

# **Sepsis/Antibiotic Stewardship/ Multidrug-Resistant Organisms**

Terri Bogue MSN, RN, PCNS-BC



## **Paraprofessionals Training**

# Leader's Guide – Before You Begin

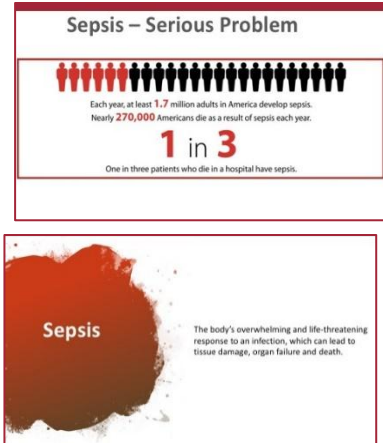
---



This training session includes videos that require internet access to access and play videos.

# Leader's Guide – Opening The Session

Visuals	Outline & Script	Time
<div data-bbox="85 386 459 598" style="border: 1px solid red; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Sepsis/Antibiotic Stewardship/ Multidrug-Resistant Organisms</p> <p style="text-align: center; font-size: small;">Terri Bogue MSN, RN, PCNS-BC</p> </div> <p>In this slide deck, notes for the instructors are given in brackets [ ]. These notes shouldn't be read aloud, but instead provide background information and context for the instructor's benefit.</p> <div data-bbox="85 1130 459 1342" style="border: 1px solid red; padding: 5px; margin-top: 10px;"> <p style="text-align: center;"><b>Objectives</b></p> <ul style="list-style-type: none"> <li>• Describe the six signs of sepsis.</li> <li>• Recognize that prompt treatment of sepsis is a medical emergency (resuscitation begins immediately, IV antibiotics within 1 hour) and requires immediate action.</li> <li>• Discuss the essential basic principles of antibiotic stewardship, including how antibiotics can cause harm.</li> <li>• Realize the significance and gravity of multidrug-resistant organisms (MDROs).</li> <li>• Identify MDROs commonly found in long-term care.</li> <li>• Describe how resident care must be done differently when a resident has an MDRO.</li> </ul> </div>	<ul style="list-style-type: none"> <li>• Introduction</li> <li>• Welcome</li> <li>• Set expectations</li> <li>• Go through 6 month overview</li> <li>• Logistics/FAQ</li> </ul> <p style="margin-top: 20px;">Let's take a look at what you can expect to get out of this training session.</p> <ul style="list-style-type: none"> <li>• Describe the six signs of sepsis.</li> <li>• Recognize that prompt treatment of sepsis is a medical emergency (resuscitation begins immediately, IV antibiotics within 1 hour) and requires immediate action.</li> <li>• Discuss the essential basic principles of antibiotic stewardship, including how antibiotics can cause harm.</li> <li>• Realize the significance and gravity of multidrug-resistant organisms (MDROs).</li> <li>• Identify MDROs commonly found in long-term care.</li> <li>• Describe how resident care must be done differently when a resident has an MDRO.</li> </ul>	<p style="text-align: center;">15 min</p> <p style="text-align: center;">11:00 - 11:15 AM</p>

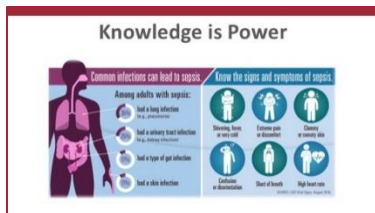
Visuals & Notes	Script & Notes	Time Estimate
	<p>Sepsis is a serious problem and a medical emergency. We should start by explaining what sepsis is and why it is so deadly.</p> <p>Sepsis starts out as an infection. When pathogens, or germs, get into someone’s body, they can cause an infection. If the infection isn’t stopped, it can cause sepsis. The most frequent sites of infections that lead to sepsis are the lungs, urinary tract, gastrointestinal system, and skin. These infections trigger a chain reaction that rapidly affects the entire body.</p> <p>Anyone can get sepsis. Does anyone know someone who has had sepsis?  (Typically, someone in every class knows someone or has even been affected themselves. Allow them to share their story if they want, though sometimes it is too painful to share.)</p> <p>There are certain risk factors that cause people to be at a higher risk of developing sepsis. These include adults over 65 years old; people with weakened immune systems; people with chronic medical conditions such as diabetes, lung disease, cancer, and kidney disease; and children younger than 1 year old. This means our residents have an increased risk of sepsis.</p> <p>Once an infection spreads into the blood, the pathway towards sepsis begins. This does not mean that everyone who has an infection will develop sepsis. However, once sepsis develops, the risk of death increases rapidly. Minutes matter! This is why it is so important to identify sepsis early and get the patient to the hospital for rapid</p>	

treatment. Sepsis is a medical emergency!

**Visuals & Notes**

**Script & Notes**

**Time Estimate**





The prevention of infections is the key to preventing sepsis; early recognition of sepsis is the key component of survival. Knowing and recognizing the signs and symptoms of sepsis can help you save a life.

The signs and symptoms of sepsis include shivering, fever or feeling very cold (“I just can’t get warm”), extreme pain or discomfort, clammy (cool and moist or sticky) or sweaty skin, confusion or disorientation (that is different from the resident’s norm), shortness of breath, and high heart rate.

You do not need to have all six signs of sepsis to have sepsis. Any one symptom or combination of symptoms is enough to alert nursing. When discussing with nursing, be sure to share your suspicion (remember we talked about sharing meaning when we discussed communication). Ask if this could be an infection leading to sepsis. It is better to ask the question and have a resident sent to the hospital and not have sepsis than to wait and have a resident die. Sepsis is that serious.

Your knowledge of the signs and symptoms of sepsis and the importance of communicating with nursing will save a life someday.

Visuals & Notes	Script & Notes	Time Estimate
	<p>We are going to move from talking about sepsis to discussing antibiotic stewardship. You may wonder why we are talking about antibiotic stewardship when you are not the person prescribing antibiotics.</p> <p>It is true that you will not be prescribing antibiotics for our residents. It is also true that our residents and their families will talk to you about what you think about antibiotics. They may ask you if you think they need them or if you think they should still be taking them. These questions should be directed to the nurse.</p> <p>We want you to understand a bit about antibiotic use and what antibiotic stewardship means, so that you do not inadvertently share beliefs or ideas that are not founded on fact.</p> <p>Antibiotic stewardship is a term used to describe a set of commitments and activities designed to “optimize the treatment of infections while reducing the adverse events and harms associated with antibiotic use.” I know that is not the most helpful definition for us today. In general, antibiotics are important when taken for the right reason, the right length of time, and for the right bacteria. Antibiotics also can cause harm, even when taken appropriately. Recognizing that not every illness requires an antibiotic and understanding the potential side effects of antibiotics and the impact of effective communication of observations are key factors in contributing to our antibiotic stewardship as a facility.</p>	

Visuals & Notes	Script & Notes	Time Estimate
	<p>Antibiotics are only effective against illness caused by bacteria. There are other medications that can be effective against fungi and some viruses, but antibiotics are only used to treat bacterial infections.</p> <p>A common thing happens with our residents. They or their families may notice that their urine smells “funny” (not funny like a clown fish). They automatically believe they need antibiotics. They may even ask you if you think their urine smells funny. Their urine may smell different, the truth is that what we eat (think about eating asparagus and how urine smells afterwards), how hydrated we are, and many other factors influence how urine smells. None of these causes relate to the need for an antibiotic.</p> <p>The same thing happens when a resident has a cold. A cold is typically caused by a virus, not a bacteria. Antibiotics will not cure a cold. Antibiotics are effective against some sinus infections, bronchitis, and pneumonia.</p> <p>Being able to say, “Maybe you do not need an antibiotic; let’s discuss it with the nurse,” rather than saying, “Yes, you probably do,” is an important step in antibiotic stewardship.</p>	

## Visuals & Notes

### Impact of Antibiotics

#### Adverse Drug Reactions

- *Clostridium difficile*
- Kidney injury
- Sepsis



#### Antibiotic Resistance

- Ability of bacteria to avoid the killing effect of an antibiotic
- Passed from one bacterium to another
- Spread from person-to-person





## Script & Notes




Antibiotics have risks, even when taken for the right reasons and in the right doses. Antibiotics are the key cause of *Clostridium difficile*, or *C. diff*, the serious and contagious diarrhea we have discussed (or will discuss). Antibiotics can cause kidney injury as they are metabolized. Antibiotics that do not cure an infection can lead to sepsis. Antibiotics impact specific bacteria, but not all bacteria. If the antibiotic is not effective against the bacteria causing the infection, the infection continues to spread and worsen.

Antibiotic resistance is the ability of a bacteria to change so that it is no longer susceptible to a given antibiotic. Exposure to antibiotics are the key to the development of antibiotic resistance. Once a bacteria becomes resistant to an antibiotic, it shares it resistant ability. This resistance is passed on from person to person.

## Time Estimate



Visuals & Notes	Script & Notes	Time Estimate
 <p data-bbox="118 498 222 595"><b>Multidrug-Resistant Organisms</b> (MDRO)</p>  <p data-bbox="105 909 161 929">Impact</p> <p data-bbox="322 973 444 1012">2,000,000 Americans develop serious infections from MDROs each year</p>	<p data-bbox="522 401 1136 774">Multidrug-resistant organisms, or MDROs, are one of the negative outcomes that can occur due to antibiotic use. As we just discussed, antibiotic resistance can occur and spread. MDROs include not only bacteria but also viruses, fungi, and parasites. These organisms have not only become resistant to one bacteria but to many different bacteria. There are even some pathogens that we have no antibiotics to treat.</p> <p data-bbox="508 915 1136 1025">The World Health Organization has identified MDROs as one of the greatest threats we face as a global community.</p> <p data-bbox="508 1070 1146 1213">Currently, 700,000 people die worldwide every year due to drug-resistant diseases. By 2050, it is estimated that 10,000,000 deaths will occur each year worldwide from drug-resistant diseases.</p> <p data-bbox="508 1257 1136 1329">Each of us has a responsibility to do our part to prevent the development and spread of MDROs.</p>	

Visuals & Notes	Script & Notes	Time Estimate												
 <p><b>Resistant Organisms</b></p> <table border="1"> <thead> <tr> <th>Abbreviation</th> <th>Antibiotic Resistance</th> </tr> </thead> <tbody> <tr> <td>MRSA</td> <td>Methicillin-resistant Staphylococcus aureus</td> </tr> <tr> <td>VRE</td> <td>Vancomycin-resistant Enterococci</td> </tr> <tr> <td>ESBL</td> <td>Extended-spectrum beta-lactamase (i.e. carbapenem)</td> </tr> <tr> <td>CRE</td> <td>Carbapenem-resistant Enterobacteriaceae (i.e. coliforms)</td> </tr> <tr> <td>MCR</td> <td>Resistant to three or more antibiotic classes (Pseudomonas aeruginosa / Acinetobacter species)</td> </tr> </tbody> </table>  <p><b>Prevention</b></p> <p>A collage of images illustrating infection prevention: a person in a lab coat, hands being washed, a person wearing a mask, a person in a hospital bed, and a person in a red cape.</p>  <p><b>Thank you for being a hero!</b></p> <p>An image of a person in a red cape standing against a sunset background.</p>	Abbreviation	Antibiotic Resistance	MRSA	Methicillin-resistant Staphylococcus aureus	VRE	Vancomycin-resistant Enterococci	ESBL	Extended-spectrum beta-lactamase (i.e. carbapenem)	CRE	Carbapenem-resistant Enterobacteriaceae (i.e. coliforms)	MCR	Resistant to three or more antibiotic classes (Pseudomonas aeruginosa / Acinetobacter species)	<p>Here are a few of the more common MDROs that you may hear about or have heard of.</p> <p>You can reduce the risk of sepsis and MDROs through all the ways you have learned to stop the spread of infection and alert the nurses to changes in the resident's condition.</p> <p>Infection prevention does not sound cool, but the things you have learned about preventing infection, sepsis, MDROs, and more have the ability to change the world. The life you save, the disease you prevent, is priceless.</p> <p>Thank you for taking the extra steps to protect our residents and yourself! We are glad you are here!</p>	
Abbreviation	Antibiotic Resistance													
MRSA	Methicillin-resistant Staphylococcus aureus													
VRE	Vancomycin-resistant Enterococci													
ESBL	Extended-spectrum beta-lactamase (i.e. carbapenem)													
CRE	Carbapenem-resistant Enterobacteriaceae (i.e. coliforms)													
MCR	Resistant to three or more antibiotic classes (Pseudomonas aeruginosa / Acinetobacter species)													