

ICNC Annual Meeting 10.21.26

ANTIBIOTIC STEWARDSHIP

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MARY AND MO'S ANTIMICROBIAL RESISTANCE STORY



Connecticut Public Health

SistersInInfectionPrevention

ANTIMICROBIAL RESISTANCE



CDC ANTIMICROBIAL RESISTANCE SURVEILLANCE



Antimicrobial resistance (AR) is an urgent global public health threat

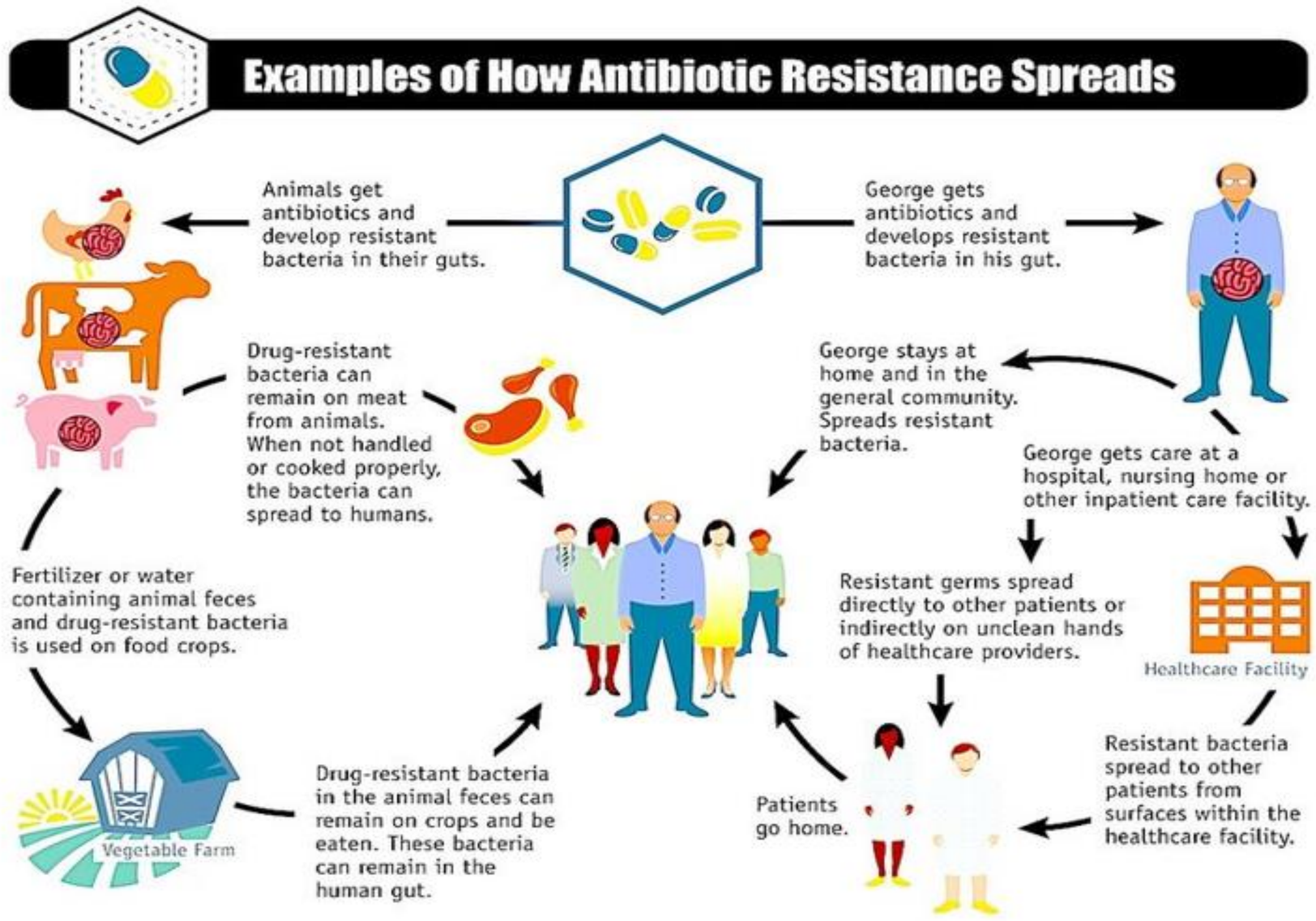


In the U.S., more than 2.8 million antimicrobial-resistant infections occur each year resulting in more than 35,000 deaths annually



The total exceeds 3 million infections and 48,000 deaths when *Clostridium difficile* (*C. diff*)is included

HOW ANTIMICROBIAL RESISTANCE SPREADS



Connecticut Public Health

Simply using antibiotics creates resistance. These drugs should only be used to treat infections.

CDC ANTIMICROBIAL RESISTANCE THREATS

AR Threats

	Threat	Change in Rates or Number of Infections***			
		2020 vs. 2019	2021 vs. 2020	2022 vs. 2021	2022 vs. 2019
URGENT*	Hospital-onset CRE	▲ Increase	▲ Increase	— Stable	▲ Increase
URGENT*	Hospital-onset Carbapenem-resistant *Acinetobacter*	— Stable	— Stable	— Stable	▲ Increase**
URGENT*	Clinical Cases of *C. auris*	▲ Increase	▲ Increase	▲ Increase	▲ Increase
SERIOUS*	Hospital-onset MRSA	▲ Increase	— Stable	▼ Decrease	— Stable
SERIOUS*	Hospital-onset VRE	▲ Increase	▲ Increase	— Stable	▲ Increase
SERIOUS*	Hospital-onset ESBL-producing Enterobacterales	▲ Increase	— Stable	— Stable	▲ Increase
SERIOUS*	Hospital-onset MDR *Pseudomonas aeruginosa*	▲ Increase	▲ Increase	— Stable	▲ Increase

* Threat level for each pathogen, as categorized in CDC's Antibiotic Resistance Threats in the United States, 2019.
** There was no statistically significant difference in rate of hospital-onset carbapenem-resistant *Acinetobacter* in 2020, 2021, and 2022 when compared to the previous year. However, there was a statistically significant increase in rate of hospital-onset carbapenem-resistant *Acinetobacter* in 2022 when compared to 2019.
*** Hospital-onset rates were described using multivariable models for all threats except *C. auris*. Please note that in above table, stable indicates there was no statistically significant increase or decrease, decrease indicates a statistically significant decrease where $p<0.05$, and increase indicates a statistically significant increase where $p<0.05$, for all threats except for *C. auris*. Increases or decreases in *C. auris* were indicated by changes in the number of clinical cases reported nationally without hypothesis testing.

ANTIBIOTIC STEWARDSHIP



CORE ELEMENTS OF ANTIBIOTIC STEWARDSHIP IN NURSING HOMES



Leadership commitment
Demonstrate support and commitment to safe and appropriate antibiotic use in your facility



Accountability
Identify physician, nursing and pharmacy leads responsible for promoting and overseeing antibiotic stewardship activities in your facility



Drug expertise
Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship for your facility



Action
Implement **at least one** policy or practice to improve antibiotic use



Tracking
Monitor **at least one process** measure of antibiotic use and **at least one outcome** from antibiotic use in your facility

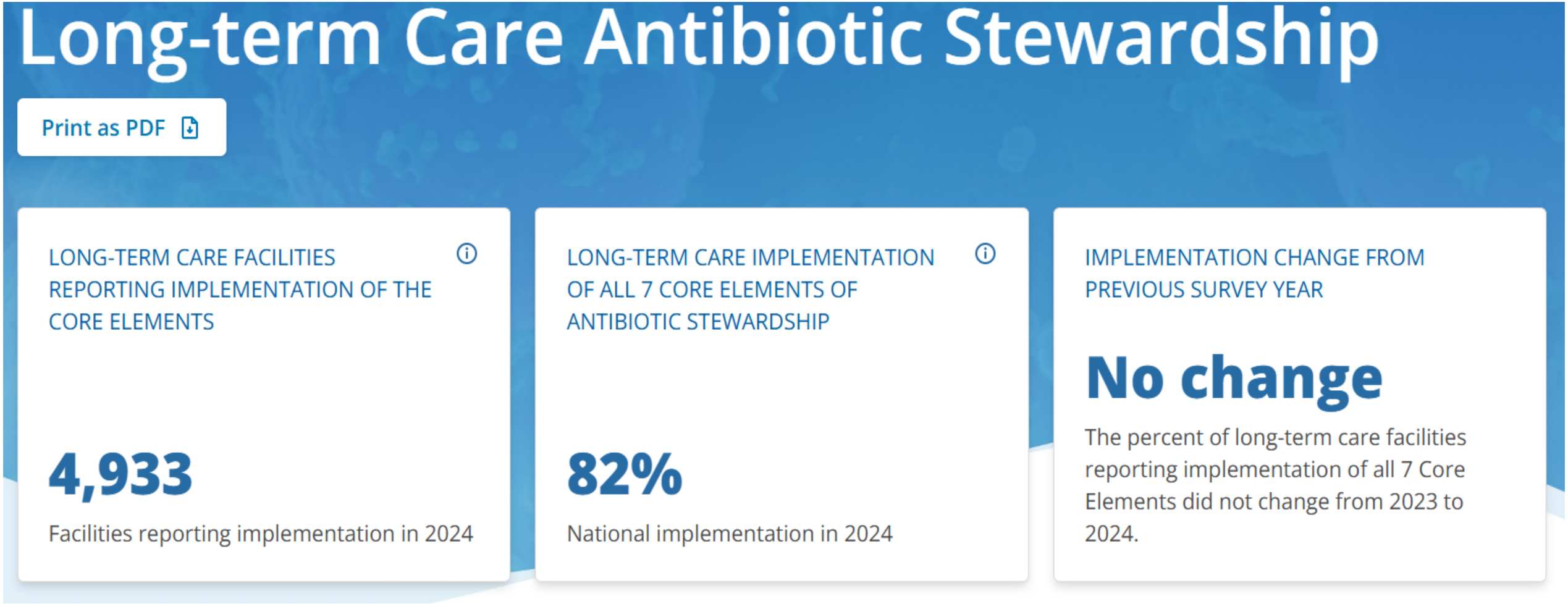


Reporting
Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and other relevant staff

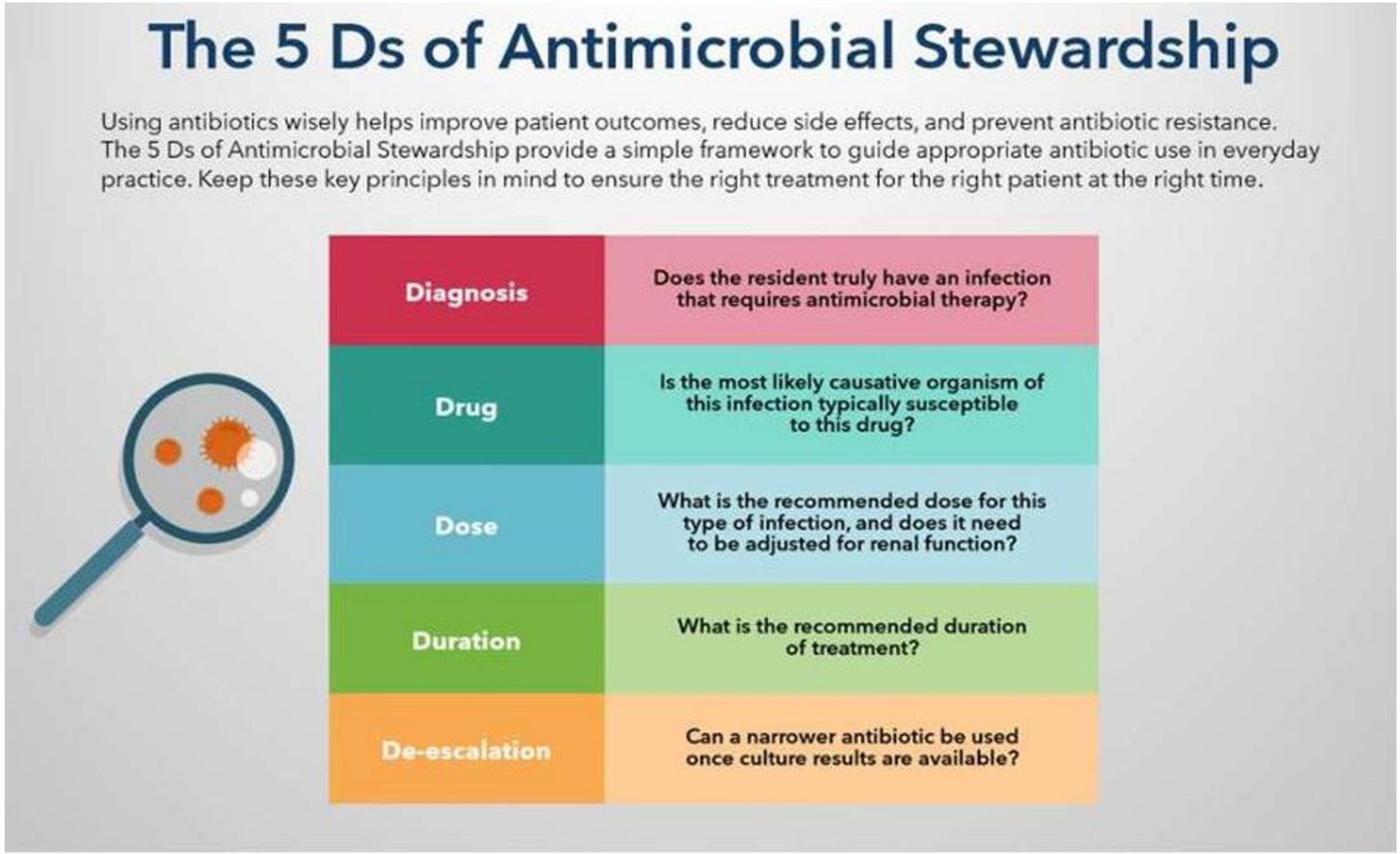


Education
Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities for improving antibiotic use

ANTIBIOTIC STEWARDSHIP IN LONG TERM CARE



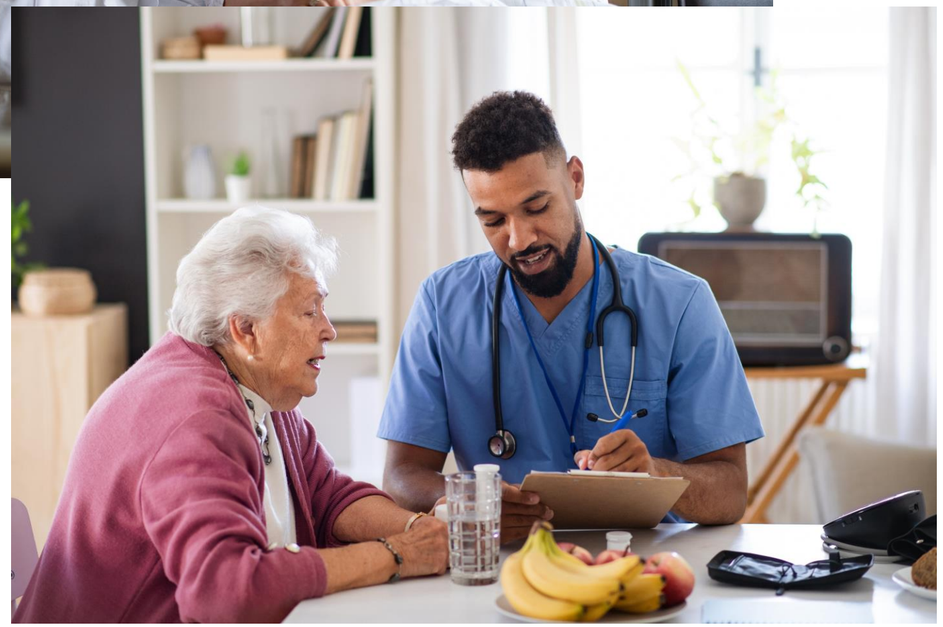
THE 5 D's OF ANTIMICROBIAL STEWARDSHIP



THE FIRST “D” – DIAGNOSIS

Nursing home front line staff play an important role in the assessment of infection, which helps to ensure the correct diagnosis is made, and the correct treatment is administered in a timely manner.





ANTIBIOTIC STEWARDSHIP TOOLS & EDUCATION



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FRONT-LINE STAFF EDUCATION

LEARNINGCE
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Find a course...

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Home » You Can Help! Improving Antibiotic...

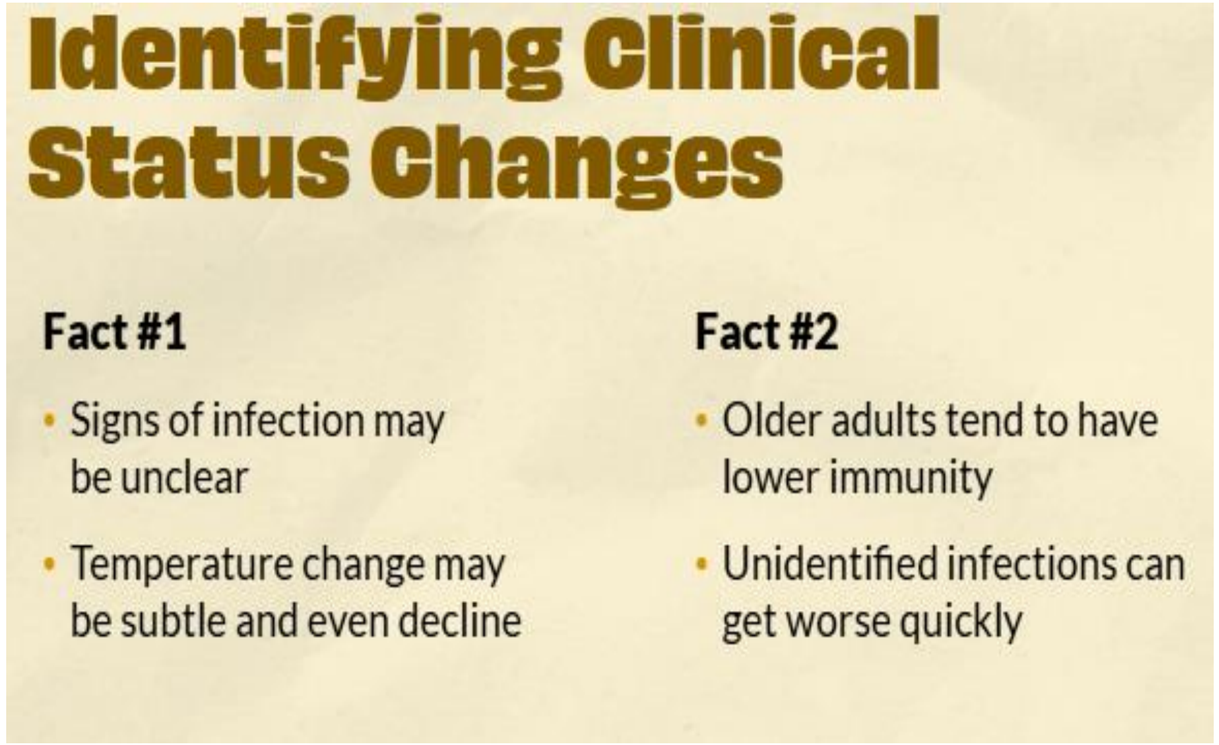
You Can Help! Improving Antibiotic Stewardship & Infection Prevention in Nursing Homes

Connecticut Public Health

YOU CAN HELP! MICRO-LEARNING MODULES

- Module 1: Role of Front-line Caregivers in Antibiotic Stewardship
- Module 2: MDROs - The Risks of Unnecessary Antibiotics
- Module 3: Early Recognition & Communication of Clinical Status Changes
- Module 4: Active Monitoring & Timely Response to Clinical Status Changes
- Module 5: Recognition & Management of UTI in Long-Term Care
- Module 6: Assessment & Management of Respiratory Infections in Nursing Homes
- Module 7: Recognition, Care, and Prevention of Skin & Soft tissue Infections in Long-Term Care Residents

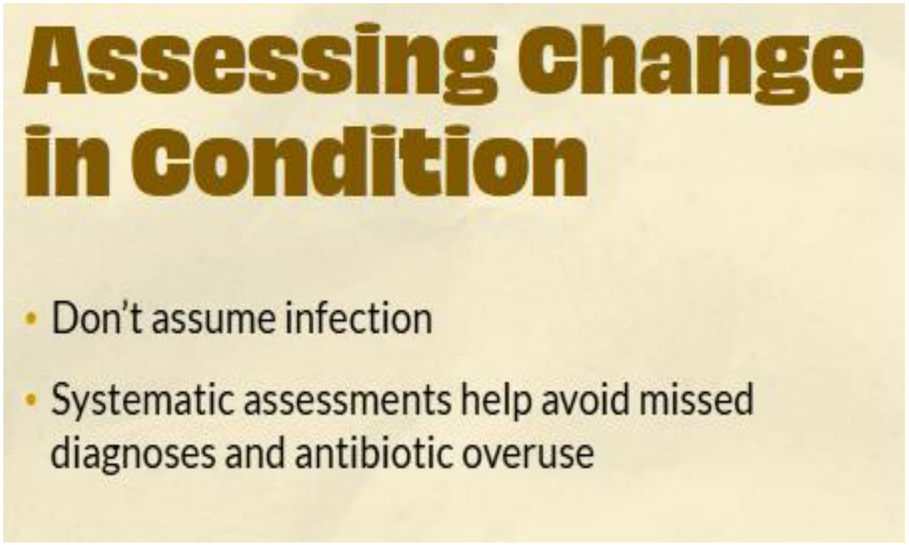
KEY CONCEPTS-IDENTIFYING CLINCAL CHANGES



DAILY STRESSORS:

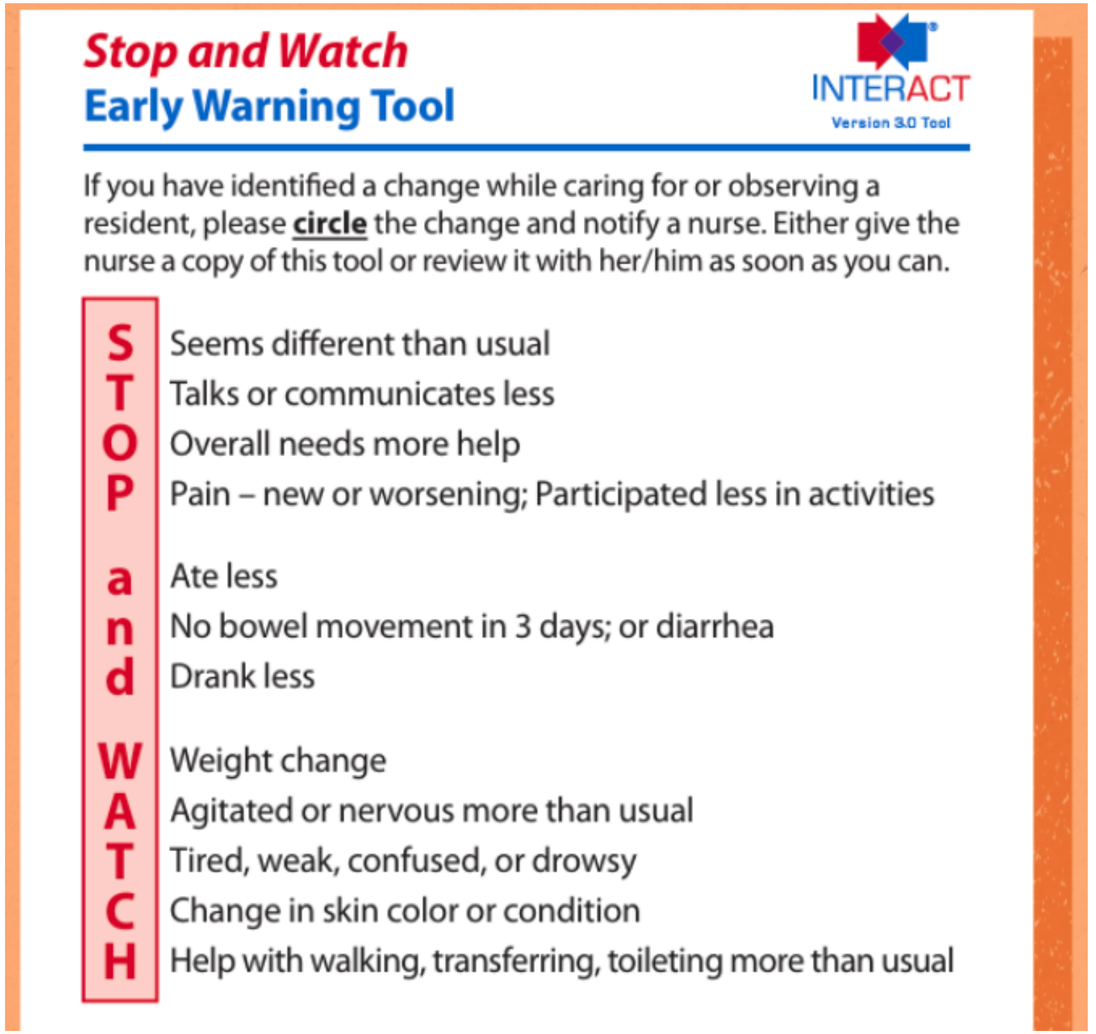
- Inadequate sleep
- Environment changes
- Pain
- Constipation
- Medication reaction
- Dehydration

KEY CONCEPTS-ASSESSING CHANGE IN CONDITION



STAFF:
- Fill out as soon as a change is spotted
- Hand to responsible nurse right away

NURSE:
- Perform full assessment immediately



ACCURATE AND THOROUGH ASSESSMENT IS KEY

Resident Assessment Should Include

- Listening to the resident's main complaint
- Noting any new or changed symptoms
- Recording a full set of vital signs
- Checking for bladder distension and fecal impaction
- Inspecting skin (especially feet and sacrum) for ulcers

S — Situation

I am concerned about a suspected UTI for the above resident.

B — Background

Indwelling catheter ☐Yes ☐No If yes, ☐ Urethral ☐ Suprapubic
Incontinence ☐Yes ☐No If yes, is this new or worsening ☐Yes ☐No
UTI in last 6 months ☐Yes ☐No If yes, Date: _____ Organism: _____ Treatment: _____
Active diagnosis (especially bladder, kidney, genitourinary conditions; diabetes; receiving dialysis, anticoagulants):
_____
Advance directives for limiting treatment (especially antibiotic use): _____
Medication allergies: _____

A — Assessment

Vital signs: BP____/____ HR_____ Resp. rate_____ Temp._____ 0_2 Sats._____

Resident WITH indwelling catheter

The criteria are met to initiate antibiotics if one of the following are selected:

No Yes
☐ ☐ Fever of 100°F (38°C), or 2°F (1.1°C) above baseline, or repeated temperatures of 99°F (37°C)
☐ ☐ New back or flank pain
☐ ☐ Rigors / shaking / chills
☐ ☐ New onset delirium (new dramatic change in mental status)
☐ ☐ Hypotension (significant change in baseline BP or SBP <90)
☐ ☐ Acute suprapubic pain
☐ ☐ Acute pain, swelling or tenderness of the scrotal area

Resident WITHOUT indwelling catheter

Criteria are met to initiate antibiotics if one of the three situations are met:

No Yes
☐ ☐ Any one of the following two:
- ☐ Acute dysuria alone (pain or burning while urinating)
- ☐ Acute pain, swelling or tenderness of the scrotal area

OR

☐ ☐ Single temp of 100°F (38°C), or 2°F (1.1°C) above baseline, or repeated temperatures of 99°F (37°C) **and** at least one of the following new or worsening symptoms:
- ☐ Urgency ☐ Suprapubic pain ☐ Frequency
- ☐ Gross hematuria ☐ Back or flank pain ☐ Urinary incontinence

OR

☐ ☐ No fever, but two or more of the following new or worsening symptoms:
- ☐ Urgency ☐ Suprapubic pain ☐ Frequency
- ☐ Gross hematuria ☐ Urinary incontinence

R — Recommendation

☐ **Protocol criteria met.** Resident may require UA and urine culture or an antibiotic.

☐ **Protocol criteria are NOT met.** Resident **DOES NOT** need immediate antibiotic but may need additional observation.

Nurse's Signature: _____ **Date/Time:** _____

☐ **Notification of Family/POA Name:** _____ **Date/Time:** _____

☐ **Faxed or ☐ Called to:** _____ **By:** _____ **Date/Time:** _____

SBAR COMMUNICATION IS IMPORTANT

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I am concerned about a suspected UTI for the above resident.

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Indwelling catheter ☐Yes ☐No If yes, ☐ Urethral ☐ Suprapubic
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Active diagnosis (especially bladder, kidney, genitourinary conditions; diabetes; receiving dialysis, anticoagulants):
_____
Advance directives for limiting treatment (especially antibiotic use): _____
Medication allergies: _____

A — Assessment
Vital signs: BP____/____ HR_____ Resp. rate_____ Temp._____ 0_2 Sats._____

Resident WITH indwelling catheter
The criteria are met to initiate antibiotics if one of the following are selected:

No	Yes	
☐	☐	Fever of 100°F (38°C), or 2°F (1.1°C) above baseline, or repeated temperatures of 99°F (37°C)
☐	☐	New back or flank pain
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Resident WITHOUT indwelling catheter
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No Yes
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OR

☐ ☐ Single temp of 100°F (38°C), or 2°F (1.1°C) above baseline, or repeated temperatures of 99°F (37°C) **and** at least one of the following new or worsening symptoms:
- ☐ Urgency ☐ Suprapubic pain ☐ Frequency
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OR

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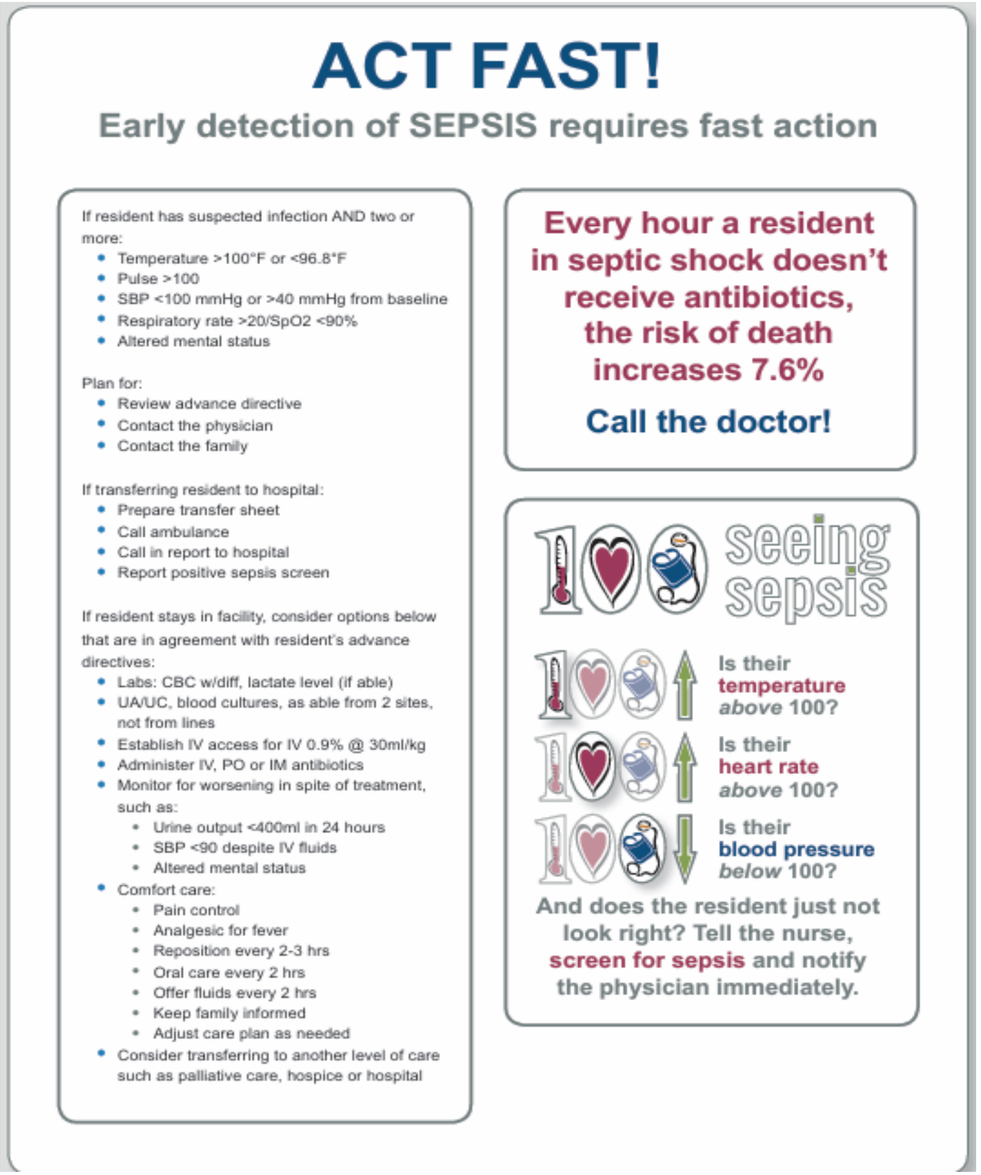
- **BE SURE TO REPORT THE RESIDENT'S USUAL VITAL SIGNS IN ADDITION TO THE CURRENT VITAL SIGNS**
- **BE SURE TO REPORT THE RESIDENT'S GOALS OF CARE**

EARLY SEPSIS DETECTION REQUIRES FAST ACTION

The “100-100-100” tool is a quick, visual screening method for early sepsis recognition in long-term care, based on three simple vital sign thresholds:

- ❖ **Temperature ≥100°F**
- ❖ **Heart Rate ≥100 bpm,**
- ❖ **Respiratory Rate ≥20 breaths/min**

Plus clinical judgment

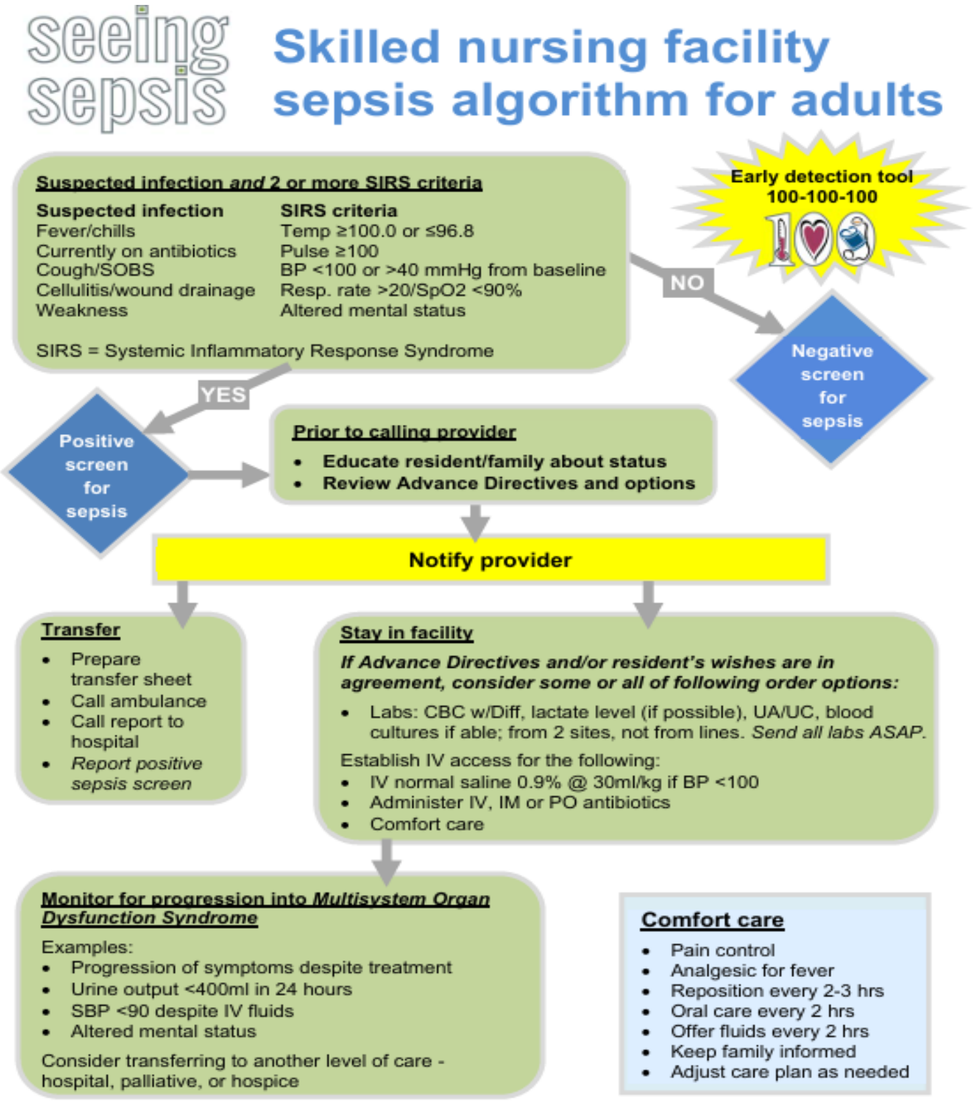


SNF SEPSIS ALGORITHM FOR ADULTS – A HELPFUL TOOL

A positive screen for SEPSIS includes:

Suspected infection AND ≥2 of the following SIRS criteria:

- **Fever/chills:** Temp ≥100.0ºF or ≤96.8ºF
- **Tachycardia:** HR ≥100
- **Tachypnea:** RR >20 or SpO_2 <90%
- **Hypotension:** SBP <100 mmHg or >40 mmHg from baseline
- **Altered mental status**
- **Weakness**
- **Cellulitis/wound drainage**
- **Cough/SOBS**



US ANTIBIOTIC AWARENESS WEEK
NOVEMBER 18–24, 2026



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US ANTIBIOTIC AWARENESS WEEK
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18 NOV



ROOTING OUT ANTIBIOTIC RESISTANCE: CASES IN DENTAL ANTIBIOTIC STEWARDSHIP

Naushad Edibam, DMD, OMS, Elias Chatah, DMD, PharmB, Ami Belmont, MD, MHS, Jessica Abrantes-Figueiredo, MD

COURSE ID 1140423

19 NOV



FROM DIAGNOSIS TO DURATION: CASE-BASED PEDIATRIC STEWARDSHIP FOR RESPIRATORY INFECTIONS

Thomas Murray, MD, PhD, Jennifer Girotto, PharmD, BCPPS, BCIDP

COURSE ID 1140352

20 NOV



ANTIMICROBIAL STEWARDSHIP IN URGENT CARE

Christopher Chao, MD, Medical Director Urgent Care WakeMed Health and Hospital

COURSE ID 1140357

24 NOV



CHALLENGES OF ANTIBIOTIC STEWARDSHIP IN LONG TERM CARE

Karl Dauphinais, MD, MSS, FACP, CMD, Long Term Care Medical Director

COURSE ID 1140350

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THANK YOU!

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