

SEPSIS: Prevent, Identify, Intervene

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Remedi Senior Care Consultant Pharmacist

Today, sepsis is the number one reason for readmission from a long-term care (LTC) facility to a hospital. Approximately 1.7 million people are diagnosed each year with sepsis, many of whom are LTC residents, and 16% of those diagnosed do not survive the infection. The Centers for Medicare and Medicaid Services (CMS) has identified the prevention, identification, and intervention against sepsis in long-term care settings to be a key area where improved understanding, procedure, and action can make a marked improvement in resident outcomes.

PREVENTION



Sepsis requires a source of infection. While there are many possible entry points for bacteria to enter the bloodstream, the most common LTC infections that develop into sepsis are wounds, urinary tract infections, pneumonia, and gastroenteritis. Effective prevention and treatment of these precursory infections is crucial to lowering rates of sepsis. CMS has recently updated guidelines on Enhanced Barrier Precautions [CMS document: QSO-24-08-NH] aimed at prevention of transmission of infections during high-contact resident care. These guidelines should be implemented where appropriate. Concerns have been raised that the increased use of personal protective equipment (PPE), which these guidelines recommend, may push the residents' sense of their environment in the LTC setting away from one of "home," increase cost, and take away valuable staffing time.

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Effective treatment of and follow-up on these common infections is just as important as their prevention. A common pair of breakdown points in treatment include failure to perform appropriate culture & sensitivity (C&S) labs and failure to act on the data provided by the C&S and/or order follow-up C&S labs, when appropriate. This often results in the incomplete treatment of the original infection and the development of drug resistance, even while the original infection “appears” to be treated from a symptomatic perspective and surveillance of the resident is relaxed, giving sepsis a chance to quietly develop. It is critical for facility leadership to develop and implement policies regarding C&S lab use and to monitor the execution of these policies throughout the facility.

IDENTIFICATION



The signs and symptoms of sepsis can be both sudden and yet sometimes subtle. As early identification is necessary for timely and appropriate intervention, staff must be vigilant at identifying these signs and symptoms.

Some of the common sepsis signs and symptoms identified by CMS and the Sepsis Alliance include the “**Three One-Hundreds**”:

- **Fever (temperature > 100°F)**
- **Tachycardia (pulse > 100)**
- **Hypotension (systolic blood pressure [SBP] < 100)**
- Chills and/or shivering
- Unusual and/or sudden pain/discomfort
- “Clammy” or sweaty skin
- Confusion/disorientation/sudden change in cognition
- A sudden change in ability to understand or perform Activities of Daily Living (ADL’s)
- Shortness of breath/wheezing



All caregivers should be educated to look for these signs and symptoms and to speak up if they are observed, especially those who have frequent contact with the residents. Family members should also be encouraged to let staff know when their loved one “just doesn’t seem right,” as they often know the resident’s baseline best.

INTERVENTION



Swift intervention must follow prompt identification to prevent sepsis from developing into septic shock. “Time is Tissue.” Once the possibility of sepsis is suspected, the resident’s physician should be contacted without delay. If it is determined that the resident will be treated in the LTC facility, it is crucial to think ahead to the possible directions the septic resident may take and implement measures that will inform future decisions and reduce reaction time. As recommended by CMS, a system of measures should be developed with the involvement of facility clinical leadership.

According to CMS' sepsis partners at the Health Quality Innovation Network (HQIN), these standard measures often include:

- Standard panel of sepsis labs – Complete Blood Count (CBC) with differential and lactate level
- Cultures throughout treatment, from two sites (not the IV lines), if possible
- IV access establishment for fluids should be considered, even if not immediately needed
- Interim review of medication regimen (iMRR) by a consultant pharmacist for interactions with any newly ordered antibiotics for sepsis
- Routine monitoring for worsening signs
 - Urine output < 400 mL/24h
 - SBP < 90
 - Deterioration of mental status
- Comfort measures
 - Pain/fever control
 - Frequent offering of fluids
 - Frequent repositioning
 - Family involvement
- Continual evaluation as to whether hospitalization is warranted

“Sepsis is the body’s extreme response to an infection. It is a life-threatening medical emergency. Without timely treatment, sepsis can rapidly lead to tissue damage, organ failure and death.”

WE CAN MAKE A DIFFERENCE



Preventing, identifying, and intervening to prevent the onset of sepsis requires a multi-discipline and systematic approach. Facility leadership should use the available resources from CMS and their partnerships (CDC, Sepsis Alliance, HQIN) as well as the expertise of their Medical Director, Remedi Clinical Consultant Pharmacist, Infection Control Nurse, and other providers to develop and implement a Sepsis Response Plan. Implementation and regular review of this plan via the Quality Assurance Performance Improvement process can reduce the incidence of sepsis in residents and improve the outcomes of those who do develop sepsis.

Please refer to page 8 for Sepsis infographics.

Selected resources

<https://www.mcknights.com/news/why-cms-is-shifting-its-infection-control-focus-to-sepsis/>
https://hqin.org/wp-content/uploads/2022/06/Meeting-the-Challenge-of-Sepsis-in-Long-Term-Care_508.pdf
<https://www.nigms.nih.gov/education/fact-sheets/Pages/sepsis.aspx>
<https://www.sepsis.org/sepsis-basics/symptoms/>
<https://hqin.org/wp-content/uploads/2021/06/Sepsis-Early-Detection-Toolkit-508.pdf>
<https://www.cms.gov/files/document/qso-24-08-nh.pdf>

TIPS

For a Safe and Fun Summer!

Prepared by Sarah Griffie, PharmD,BCGP
Remedi SeniorCare Midwest Lead Clinical Consultant Pharmacist

The season of sunshine and fun times is finally upon us! For most of us, summertime means taking time to enjoy the warm weather and sunshine outdoors, as well as participating in all the fun events and get-togethers that are bound to take place this season. As we get ready to enjoy and to help our residents make the most out of this summer, it is important that we do our best to make sure that these good times are enjoyed safely.



STAY HYDRATED

Dehydration is a dangerous problem that can easily escalate and lead to several adverse consequences and, even the potential need for hospitalization. Older adults become even more susceptible to dehydration as their sense of thirst and ability to conserve water decreases. The use of certain medications may also increase one's risk for dehydration including:

- Diuretics
- Laxatives
- Oral Antidiabetic agents
- Lithium
- Fentanyl and Opioid analgesics



When the heat and humidity start to rise, it's very important to prevent dehydration by maintaining adequate fluid intake.

- Dehydration may increase your risk of developing a heat-related illness.
- If your doctor has told you to limit your liquids, ask what you should do when it is very hot.
- Signs of hyperthermia include dizziness, muscle cramps, edema, rapid pulse, nausea, and weakness.



KEEP YOUR COOL

As the temperature rises, so does the risk of heat-related illnesses and the dangers associated with them. Individuals who may not be able to adjust as well to temperature changes and are most at risk for these illnesses include the elderly, obese, and those who have chronic medical conditions such as cardiac, pulmonary, and psychiatric disorders. One may also be more sensitive to heat stress if taking certain medications such as:

- Antipsychotic agents
- Thyroid hormones
- Medications with anticholinergic effects* (can decrease sweat production)

*Examples: benztropine (Cogentin), scopolamine (Transderm-Scop), oxybutynin (Ditropan)

When temperatures get extreme it is important to stay in air-conditioned areas as much as possible, wear appropriate clothing, and give baths or use cool cloths to cool down.



SHIELD YOUR SKIN: DON'T FORGET THE SUNSCREEN

To enjoy the outdoor sunshine safely, EVERYONE should wear sunscreen. Even if only going outside for a short time, sunscreen, with an SPF (Sun Protection Factor) of 15 or higher, should be applied liberally one-half hour before heading out, and be sure to reapply often. Wearing sunglasses outdoors is also very important, along with being sure to remove them once inside and taking time to adjust to the diminished light in order to prevent accidents. Taking appropriate precautions and avoiding sun exposure becomes especially important when someone is taking medication that may make them more sensitive or have a reaction to sunlight.

Common photosensitizing medications include:

- Certain antibiotics (including doxycycline, ciprofloxacin, levofloxacin, Bactrim)
- Diuretics
- NSAIDs
- Sulfonylureas
- Antidepressants
- Statins
- Amiodarone
- Many other medications may also contribute towards photosensitivity, making it a good practice to avoid sun exposure whenever possible and to contact your pharmacist if you have any questions regarding a specific medication.



CELEBRATE IN MODERATION

During some events taking place this season, there will likely be an opportunity to celebrate or relax with an alcoholic beverage. When having a drink, there are a few extra precautions to keep in mind. Since alcohol is a diuretic, be sure to drink plenty of water before, during, and after to stay adequately hydrated. Drinking alcohol can also impact judgment, making it more difficult to self-recognize symptoms of heat-related illness. It is important to be extra cautious of hypoglycemia since alcohol may not only cause a decrease in blood sugar, but can also mimic common symptoms of hypoglycemia such as dizziness and confusion.

While it may be difficult to impede on one's decision to enjoy alcohol in moderation, certain situations require intervention to prevent an adverse outcome. If taking a CNS-depressing medication such as a benzodiazepine, muscle relaxant, or opioid, it is important to understand how alcohol may increase these effects. Medications that can interact with alcohol and may cause a reaction resulting in immediate and severe hangover-like symptoms include metronidazole, isosorbide dinitrate, glyburide, nitrofurantoin, and Bactrim. Always be sure to promote responsible drinking and maintain a safe environment whenever alcohol is involved.



These are just a few tips to have in mind to help keep everyone safe this season and keep the good times as fun and enjoyable as possible.

Enjoy, and have a safe and healthy summer!

Selected resources

Clinical Pharmacology powered by ClinicalKey. Philadelphia (PA): Elsevier. c2024- [cited 2024 June 5]. Available from: <http://www.clinicalkey.com>.

Weathermon R, Crabb DW. Alcohol and medication interactions. Alcohol Res Health. 1999;23(1):40-54. PMID: 10890797; PMCID: PMC6761694.

"Hot Weather Safety for Older Adults." National Institute on Aging. Web. 3 June 2024.

<https://www.nia.nih.gov/health/safety/hot-weather-safety-older-adults>

"Extreme Heat and Your Health." CDC. Web. 3 June 2024.

<https://www.cdc.gov/extreme-heat/about/index.html>



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Remedi Superstar Nurse

Congratulations

ERIN ELDRIDGE, RN

Nurse Manager, Calhoun County Medical Care Facility (CCMCF)
Battle Creek, Michigan



Erin was nominated by her administrator, Stephanie Cornish, who shares that “Erin has been employed at CCMCF since 2005. She began as a member of the Life Enrichment team while she was in nursing school, transitioned to an RN Charge Nurse in 2011, and has been an RN Nurse Manager with CCMCF since 2016. As Nurse Manager, Erin oversees two of our neighborhoods to ensure resident needs are met and supports the staff in their work.

What makes Erin a Superstar Nurse is that she never hesitates to jump in and help the CNAs and Charge Nurses she supervises. It is not uncommon to find Erin out on the floor serving meals right next to her CNAs, assisting staff with personal care, or coming in on weekends to lend a hand with a planned discharge. She truly knows both her staff and residents on a personal level and takes a genuine interest in their well-being. She also is an advocate in IDT meetings to ensure their concerns are both voiced and heard.

Her experience of working as a Charge Nurse prior to becoming a Nurse Manager certainly has given her an added advantage in understanding how she can best support her team as she has truly been “in their shoes.”

The last four years, Erin has shined as a Nurse Manager in more ways than ever. As with many SNFs, staffing has been a challenge and our facility has not been immune to the staffing challenge. In the summer of 2020, when our facility was in the thick of our first COVID outbreak and needed to have a dedicated neighborhood that was a COVID isolation area, Erin jumped in without hesitation and temporarily worked as a Charge Nurse full-time in our COVID unit. Since then, she has selflessly gone back and forth between being a Nurse Manager and Charge Nurse when our facility was in need, which usually meant her working as a Charge Nurse on the night shift. She did this countless times throughout the pandemic and has greatly helped our facility while we were hiring and training new Charge Nurses.

It is not often that you find an employee like Erin. She has dedicated 19 years, and counting, of her life to CCMCF and I’m confident she will be with us for many more years to come.”

NOMINATE A FUTURE REMEDI NURSE SUPERSTAR!



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Download Sepsis resources



ANY KIND OF INFECTION CAN LEAD TO SEPSIS

Some common infections that can lead to sepsis include:

- URINARY TRACT INFECTIONS (UTIs)
- STREP THROAT • INFLUENZA • MRSA

- Sepsis is your body's life-threatening response to an infection.
- Sepsis is usually easy to treat if it is detected early.
- Sepsis kills 270,000 people each year in the U.S.

If you've had an infection or suspect an infection, and develop a combination of these symptoms, seek medical attention right away:



- T** TEMPERATURE: higher or lower than normal
- I** INFECTION: may have signs or symptoms of infection
- M** MENTAL DECLINE: confused, sleepy, difficult to rouse
- E** EXTREMELY ILL: severe pain, discomfort, shortness of breath

Take the **TIME** to learn the signs at sepsis.org.



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Sepsis is your body's life-threatening response to an infection and is a medical emergency.

When it comes to sepsis, remember **IT'S ABOUT TIME™**. Watch for:

- T** TEMPERATURE: higher or lower than normal
- I** INFECTION: may have signs or symptoms of infection
- M** MENTAL DECLINE: confused, sleepy, difficult to rouse
- E** EXTREMELY ILL: severe pain, discomfort, shortness of breath

CALL 911 OR GO TO A HOSPITAL AND SAY "I'M CONCERNED ABOUT SEPSIS"

Take the **TIME** to learn the signs at sepsis.org.



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