment areas (e.g., therapy gyms) where invasive procedures are not performed should be cleaned and disinfected:
  - When visibly soiled.
  - At least daily.
  - Immediately after use by residents colonized or infected with highly resistant organisms (e.g., C. difficile or carbapenem-resistant Enterobacteriaceae).

High-touch surfaces in the facility's common areas (e.g., family room or lounge) should be cleaned and disinfected:

- · When soiled.
- On a regular basis (e.g., daily).




### Breaking the Chain of Transmission in the Environment A colonized or infected resident can contaminate environmental surfaces and noncritical equipment. Microorganisms from these contaminated environmental surfaces and noncritical equipment can be transferred to a susceptible resident in two ways: • If the susceptible resident directly meets the contaminated surfaces. • If a healthcare personnel, caretaker, or visitor meets the contaminated surfaces and then transfers the microorganisms to the susceptible resident. LIGE THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team

Cleaning Carpeting	
<ul> <li>Harder to keep clean and cannot be reliably disinfected, especially after spills of blood or body fluids.</li> <li>Recommended practices: <ul> <li>Minimize use in high-traffic zones within resident care areas or where spills are likely.</li> <li>Vacuum on a regular basis with equipment designed to minimize dust dispersion.</li> <li>Periodically deep clean using a method that minimizes production of aerosols and leaves little to no residue.</li> <li>Promptly spot clean spills of blood or body fluids.</li> </ul> </li> </ul>	
LIGHTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team	\$ \\ \frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\hat{\frac{\frac{\hat{\frac{\frac{\hat{\frac{\frac{\hat{\frac{\frac{\frac{\frac{\frac{\hat{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fir}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fir\fir}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\fir\f


# Pose challenges with cleaning and disinfection. Recommended practices: Minimize use in areas with increased potential for body substance contamination. Maintain in good repair; promptly repair tears and holes. If furniture in a resident's room requires cleaning to remove visible soil or body substance contamination, promptly move that item to a maintenance area. Mas THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team

The Policies & Procedures clearly define the terms like "cleaning" and "disinfection." It also identifies the following:

- Purpose
- Responsibility
- Procedures (to include instructions from the Manufacturer)
  - o Process
    - Including the supplies that are necessary for cleaning and disinfecting environmental surfaces
  - o PPE needed
  - o Process for exposure or spill

LASTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team

o Process when variations to procedure are to be performed

**Environmental Cleaning** and Disinfection **Template** 



### Define the Infection Prevention and Control (IPC) Practice

Cleaning refers to the removal of visible soil from surfaces through the physical action of scrubbing with a surfactant or detergent and water. This step is important to reduce the volc of organisms on a surface and remove foreign material that could interfere with disinfection. or organisms on a since and remove breep makes an and count market was most or organisms on a since and organisms of the cast of the cast

ostreacon s general papopraras on noci envorontenta suruese. Intermediale-level disinfection refers to leve on a payor that likit a vider range of pathogens than a lov-level disinfector but does not it lib landerial spores. EPA-registre compati disinfectors with a bacterizatiod data are intermediale-level disinfectors. Go troader spectrum of activity, intermediale-level disinfectors hould be considered for previousmental surface that was veidely contamental with blood. However, a love-level disinfector with a label claim against HBV and HV could also be used.

Purpose (provides background to explain the rationale for the policy/procedure)
Environmental surfaces can be a source of partiagens in running homes. If environmental
surfaces are not provide learned and districted, partiagens from the surface can be
transferred to residents and staff. Proper cleaning and distriction of environmental surfaces in
necessary to break the chain of refection.

Responsibility (defines who is responsible for following this policy/procedure)
In most facilities, Environmental Services (EVS) or Housekeeping staff may be prima



### At a minimum, your policy should address:

- the types of cleaning and disinfection products used in the facility, considering their label claims and compatibility with different surfaces
- frequency with which cleaning and disinfection of environmental surfaces in different locations in the facility should be performed. For example, immediately if surfaces are visibly soiled, or daily for hightouch surfaces in resident rooms
- the locations in the facility where carpeting and upholstered furnishings are and are not allowed
- and the proper storage and maintenance of cleaning and disinfection products and equipment.

Environmental Cleaning and Disinfection Template

Define the Infection Prevention and Control (IPC) Practice

Causing refer to the removal of value and often surfaces through the physical action of surfaces with a surfacini of orderings and water. This stop is supported to subcome the surface of Low-law disables of the surface of Low-law disables of the surface of surface of the surface of the surface of surface surf

Intermediate-level disinfaction refers to the use of an agent that kills a wider range of purhogens than a low-level disinfectant but does not kill bacterial spines. EPA-registered hospital disinfectants with a labercucoidal claim are intermediate-level disinfectants. Given the broader spectrum of activity, intermediate-level disinfection should be considered for environmental surfaces that are visibly contaminated with blood. However, a load of property of the propert

Purpose (provioes background to espain the rationale for the policy)procedure; Environmental surfaces can be a source of pathogens in nursing homes. If environmental surfaces are not properly cleaned and distributed, pathogens from the surface can be transferred to residents and staff. Proper cleaning and distribution of environmental surfaces necessary to have the chain of infection.

Responsibility (defines who is responsible for following this policy/procedure)



### Resources:

•CDC, Guidelines for Environmental Infection Control in Health-Care Facilities (2003):

https://www.cdc.gov/infectioncontrol/pdf/guidelines/envi ronmental-guidelines.pdf

•CDC, Guideline for Isolation Precautions (2007): https://www.cdc.gov/infectioncontrol/pdf/guidelines/isola tion-quidelines.pdf

•EPA, Selected Disinfectants:

https://www.epa.gov/pesticide-registration/selectedepa-registered-disinfectants

•OSHA, Bloodborne Pathogens Standard: https://www.osha.gov/SLTC/bloodbornepathogens/inde <u>x.html</u>

•OSHA, Guidance for Cleaning Industry Worker Safety Considerations:

https://www.osha.gov/SLTC/cleaningindustry/index.html

**Environmental Cleaning** and Disinfection Template

Befine the Infection Prevention and Control (IPC) Practice

Cleaning refers to the removal of visible soil from surfaces through the physical action oscubling with a surfactant or detergent and water. This step is important to reduce of organization or autiface and envolve foreign material rate could inferiere with distribed organization so reactions are surfaced and envolve foreign material rate could inferier with distribed control of the country of Compared to it is distinction refers to the use of an agent that distinys all vegetative bacteria, Low-level distinction refers to the use of an agent that distinys all vegetative bacteria, the production of the compared to the compared

Intermediate-level distinction refers to the use of an agent that this author range of frittinguistates as inverted sind rection of does not the level residence from the property of the pr

Purpose (provides background to explain the rationals for the policy/strocedural)
Environmental surfaces can be a normal of pathogens in nursing homes. If environmental
surfaces are not properly desired and distincted, pathogens from the surface can be
transferred to residents and staff. Proper cleaning and distriction of environmental surfaces in
crossary to treat the other of infection.

Responsibility (defines who is responsible for following this policy/procedure)



N 11 N 11 N	JTENA		$\triangle$ E	וחחו	$\Box \Box \subset$
MAII		$\mathbf{N} \mathbf{C} \cdot \mathbf{F}$		LIPPL	


### Housekeeping Cleaning Carts Housekeeper's carts commonly used to transport supplies throughout the facility can serve as a source of pathogen transmission if they are not regularly cleaned and disinfected. For example, in an outbreak of drugresistant Enterobacteriaceae at a healthcare, the organism was identified on an environmental services cart, suggesting a potential role in transmission. Carts should not enter resident rooms and should be cleaned and disinfected at least daily.

### Utility Room Maintenance

- Dedicate space to store cleaning and disinfection products and equipment.
  - Maintain separation between clean and dirty equipment.
- Cleaning and disinfection schedules should include clean and dirty utility areas.
- Designate staff to monitor supply levels in these areas and restock, as appropriate.





### TRAINING, COMPETENCY, AND PERFORMANCE MONITORING

### Training should be provided:

- Upon hire.
- Annually.
- When new products are introduced.
- When new policies and procedures are developed.
- In response to deviations from recommended practices.

Verify competency following each training.

Hands-on training and direct observation of practices are particularly important when assessing competency for environmental cleaning.

Maintain documentation that education and competency assessment were performed.



Performance Monitoring	
<ul> <li>Performance monitoring and feedback ensure adherence to facility policies and procedures.</li> <li>Frequency and locations of audits should be informed by your annual IPC risk assessment.         <ul> <li>More frequent monitoring may be performed on higher acuity units or the rooms of residents on Transmission-Based Precautions.</li> </ul> </li> <li>Results of performance monitoring should be documented and shared to reinforce adherence to recommended practices.</li> <li>Self-assessment checklists and signoff sheets can be helpful reminders, but these alone are not sufficient.</li> </ul>	
LIGE THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$

### 


### Methods for Assessment of Cleaning and Cleanliness

It is best practice to perform routine, standardized assessments of environmental cleaning (i.e., practices, level of cleanliness) in order to:

- ensure that environmental cleaning procedures are being performed according to best practices and facility policy
- use results to inform program improvement (e.g., training resource allocation)





### **Direct Performance Observations**

- Observe staff practices with the assistance of a checklist
  - Confirm they have prepared and applied cleaners and disinfectants in accordance with facility polici and procedures.
  - Confirm they have addressed all required surfaces in the room.
- Staff may modify their typical practices if they are aware they are being observed.






# Fluorescent Markers Apply fluorescent markers before cleaning and assess the markers using special lighting after cleaning. If the marker is still present after cleaning, it objectively indicates the surface was not adequately cleaned. This method would not identify deviations in preparation of cleaning and disinfection products or in how products were applied. Before marked surface was wiped

# Methods for Assessing the Level of Cleanliness Adenosine triphosphate (ATP) bioluminescence assay systems measure residual organic matter, both microbial and non-microbial, that is left on a surface after cleaning. Provides objective quantitative results that can be used to track and document improvement in daily cleaning practices. Method would not identify deviations in preparation and use of cleaning and disinfection products. Method is unable to measure virus, bacteria, fungus or parasites.

# **Bacterial Culture of Surface**

- •Not recommended for routine use; This method lacks a defined threshold or benchmark for determining the level or status of cleanliness (e.g., colony-forming units per surface area
- •Environmental cultures--the only direct measurement of levels of microbial contamination after cleaning. In this process, cultures are taken (by swabbing or use of RODAC or contact agar plates) after an item is cleaned. Swabbing can indicate the presence of a specific bacteria on a surface. Contact agar plates can show the level of bacterial contamination on an area of a large, flat surface.



•May be useful for identifying source of outbreaks and/or environmental reservoirs – use only with the direction of ADPH




# Provide Performance Feedback Results of monitoring should be documented and shared. •Additional information about options for evaluating environmental cleaning available on CDC website. CDC Options for Evaluating Environmental Cleaning THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team







# RESOURCES

Environmental Cleaning Procedures | Environmental Cleaning in RLS | HAI | CDC

 $\underline{^*\text{Nursing Home COVID-19 Infection Control Assessment and Response (ICAR) Tool Facilitator Guide, version 3.1 (cdc.gov)}$ 

Environmental Cleaning in RLSs | HAI | CDC

ARKRAY ASSURE PLATINUM REFERENCE MANUAL Pdf Download | ManualsLib

Super-Sani-Cloth-IFU-0821-UPDATE_05168539.pdf (pdihc.com)

SuperSaniCloth EnglishFrench LCan .pdf (pdihc.com)

SDS-0020-00-English-REV-5-10.6.22_Super.pdf (pdihc.com)

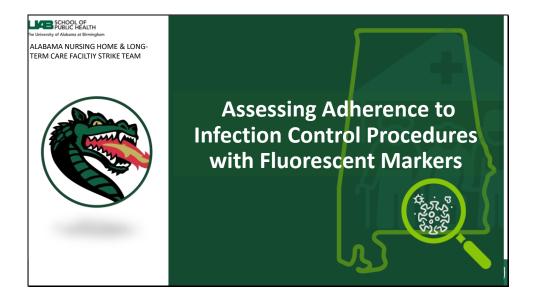
CDC Options for Evaluating Environmental Cleaning

 $\underline{https://www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines.pdf}$ 

https://www.osha.gov/SLTC/bloodbornepathogens/index.html

 $\underline{\text{https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants}}$ 


LAGE THE UNIVERSITY OF ALABAMA AT BIRMINGHAM 2024 INFECTION PREVENTION BOOTCAMP FOR NURSING HOMES AND LONG-TERM CARE FACILITIES	\$500 mg
THE UNIVERSITY OF ALABAMA AT DIRWINGHAM	A 38 (18%)
2024 INFECTION PREVENTION BOOTCAMP FOR NURSING HOMES AND LONG-TERM CARE FACILITIES	. 2363.



	OBJECTIVES	

# **Objectives**

- Recognize risk factors for healthcare associated infections.
- Identify the role of assessing training, audits, and competency in preventing and controlling healthcare associated infections.
- Describe strategies for assessing the adherence to infection control procedures during hand hygiene, PPE use, and environmental hygiene during training and auditing.
- Discuss the Quality Assurance/Quality Improvement process when providing feedback





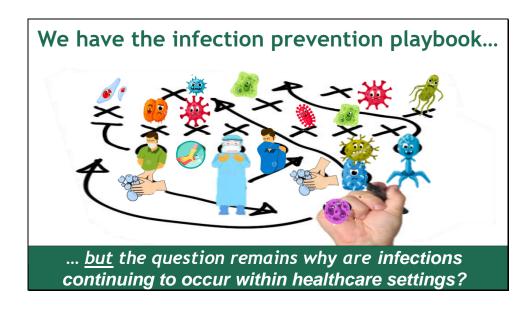



# **According to Centers for Disease and Control**

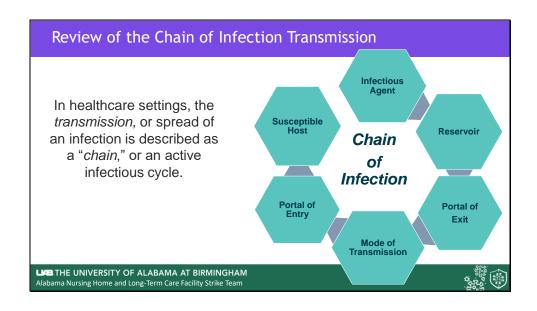
- Healthcare Associated Infections (HAIs)
  - It is estimated that on any given day, 1 in 31 hospital patients and 1 in 43 nursing home residents has an healthcare-associated infection while receiving care in a medical facility.
- Reducing HAIs is critical to improving patient safety and controlling healthcare costs.

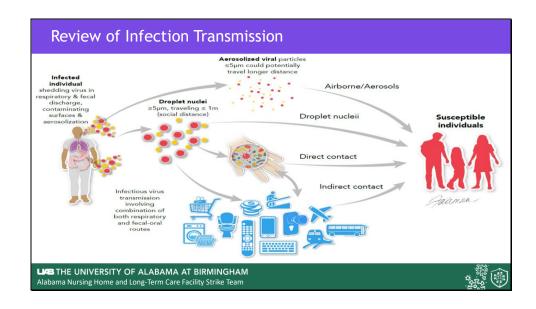
LAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM




BASI	CS IN INFECTION	I PREVENTION	



# **Fomites**

- Fomites are inanimate objects that are most likely to transfer the pathogens deposited by the infected host into a susceptible host.
- Examples of fomites are door handles, faucet handles, and bedside tables.
- Examples of diseases caused by fomite transmission are the common cold, influenza, Meningitis, and COVID-19





# **Environmental Surfaces**

In the healthcare setting, environmental surfaces refer to:

- Surfaces of resident care equipment.
- Housekeeping surfaces, which are divided into two categories:
  - Surfaces with *minimal* hand contact (e.g., floors, ceilings, and windowsills).
  - Surfaces with frequent hand contact, also known as hightouch surfaces



# What are High Touch Surfaces?

# The Room is the Resident.

A resident can touch any or all surfaces in their room during their stay:

- ✓ Paper towel push bars
- ✓ Door handles
- ✓ Blind handles, knobs
- ✓ Call button
- ✓ Microwave
- ✓ TV and TV Remote
- ✓ Bedrail buttons

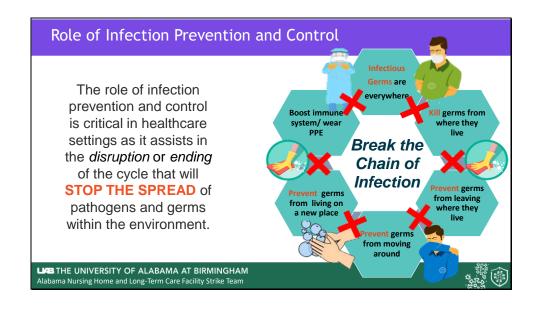
- √ Shower handle
- ✓ Toilet handle
- √ Faucet handles
- √ Thermostat
- √ A/C buttons
- ✓ A/C Unit
- √ Fan cord

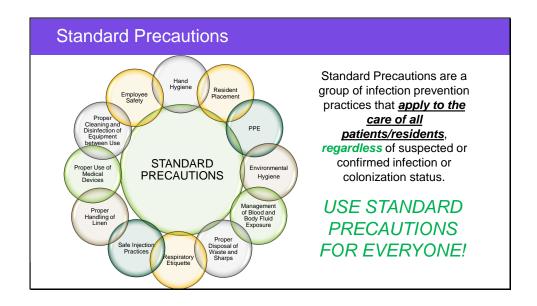
- ✓ Telephone
- √ Cabinet doors
- √ Shower knob
- ✓ Linen hamper
- ✓ Light switches
- ✓ Recliner handle
- ✓ Bedside Table

LABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team




### Germs Can Persist in the Environment Germs or pathogens of concern, such as C. difficile, E. coli, Enterococcus species, Hepatitis B virus, Norovirus, Clostridioides difficile (spores) 5 months Escherichia coli 1.5 hours to 16 months and S. aureus, can survive for long periods of time if proper cleaning and disinfection are not performed. Enterococcus spp. 5 days to 4 months Susceptible patient/residents can become infected or colonized with pathogens, if they have direct or indirect contact with contaminated surfaces or equipment. Staphylococcus aureus 7 days to 7 months 8 hours to 7 days LIGE THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team


# IMPROVING INFECTION PREVENTION PRACTICES


# Core Infection Prevention and Control Practices

- Leadership Support
- Education and Training of Healthcare Personnel on Infection Prevention
- Patient Family and Caregiver Education
- Performance Monitoring and Feedback
- Standard Precautions
  - o Hand hygiene
  - o Environmental Cleaning and Disinfection
  - o Injection and Medication Safety
  - o Risk assessment with Appropriate Use of Personal Protective Equipment
  - o Minimizing Potential Exposures
  - Reprocessing of Reusable Medical Equipment
- Transmission-Based Precautions
- Temporary Invasive Medical Devices for Clinical Management
- Occupational Health



# Training should be provided:

- Upon hire.
- Annually.
- When new products are introduced.
- When new policies and procedures are developed.
- In response to deviations from recommended practices.

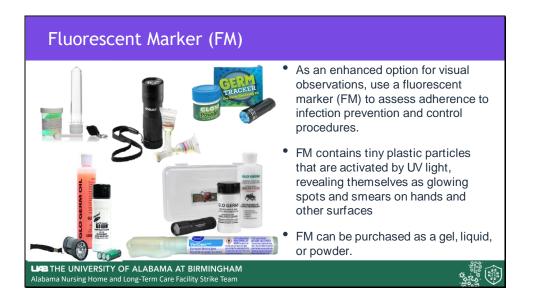
Verify competency following each training.

Hands-on training and direct observation of practices are particularly important when assessing competency for environmental cleaning.

Maintain documentation that education and competency assessment were performed.




# Examples of content that are included in training and assessed during auditing include: • Hand hygiene • Cleaning and disinfection of environmental surfaces • Use of Personal Protective Equipment • Point of Care Blood Testing



# Fluorescent Marker (FM)

- In this approach, the FM is considered a "pretend germ" or a "contaminant."
- Intact hard surfaces, are marked with FM, which appears transparent under normal lighting.
- After cleaning, sanitizing, or disinfection has occurred, use an ultraviolet (UV) light, to detect if the FM is still present.
- If the FM is visible, it objectively indicates the surface was not adequately cleaned.





Before marked surface was wipe

After marked surface was wiped

NOTE: This method would not identify deviations in preparation of cleaning and disinfection products or in how products were applied.



		<del></del>	

# ADVANTAGES VERSUS DISADVANTAGES OF USING FLUORESCENT MARKERS


# Advantages of Observing Cleaning Practices Using Fluorescent Agents

# **Advantages**

- Quick
- Provides immediate feedback on performance
- · Minimal training required to perform
- Objective
- Benchmarking is possible
- · Relatively inexpensive






# Disadvantages of Observing Cleaning Practices Using Fluorescent Agents

# **Disadvantages**



- Does not assess or correlate to bioburden
- Labor-intensive as surfaces should be marked before cleaning and checked after cleaning has been completed
- Some difficulties documented in terms of removal of markers from porous or rough surfaces (e.g., canvas straps)
- Time-intensive
- Need to vary frequency and objects to prevent monitoring system from becoming known



# EXAMPLES OF HOW TO USING FLUORESCENT MARKERS

# Simulation Tool - Hand Hygiene Training

### **Hand Hygiene Training**

- Place a small amount of the FM on a staff member's hands.
- 2. Have staff to wash hands with soap and water per their handwashing policy and procedure.
- 3. After handwashing is completed, pass the UV light over the surface of the hands.
- 4. Assess for any residual FM on the surface of the hands, including the nail beds and knuckles.
- 5. Use the findings as a teachable moment for the trainee to improve upon their handwashing technique.



An example of placing fluorescent marker on hands

Note: Complete removal of the fluorescent marker is more difficult if the skin is dry, chapped, and cracked, which further helps to illustrate the point that bacteria will also be hard to remove on these surfaces.

# Simulation Tool - Hand Hygiene Training

### **Hand Hygiene Training Teachable Moments**

- Use this training to highlight:
  - Facility policy and procedures
  - The importance of the sequence of steps when performing hand hygiene
  - The surfaces of hands
  - The length of time when performing hand hygiene
  - The importance of not contaminating hands during the process
  - o Any areas of cleaning improvement



An examples of residual fluorescent marker seen while using a UV light after handwashing was performed.

Note: Complete removal of the fluorescent marker is more difficult if the skin is dry, chapped, and cracked, which further helps to illustrate the point that bacteria will also be hard to remove on these surfaces.


# Simulation Tool - Personal Protective Equipment Training

# Personal Protective Equipment (PPE) Training Exercise

- 1. Don gown and gloves.
- 2. Lightly place a small amount of the FM on gloved hands and have the trainee to touch different areas on the front of the gown.
- 3. Doff PPE.
- 4. Use the UV light to assess for any instances of FM transfer onto the trainee.
- If FM is seen on the trainee, use this opportunity as a teachable moment and shore up any educational gaps.



Example of a gown with fluorescent marker applied to its surface.

Note: Porous and non-intact environmental surfaces may show residue of the fluorescent marker as these areas are unable to be disinfected.

# Simulation Tool - PPE Training

# **PPE Training Teachable Moments**

- Use this training to highlight:
  - Facility policy and procedures
  - The importance of the sequence of steps when performing PPE Donning and Doffing
  - The importance of not contaminating hands during the process
  - o Any areas of transfer found
  - o Proper disposal of PPE
  - The importance of performing hand hygiene post glove removal



An example of residual fluorescent marker seen while using a UV light after PPE was doffed.

Note: Porous and non-intact environmental surfaces may show residue of the fluorescent marker as these areas are unable to be disinfected.

### Simulation Tool - Surface Cleaning and Disinfection Training

### **Surface Cleaning and Disinfection Training**

- Lightly place a small amount of the FM on a designated surface area.
- 2. Clean and disinfect the surface observing infection control policies.
- After cleaning and disinfection has been completed, pass the UV light over the surface; Intact surfaces with residual FM will glow on the areas that were not cleaned thoroughly. When checking restroom areas for cleanliness, the UV light may be used for the detection of urine without using the FM.



Examples of high touch surfaces

Note: Porous and non-intact surfaces may show residue of the fluorescent marker as these areas are unable to be disinfected.


### Simulation Tool - Surface Cleaning and Disinfection

### **Surface Cleaning and Disinfection Teachable Moments**

- Use this training to highlight:
  - o Facility policy and procedures
  - o Following manufacturer's instructions for use
  - Use of PPE
  - The importance of the sequence of cleaning and disinfection (clean to dirty, top to bottom, clockwise or counter-clockwise)
  - o Observance of wet contact time
  - Use of timer
  - o Any residual areas found
  - Proper disposal of PPE
  - The importance of performing hand hygiene post glove removal



Examples of fluorescent marker on high touch surface when using a UV light.

Note: Porous and non-intact environmental surfaces may show residue of the fluorescent marker as these areas are unable to be disinfected.

AND QUAI	

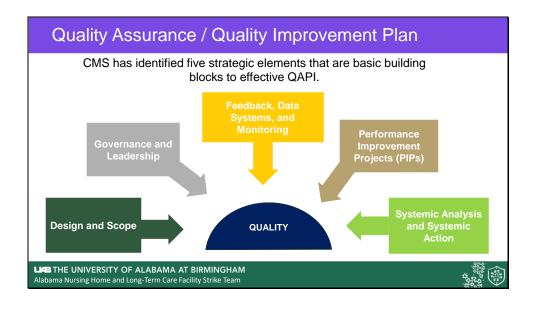
### **Quality Assurance/Quality Improvement (QAPI)**

Quality Assurance and Performance Improvement (QAPI) is a data-driven, proactive approach to improving the quality of life, care, and services in nursing homes.



THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team






### **Observe Staff Practices**

- Rounding, or making unannounced visual inspections are a long-standing technique that helps to identify problems before they escalate into serious infection threats.
- Observe staff practices with the assistance of a checklist.
- Staff may modify their typical practices if they are aware they are being observed.



LASTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



### Performance Monitoring Performance monitoring and feedback ensure adherence to facility policies and procedures. Frequency and locations of audits should be informed by your annual IPC risk assessment. More frequent monitoring may be performed on higher acuity units or the rooms of residents on Transmission-Based Precautions. Results of performance monitoring should be documented and shared to reinforce adherence to recommended practices. Self-assessment checklists and signoff sheets can be helpful reminders, but these alone are not sufficient.

LAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



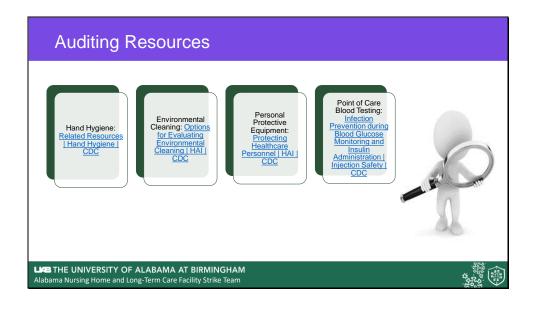
### Auditing

- Methods for auditing practices vary.
- Facilities could consider implementing more than one approach to performance monitoring.
- Visually inspecting the cleanliness of a room after cleaning and disinfection has been performed.
- Visual assessment, alone, is not sufficient to ensure that all surfaces have been properly cleaned and disinfected.
  - Just because a surface appears clean does not mean that it was disinfected.



LIGHTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team






### Provide Performance Feedback

- Providing feedback helps to increase motivation and engagement with resulting improvements.
- Results of performance monitoring should be documented and shared to reinforce adherence to recommended practices.
- Provide feedback to staff on their compliance with IPC practices and establish goals for improvement.



LIGHTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



	PREVENT	TON IS KE	Y

## Infection Prevention and Control is an important strategy intended to prevent and reduce the spread of healthcare associated infections. PREVENTION IS KEY! LIPE THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team





	GULD.
LAGE THE UNIVERSITY OF ALABAMA AT BIRMINGHAM 2024 INFECTION PREVENTION BOOTCAMP FOR NURSING HOMES AND LONG-TERM CARE FACILITIES	A 300 1000
2024 INFECTION PREVENTION BOOTCAMP FOR NURSING HOMES AND LONG-TERM CARE FACILITIES	35.55 (E)
	.‱°? →




OBJ	ECTIVES	
	Acknowledge the importance of an antibiotic stewardship program in long-term care.	
*	Describe the importance of documentation as related to health-care associated infections.	
	Verbalize a list of signs and symptoms you need to document.	
	Verbalize measures you can take to prevent health-care associated infections.	
	VERSITY OF ALABAMA AT BIRMINGHAM g Home and Long-Term Care Facility Strike Team	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
		\$\$\tag{\text{\$\infty}}\$
		\$ \$\tag{\tag{\tag{\tag{\tag{\tag{\tag{

### ANTIBIOTIC STEWARDSHIP IN NURSING HOMES

**4.1 million** Americans are admitted to or reside in nursing homes during a year

Up To 70% of nursing home residents received antibiotics during a year

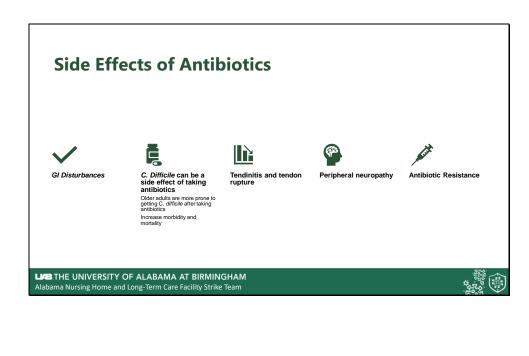
Up to **75% of antibiotics** are prescribed incorrectly

CDC Recommends 7 CORE ELEMENTS for antibiotic stewardship in nursing homes.

Your facility has an antibiotic stewardship program in place.

LIGHTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



### TRACKING AND REPORTING ANTIBIOTIC USE AND OUTCOMES

Process measures: Tracking how and why antibiotics are prescribed

Antibiotic use measures: Tracking how often and how many antibiotics are prescribed

Antibiotic outcome measures: Tracking the adverse outcomes and costs from antibiotics

LIFE THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team




# Clinical criteria are meant to assist with making informed decisions on individual residents when care is needed. Surveillance criteria are used to count true case events and to estimate the actual incidence/prevalence of disease conditions. LIES THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team

### Loeb, McGeer and NHSN Criteria

### Loeb Criteria are designed for Clinical Use

- Establish minimum criteria that should be present before initiating antibiotics
- Useful for guiding patient care and clinical practice

### McGeer and NHSN Criteria are designed for Surveillance

- Surveillance definitions are highly specific for benchmarking across facilities
- Revised McGeer criteria often applied retrospectively to review and count cases
- Not very useful for diagnosis or necessity of treatment.

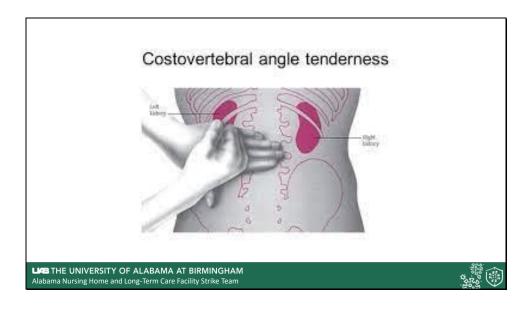
LASTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



## Loeb Criteria is applied prospectively, in "real time" to identify cases in which antibiotic initiation is appropriate in LTCF Loeb Criteria developed for: - Urinary Tract Infections (UTIs) - Sikin and Soft-Tissue Infections - Reprintely Infections - Fever of Unknown Origin LMB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team

Urinary Tract Infection	Minimum Criteria for Collecting Urine starting Antibiotic Thera	ру
Resident without urinary catheter	Either one of the following criteria:  • Acute dysuria (discomfort, pain, burning) OR  • Temp >100° F or 2.4° F above baseline,  AND >1 of the following new or worsening symptoms  • Urgency (sudden desire to void)  • Suprapubic pain  • Urinary incontinence  • Frequency (needing to urinate 8 or more times a day)  • Gross hematuria  • Costovertebral angle tenderness	
LAB THE UNIVERSITY OF ALABAM Alabama Nursing Home and Long-Term Ca		

Urinary Tract Infection	Minimum Criteria for Collecting Urine starting Antibiotic The	rapy
Resident with urinary catheter	At Least One of the following criteria:  Rigors – an episode of shaking or exaggerated shivering with a rise in temperature  New onset delirium - confusion  Temp > 100° F or 2.4° F above baseline  New costovertebral angle tenderness	
LIGHTHE UNIVERSITY OF ALABAM Alabama Nursing Home and Long-Term C		


### **Please Note**

Residents with intermittent catheterization or condom catheter should be categorized as 'without catheter'

• Urine culture should be sent prior to starting antibiotics

Antibiotics <u>should not</u> be started for cloudy or foul smelling urine

LAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



## Respiratory Tract Infections Common cold or pharyngitis Influenza-like illness Pneumonia Bronchitis or Tracheobronchitis Lower respiratory tract Lower respiratory tract Lower respiratory tract Lungs


	Lower Respiratory Tract Infection
Temp 102°F	One of the following: Productive Cough, Respiratory rate >25/minute
Temp 100°F or 2.4°F above baseline	Cough and one of the following criteria: Pulse >100 beat/minute Delirium (disorientation, agitation, hallucinations) Rigors Respiratory rate >25 breaths/minute
Afebrile with COPD and >65 YOA	Both of the following:  New or increased cough  Purulent sputum production
Afebrile without COPD	All of the following:  • New Cough  • Purulent sputum production  • At least one of the following: Delirium and/or Respiratory rate >25 breaths/minute
With new infiltrate on Chest X-Ray consistent with Pneumonia	At least one of the following: Productive cough Respiratory rate > 25 breaths/minute Temp > 100°F or 2.4°F above baseline

### **Cellulites, Skin Tissue, or Wound Infection**

- Pus at wound, skin or soft tissue site
- · Heat (warmth) at affected site
- Swelling at affected site
- Tenderness or pain at affected site
- Serous drainage at the affected site (clear to yellow)
- Fever
- Acute change in mental status
- Acute functional decline



LAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



### Scabies Maculopapular Rash(flat and raised parts) Itching Rash



LIFE THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Strike Team




### **Oral Candidiasis**

 Raised white patches on inflamed oral mucosa



LASTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team




### Conjunctivitis

- Pus from one or both eyes for > 24 hours
- New or increased conjunctival erythema (redness)
- may cause itching and/or pain



LASTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



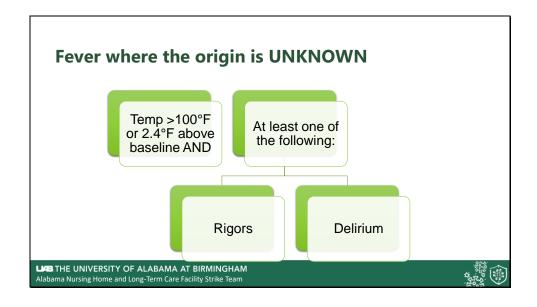
### **Gastroenteritis**

- Diarrhea with ≥ 3 liquid or watery stools above what is normal for the resident within a 24 hour period.
- Vomiting ≥ 2 episodes in 24 hour period
- Abdominal Pain/tenderness



THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team






### **Documentation**

- Documentation is extremely important.
- The IPN must follow very specific criteria to decide if an infection was acquired at your facility.
- Bedside caregivers role is extremely important.

THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team

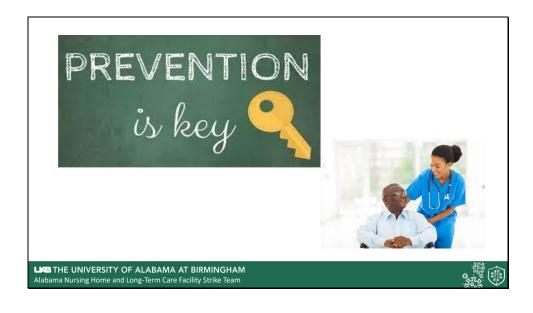


# **McGeer Surveillance Criteria** Surveillance criteria are not intended for informing antibiotic initiation because they depend on information that might not be available when that decision must be made. LIGHTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team

### **NHSN Surveillance Criteria**

- NHSN criteria are used for active, resident-based, prospective surveillance of events.
  - Criteria might be based on lab results alone or include specific signs/symptoms.
  - Criteria are specifically designed to remove subjectivity and ensure accurate, reproducible & comparable surveillance data for a facility over time and across facilities.
  - Provides a way for facilities to benchmark infection rates with other US facilities.
  - NHSN criteria are not intended for clinical decision making.











# UTI risk increase with age

- More than 1/3 of infections in Long term care facilities are UTI's
- More than 10% of women over 65 have a UTI each year.
- This percentage increases to 30% in women over 85.
- Men also tend to experience UTIs as they age





### How do you prevent UTI's in Seniors?

- Women should always wipe from front to back. This moves bacteria away from the urethra.
- Avoid urinary catheter usage. If resident must have a urinary catheter – insert catheter using the cleanest possible environmental and following aseptic technique.
- Make sure seniors drink plenty of water to help flush out bacteria from the urethra.
- Avoid use of adult diapers change regularly
- Avoid Constipation
- Offer toileting frequently



45.55

### **Look Before you Flush** • Remember if a resident is The color of your urine can feeling thirsty they are tell you if you are dehydrated already dehydrated. Are You Dehydrated? SEE DRINK SEE DOCTOR NORMAL WATER NOW DOCTOR LIGHT DEHYDRATED SEVERE DEHYDRATED THE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team



	-		




# You are all part of a team to keep your residents safe and healthy!

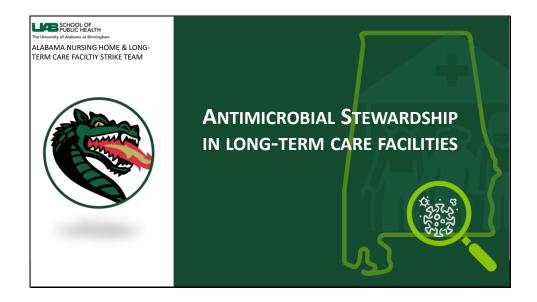
- Hand Hygiene
- Observe your resident
- Document Document Document
- Report changes








	7
LIGHTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM	7
2024 INFECTION PREVENTION BOOTCAMP FOR NURSING HOMES AND LONG-TERM CARE FACILITIES	י

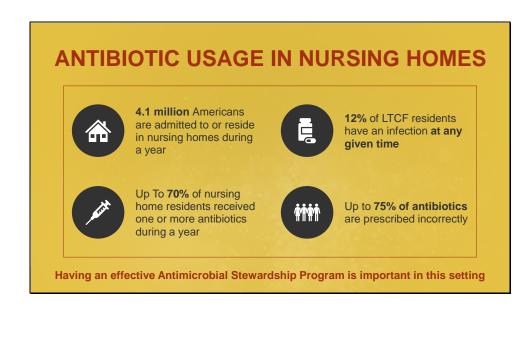


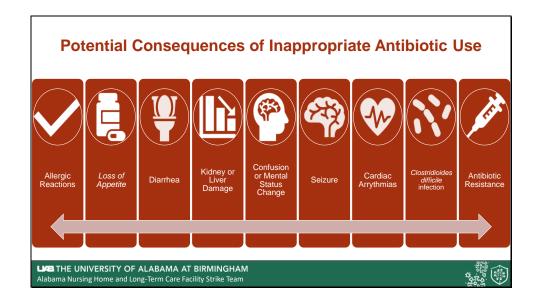
		OBJECTIVES	

**OBJECTIVES** 

	Ę	Acknowledge the importance of an antimicrobial stewardship program in long-term care.		
	*	Identify methods to measure and share outcomes of stewardship interventions.		
		Verbalize a list of core elements of antimicrobial stewardship.		
		Verbalize measures you can take to prevent health-care associated infections.		
		SITY OF ALABAMA AT BIRMINGHAM me and Long-Term Care Facility Strike Team	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
			W-8-1	

# **ANTIMICROBIAL STEWARDSHIP DEFINED**


Centers for Medicare & Medicaid Services (CMS) ASP Regulations in Long-Term Care Facilities

### Antimicrobial Stewardship is Mandated by CMS

As part of the revised Requirements for Participation, the Centers for Medicare and Medicaid Services (CMS) <u>required</u> all long-term care (LTC) facilities to have an antibiotic stewardship program by November 28, 2017.

If surveyors haven't visited facility yet, they likely will in 2019 to assess the 7 CDC Core Elements of Nursing Home Antimicrobial Stewardship Programs are in place.





Medicare and Medicaid Programs; Reform of Requirements for Long-Term Care Facilities, Available at: https://www.fedeneepister.gov/courents/2016/10/04/2016-25/00/medicare-and-medicad-programs-reform-ofrequirements-for-long-term-care-facilities, 2016.

The Commission of Commission

# Regulations (F881; **42 CFR 483.80(a)(3)**) requiring an ASP that includes:

- · Antibiotic use protocols
- · System to monitor antibiotic use
- · Be reviewed on an annual basis and as needed



# **Antimicrobial Stewardship**

Per the Infectious Diseases Society of America:

"Antimicrobial stewardship refers to *coordinated interventions* designed to *improve and measure the appropriate use of antimicrobials* by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy, and route of administration."

SURVEILLANCE VERSUS CLINICAL CRITERIA	
	SURVEILLANCE VERSUS CLINICAL CRITERIA

### **Surveillance Criteria for LTC Facilities**



**Clinical criteria** are meant to assist with making informed decisions on individual residents when care is needed.



**Surveillance criteria** are used to count true case events and to estimate the actual incidence/prevalence of disease conditions.




### **NHSN Surveillance Criteria**

- NHSN criteria are used for active, resident-based, prospective surveillance of events.
  - Criteria might be based on lab results alone or include specific signs/symptoms.
  - Criteria are specifically designed to remove subjectivity and ensure accurate, reproducible & comparable surveillance data for a facility over time and across facilities.
  - Provides a way for facilities to benchmark infection rates with other US facilities.
  - NHSN criteria are not intended for clinical decision making.




### Loeb, McGeer and NHSN Criteria

# Loeb Criteria is designed for Clinical Use

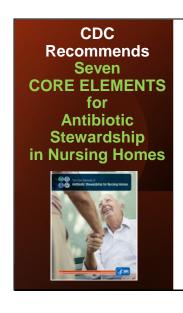
- Establish minimum criteria that should be present before initiating antibiotics
- Useful for guiding patient care and clinical practice

# McGeer and NHSN Criteria are designed for Surveillance

- Surveillance definitions are highly specific for setting benchmarks across facilities
- Revised McGeer criteria often applied retrospectively to review and count cases
- Not very useful for diagnosis or necessity of treatment.



# SEVEN CORE ELEMENTS FOR ANTIBIOTIC STEWARDSHIP IN NURSING HOMES

### Leadership commitment

Accountability

**Drug expertise** 

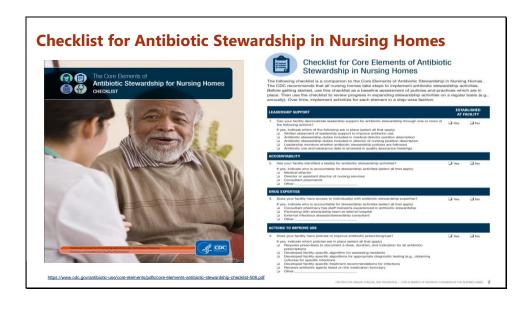
Action

**Tracking** 

Reporting

**Education** 

https://www.cdc.gov/antibiotic-use/core-elements/pdfs/core-elements-antibiotic-stewardship-H.pdf

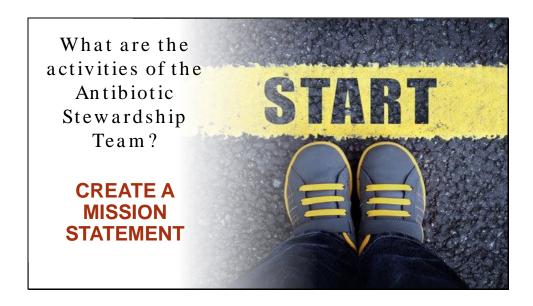




# Antimicrobial Stewardship Team

- Administrator/Member of Senior Leadership
- Medical Director
- Director/Assistant Director of Nursing
- Infection Control Preventionist
- Consultant Pharmacist

Meets Regularly

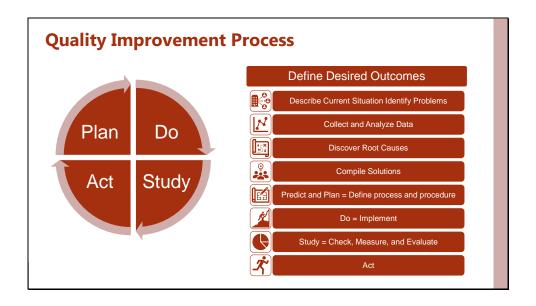


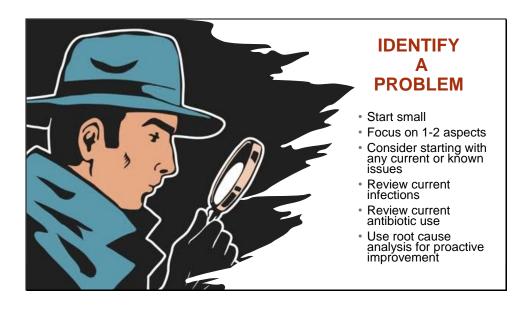



# **Quality Assurance and Quality Improvement**

Quality Assurance	Performance Improvement
Reactive	Proactive
Episode or event-based	Aggregate data and patterns
Prevent recurrence	Optimizes processes
Anecdotal	Measurable
Retrospective	Concurrent
Audit based monitoring	On-going monitoring
Potential to be punitive	Positive change




# TRACKING AND REPORTING ANTIBIOTIC USE AND OUTCOMES

**Process measures:** Tracking how and why antibiotics are prescribed

Antibiotic use measures: Tracking how often and how many antibiotics are prescribed

**Antibiotic outcome measures:** Tracking the adverse outcomes and costs from antibiotics



PUTTING IT ALL TOGETHER


# **Antimicrobial Stewardship Team Meeting**



### **SCENARIO:**

During the antibiotic stewardship team meeting, everyone is brainstorming problems related to antibiotics in your facility. You recall a recent case in which a resident was transferred to the hospital for an INR

# Antimicrobial Team Meeting Mission Statement: To use antibiotics only, when necessary, thereby protecting residents from unnecessary antibiotic exposure and adverse events. Review of Root Cause Analysis: Resident's family member shared that resident has dark, foul-small and wants a urine culture from oncall provider. Nurse obtains order for urine culture from onciding a different on-call provider, who orders ciprofloxacin. Nurse obtains order for urine culture from onciding a different on-call provider, who orders ciprofloxacin. ASP Team Meeting




Mission Statement: To use antibiotics only, when necessary, thereby protecting residents from unnecessary antibiotic exposure and adverse events.

**Review of Root Cause Analysis:** 

# What is problem #1?

Resident's family member shared that resident has dark, foulsmelling urine and wants a urine culture ordered to rule out an UTI.

This would have been a great opportunity for the nurse to discuss the indications for sending a urine culture or the potential side effects of antibiotics with the resident's family member. Without signs and symptoms of infection, it is not indicated to send a urine culture for changes in appearance or smell of the urine, as there may be other non-infection related reasons that better explain this finding.

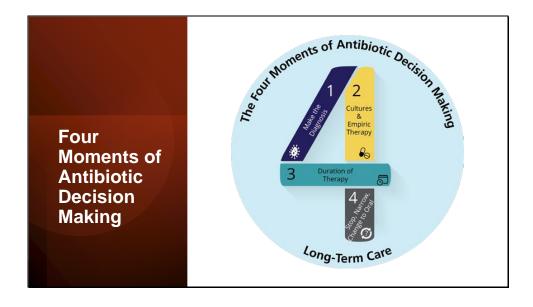


**Mission Statement:** To use antibiotics only, when necessary, thereby protecting residents from unnecessary antibiotic exposure and adverse events.

#### **Review of Root Cause Analysis:**

### What is problem #2?

Nurse obtains order for urine culture from on-call provider. Employment of consistent diagnostic criteria was not evidenced in this reviewed case. Antibiotics should be used judiciously and sparingly, ONLY when the appropriate criteria warrants. There was not any governing body or policy in place to question the necessity of the antibiotic order. The reason why it is ordered, (Ex: treatment of UTI) and the Antibiotic stop date should also be included in the order. Also having an infection SBAR may be helpful to include details when calling providers.

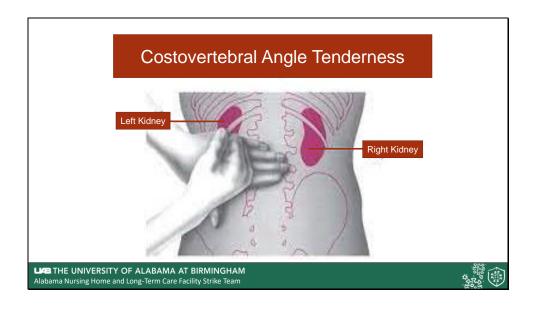





- Assess resident for a change in status and there is a concern for an infection
- Consider if changes are suggestive of an infection versus another cause

LOEB CRITER	IA – Resident <u>Without</u> Urinary Catheter
Urinary Tract Infection	Minimum Criteria for Collecting Urine starting Antibiotic Therapy
Resident WITHOUT	Either one of the following criteria:
Urinary Catheter	Acute dysuria (discomfort, pain, burning) OR
•	• Temp >100° F or 2.4° F above baseline,
	AND
	>1 of the following new or worsening symptoms:
	<ul> <li>Urgency (sudden desire to void)</li> </ul>
	<ul> <li>Suprapubic pain</li> </ul>
	<ul> <li>Urinary incontinence</li> </ul>
	<ul> <li>Frequency (needing to urinate 8 or more times a day)</li> </ul>
	<ul> <li>Gross hematuria</li> </ul>
	<ul> <li>Costovertebral angle tenderness</li> </ul>
LIGHT THE HANDYEDGITY OF ALABAM	A AT DIDMINICHAM
Alabama Nursing Home and Long-Term Ca	6 · 6   202
	· A.G.1

LOEB CRITERIA – Resident With Urinary Catheter						
Urinary Tract Infection	Minimum Criteria for Collecting Urine starting Antibiotic Therap	ру				
Resident WITH Urinary Catheter	<ul> <li>At Least <u>One</u> of the following criteria:</li> <li>Rigors – an episode of shaking or exaggerated shivering <u>with</u> a rise in temperature</li> <li>New onset delirium – confusion</li> <li>Temp &gt; 100° F or 2.4° F above baseline</li> <li>New costovertebral angle tenderness</li> </ul>					
LASTHE UNIVERSITY OF ALABAMA AT BIRMINGHAM Alabama Nursing Home and Long-Term Care Facility Strike Team						

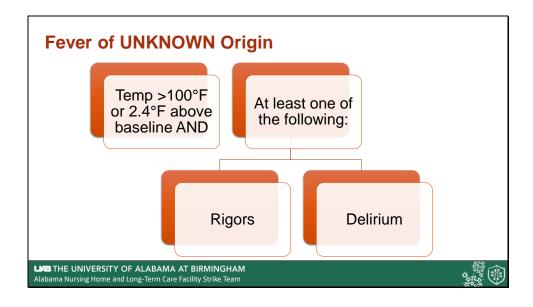




# Please Note: Residents with an indwelling urinary catheter should be categorized as 'with catheter' The following devices are not categorized as an indwelling urinary catheter: intermittent straight in and out catheters, suprapubic catheters, condom catheters, or external urinary drainage devices. Antibiotics should not be initiated for cloudy or foul-smelling urine Urine culture should be sent prior to starting antibiotics


#### **Bristol Stool Chart** Separate hard lumps, like nuts **Gastroenteritis** Type 1 (hard to pass) Diarrhea with ≥ 3 liquid or watery stools above what is Type 2 Sausage-shaped but lumpy Like a sausage but with cracks on the surface normal for the resident Туре 3 within a 24-hour period, Like a sausage or snake, smooth and soft without the use of laxatives or stool softeners. Soft blobs with clear-cut edges Type 5 • Vomiting $\geq$ 2 episodes in 24-hour period Fluffy pieces with ragged edges, a mushy stool Туре 6 🛚 Abdominal Pain/tenderness

Note: Formed stool is not recommended for *C. difficile* testing; If *C. difficile* is found from formed stool, it is more indicative of colonization and not active infection.

Watery, no solid pieces. Entirely Liquid


Lower Respiratory Tract Infection					
Temp 102°F	One of the following: Productive Cough, Respiratory rate >25/minute				
Temp 100°F or 2.4°F above baseline	Cough and one of the following criteria: Pulse >100 beat/minute Delirium (disorientation, agitation, hallucinations) Rigors Respiratory rate >25 breaths/minute				
Afebrile with COPD and >65 YO	Both of the following:  New or increased cough  Purulent sputum production				
Afebrile without COPD	All of the following:  New Cough  Purulent sputum production  At least one of the following: Delirium and/or Respiratory rate >25 breaths/minute				
With new infiltrate on Chest X-Ray consistent with Pneumonia	At least one of the following: Productive cough Respiratory rate > 25 breaths/minute Temp > 100°F or 2.4°F above baseline				
LAB THE UNIVERSITY OF ALA Alabama Nursing Home and Long-T	& '6 1291				



Mission Statement: To use antibiotics only, when necessary, thereby protecting residents from unnecessary antibiotic exposure and adverse events.

#### **Review of Root Cause Analysis:**

# What is problem #3?

Urine culture results 100,000 cfu/mL gram negative rods. The nurse notifies a different on-call provider, who orders ciprofloxacin. There was not any evaluation of resident. The On-call Physician may not have been privy to the resident's medical or medication history. No review of current guidelines to determine if antibiotics was appropriately ordered for the resident based on resident's presentation. There were not any notifications from pharmacy.





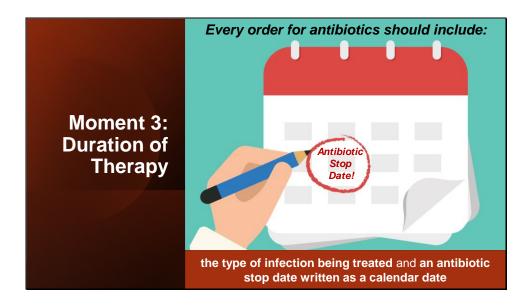


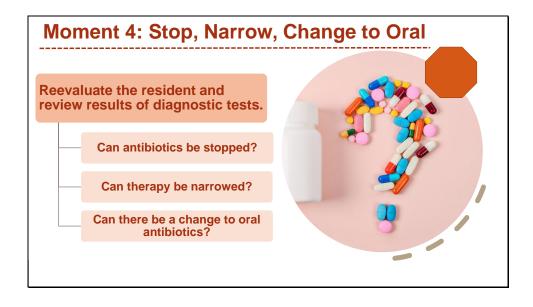
**Mission Statement:** To use antibiotics only, when necessary, thereby protecting residents from unnecessary antibiotic exposure and adverse events.

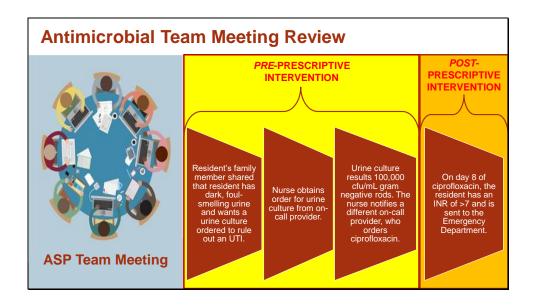
**Review of Root Cause Analysis:** 

What is problem #4?

On day 8 of ciprofloxacin, the resident has an INR of >7 and is sent to the Emergency Department. No stop date on antibiotic. No monitoring for drug-drug interactions. No follow-up to narrow therapy. No follow-up on the resident to note her response to antibiotics. No notification of the daytime clinician of new prescription.

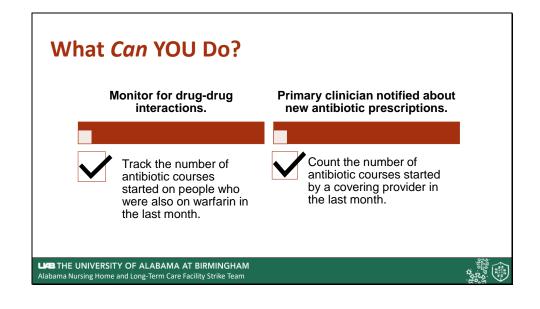



IMPLE	MENTING	ACTION	PLANS


# **Antimicrobial Stewardship Plan**

- Minimum of one process measure
- Minimum of one outcome measure
- Define what is tracked and how it is tracked
  - Target what you are tracking to align with measurable objectives and why you choose those targets.
    - Based on point prevalence study
    - Based on review of inappropriate antibiotic starts
    - Based on antibiogram
  - $_{\circ}$  Consider how to handle common topical antimicrobials.
- May include antibiogram in appendix to plan.






# **Baseline Data**



In your 150-bed facility over the last month, <u>15</u> antibiotic prescriptions were started.

10 by a covering clinician 2 residents were on warfarin



Surveillance criteria are not intended for informing antibiotic initiation because they depend on information that might not be available when that decision must be made.




# Intervention

- The <u>dispensing pharmacist</u> sends an email to regular clinicians about all antibiotics started by an on-call covering clinicians
- The team—
  - Notifies the clinicians about this new policy and the reason for the change via an email and signs posted in charting areas
  - Confirms that the dispensing pharmacist has the email and pager numbers for the regular clinicians
  - Asks the pharmacist to keep a copy of the emails sent



# **Outcomes**

# Example:

# Clinicians

- Reviewed all the antibiotic prescriptions
- Stopped or changed the antibiotics in 7 of 10 cases




# **Sharing/Reporting**

Share results with the following people:

- Nursing home staff
- Prescribers/clinicians
- Nursing home management/directors
- Centers for Medicare & Medicaid Services
- · Residents and family members



# **Pre-prescriptive Interventions**

## **Examples**

- Checklist (ex: SBAR) of signs and symptoms for nurses to use before calling a provider about a resident with a change in status
- Prescribing guidelines distributed to staff and clinicians
- Pocket cards distributed to staff indicating minimum criteria for starting antibiotics
- Electronic medical record "stops" to notify providers if a resident does not meet criteria for antibiotic therapy or needs monitoring
- Dose recommendations for residents with decreased kidney function
- Requirement that all antibiotic orders have an indication, dose, and duration



# **Post-prescriptive Interventions**

### **Examples:**

- Electronic alert or pharmacy institutes an "antibiotic time out" at 48 or 72 hours
  - Require the prescriber to reassess antibiotic prescriptions and verify the need to continue them
- Provider reviews culture results and diagnostic tests to make sure antibiotics are necessary and effective
- Formal review of appropriateness of antibiotic prescriptions by infectious disease—trained consultants 24 to 72 hours after the initial prescription
  - · Consultants can be pharmacists or physicians

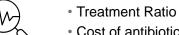


# Outcome Measures for *Post*-Prescriptive Interventions



### **Examples**

- Number of antibiotic starts per 1,000 resident-days
- Days of antibiotic therapy per 1,000 resident-days
- Length of therapy



- Cost of antibiotics
- Use of guideline-concordant antibiotics
- · Clostridioides difficile infection rates
- · Adverse events related to antibiotics





Als	lm	plemen	robial S Monitor	, & Sust	iship Iain a F	Program					Mont y Rep				
The me informa he cost for esa track the	othly surm stim regard omired axe steple, a tun see prescrip ary Raport	ary report of ing a specific indag to the sing lastic in tions separa of infaction	Summary R as provide as a c infection. Th seach of each usy wish to on rely. a and Antibio for evaluating.	recreice of y c-example be rurning born it repeat prov tic Use	low facuses i's antimics oxystoms fo	s on UTIs. The robial steward or the same inf	e report can blin anals.				Number of	Number of			
Month Jan Feb Mar Agr May Jun	Number of Senident Days	Number of Arctivate. Be	Nursber of Arcthiods Rx Cristad by Nursber of Raxident Days	Number of Residents Receiving Artitiotics for UTI (incl. Repeats)	Number of UTI SEAR Funne Ubed	Number of UTto That Bel Deposels Criteria	Number of Negative Cultures	Month	Number of Resident Days	Number of Antibiotic Rx	Antibiotic Rx divided	Residents Receiving Antibiotics for UTI (incl. Repeats)	of UTI	Number of UTIs That Met Diagnosti c Criteria	Numl of Negat Cultu
Aug Sept Oct Nov								Jan							
Dec TOTAL								Feb							
		10						Mar							
	(	A	HAQ	1											
								AT BIRM	INGHAM					,	4. C. B.


# **Antibiogram**

An antibiogram is tool that is comprised documented organisms detected from clinical specimens and their antibiotic susceptibility patterns—across all residents—for a certain time, in nursing homes from specimens sent to the laboratory for testing.

		Amin	minoglycosides B-Lactams Cephalosporins		ıs	Quinolones		Oth	ners							
Gram (-)  Highlighted rows include less than 30 isolates; interpret these results with caution	# of residents	Amikacin	Gentamicin	Tobramycin	Ampicillin	Imipenem	Piperacillin- tazobactam	Cefazolin	Cefoxitin	Ceftriaxone	Ceftazidime	Ciprofloxacin	niotuesiijosiiN		TMP/SMX	Yangi Inni
Escherichia coli		100	100	100		100	100				100	75				
Klebsiella sp *		100	84.6	92.3	38.5	100	92.3	84.6	100		100	38.5	92	_	38	_
Proteus sp	31	71.4	57.1	71.4		85.7	85.7			57.1	57.1		28	.6	71	.4
Pseudomonas aeruginosa†	† 23	100	83.3	92.3	91.7		100		81.8	100	100	30.8			69	. 2
			Peni	cillins		Ceph	alosporins	Quinc	lones			Others				
Gram (+) Highlighted rows include ess than 30 isolates; nterpret these results with caution	# of res	Penicillins	Ampicillin	Oxacillin	Nafcillin	Cephalothin	Ceftriaxone	Ciprofloxacin	Moxifloxacin	Gentamicin	Linezolid	Rifampin	Tetracycline	TMP/SMX	Vancomycin	
Staph aureus (all) †	† 17	0	0	0	0			0	0	87.5	100	100	100	100	100	11
Methicillin Resistant (MRSA)	34	0	0	0	0			0	0	87.5	100	100	100	100	100	1
Methicillin Susceptible (MSSA)	0															ĺ

· · · · · · · · · · · · · · · · · · ·	

# You are an IMPORTANT part of the team in keeping your residents safe and healthy!

Antimicrobial stewardship is the act of using antibiotics appropriately—that is, only using them when truly needed and using the right antibiotic for each infection.

Antimicrobial Stewardship protects the effectiveness of the most important tool in fighting life-threatening bacterial infections: antibiotics.





# Resources

 $\underline{\text{https://www.cdc.gov/antibiotic-use/core-elements/pdfs/core-elements-antibiotic-stewardship-H.pdf}}$ 

https://www.ahrq.gov/nhguide/toolkits.html

 $\frac{https://www.ahrq.gov/nhguide/toolkits/implement-monitor-sustain-program/toolkit1-start-program.html}{}$ 

https://www.ahrq.gov/antibiotic-use/long-term-care/improve/sustain.html

 $\underline{\text{https://www.ahrq.gov/nhguide/toolkits/help-clinicians-choose-the-right-antibiotic/toolkit3-develop-implement-antibiogram-program.html}$ 

https://www.ahrq.gov/sites/default/files/wysiwyg/nhguide/5_TK1_T4-Antibiogram_Formats_and_Instructions_final.pdf