the Remedi Pulse

INFECTION CONTROL

Remedi SeniorCare EDUCATION Rx

A CLINICAL AND REGULATORY UPDATE FROM REMEDI SENIORCARE

WINTER 2017

Survey Solutions

with William Vaughan, BSN, RN
VP of Education & Clinical Affairs

Infection Control and Prevention: The Cost of Non-Compliance

In this, our first edition of the Pulse in 2017, we focus our attention on infection control. Nationwide, during 2016, surveyors cited 5,172 deficiencies at F tag 441 (Infection Control). With the phase 2 implementation of several related regulations scheduled to take place in late 2017, including antibiotic stewardship and the designation of an infection preventionist, it's likely the number of deficiencies involving infection control practices will increase. Below we review several recent, high-level deficiencies cited under F441 and analyze them to identify trend and patterns of care which reflect non-compliance. These immediate jeopardy level deficiencies often prompt the imposition of significant sanctions and can have a profoundly negative impact on a facility's 5 star rating.

- **SCABIES:** During the survey of a California nursing home in January of 2016, surveyors observed several residents and a staff member with pruritic rashes. During the previous month, one of the residents was diagnosed and treated for presumptive scabies. When roommates of this resident, as well as a nursing assistant who regularly cared for him, subsequently developed similar rashes, the facility failed to consider scabies as a possible etiology. After the surveyors intervened, a dermatologist evaluated each symptomatic resident and staff member. Skin scrapings were obtained and found to be positive for scabies. A "K" level deficiency (immediate jeopardy, pattern scope) was cited for the facility's failure to "identify, detect, treat, and develop appropriate infection control practices essential in preventing scabies outbreaks." CMS imposed a civil money penalty of $21,850.00 as well as a denial of payment for new admissions.

continued on page 4

"These immediate jeopardy level deficiencies often prompt the imposition of significant sanctions and can have a profoundly negative impact on a facility's 5 star rating."

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Please do not hesitate to contact your Remedi Consultant Pharmacist or Account Manager if you have any questions or concerns.

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Fast Facts: C. Difficile

Prepared by Rob Shulman, BS, R.Ph., CGP, FASCP, Director of Consulting Services

According to the Centers for Disease Control (CDC), almost 500,000 people are diagnosed with Clostridium difficile (C. diff) infection in the US and it is responsible for over 29,000 deaths annually. More than 80% of C. diff deaths occur in people over the age of 65, which is why healthcare providers should always act immediately and with purpose, when symptoms arise.

THE BASICS:

- C. diff is implicated in 10-20% of antibiotic-associated diarrhea
- Antibiotics kill fecal bacteria causing:
  1. Increase in fat in bowel leading to diarrhea
  2. Alterations in carbohydrate metabolism leading to an osmotic diarrhea
  3. Reduced fluid absorption creating an osmotic diarrhea
- Bloody stool is NOT present during C. diff infections, but is present during Klebsiella oxytoca infection

MEDICATIONS THAT MAY INCREASE RISK FOR C. DIFF:

- Residents on antibiotics are 7-10 times more likely to contract C. diff
- Proton Pump Inhibitors (PPIs), such as omeprazole
- H2 antagonists, (i.e., ranitidine, famotidine), though not as great as PPIs
- One study showed that the addition of doxycycline to a regimen of ceftriaxone produced a 27% lower risk of C. diff[1]

TESTING-BEST PRACTICES:

- Testing for C. diff should only be done on diarrheal unformed stool
- Testing of stool from an asymptomatic patient's stool and for cure is not recommended
- C. diff produces glutamate dehydrogenase (GDH) and, therefore, its presence is a confirmatory test for C. diff; a test for toxins is then needed to determine if it is a toxic strain
- Testing should occur prior to initiation of empiric therapy, as patients begin testing negative immediately upon receiving treatment (14% day 1, 35% day 2, and 45% day 3)

DRUG TREATMENT WITH ANTIBIOTICS:

- Treatment:
  - Mild to Moderate: WBC <15,000 and SrCr 1.5 times baseline: Metronidazole 500 mg PO Q8H 10-14 days
  - Severe: WBC 15,000 OR SrCr > 1.5 times baseline: Vancomycin 125 mg Q6H PO 10-14 days
- Prolonged treatment is not recommended as it leads to increased carriage and subsequent infection
- Fidaxomycin (Dificid) is as effective as vancomycin for C. diff treatment, but is significantly more expensive, and, therefore generally not a first choice drug

TREATING RECURRENCE:

- Up to a 50% recurrence rate (average 20%), with second recurrence rates up to 45%
- Treatment of first recurrence is with re-treatment using first drug used, unless disease has worsened
- Metronidazole should not be used for a second recurrence, as prolonged exposure results in increased risks of seizures, neuropathy, and leukopenia
- Use vancomycin, in a tapering dose, for second recurrence

OTHER TREATMENTS:

- Avoid: Anion exchange resins, such as cholestyramine and colestipol, which interfere with vancomycin and do not reduce the risk of recurrence
- Controversial: A recent large study on use of probiotics, such as lactobacillus (Bacid), in patients greater than 65 years old, showed no benefit
- Patients with C. diff diarrhea can become dehydrated and run the risk of hypokalemia
- Glucose based electrolyte solutions given PO, when needed
- Fecal microbiota transplant (stool transplant) is emerging as an alternative strategy for treating recurrent C. diff infections

PREVENTION:

- Hand washing and the use of gloves and gowns per Standard Precautions helps reduce the spread of C. diff to healthcare workers and their families
- Notifying healthcare sites when transferring a patient with C. diff
- Antibiotic stewardship programs have shown to significantly reduce the incidence of antibiotic use and subsequent C. diff infections
- Although controversial, national guidelines do not promote the use of probiotics for prevention at this time
  - Limited case studies have suggested the possibility of systemic infection due to the induction of live bacteria into the GI tract

Resources:
1. Nailor, M. Clostridium Difficile in the Older Adult: An ASCP Learning Module. http://learning.ascp.com/diweb/mylearning. Accessed 12-13-16.
2. Cochrane Database of Systematic Reviews: Antibiotic treatment for Clostridium difficile associated diarrhea in adults (Review) Nelson RL,Kelsey P, Leeman H, Meardon N, Patel H, et al.
3. N Engl J Med 2015; 372:825-834 February 26, 2015DOI: 10.1056/NEJMoa1408913.
4. Nailor, M. Clostridium Difficile in the Older Adult: An ASCP Learning Module. http://learning.ascp.com/diweb/mylearning. Accessed 12-13-16.

Sepsis: Prevent a Potential Deadly Outcome from an Infection

Prepared by Rebecca Ogden, BSN, RN, CRNI, Corporate Account Manager

The Centers for Disease Control (CDC) and Sepsis Alliance define sepsis as a complication caused by "the body's overwhelming and life-threatening response to infection, which can lead to tissue damage, organ failure, and death."[1] Sepsis is one of the most under estimated health risks and is a medical emergency requiring early detection and treatment for survival. It is vital for health care personnel in the post-acute setting to recognize early signs of sepsis, understand how to prevent sepsis, and realize residents may exhibit post-sepsis syndrome effects.

SEPSIS STATISTICS:

- Per the CDC, over 1 million cases of sepsis occur every year
- Over 285,000 deaths a year in the US occur from sepsis; 92,000 of these deaths are preventable
- Forty percent of septic patients are re-admitted to the hospital in 90 days and one-half of these re-admissions are preventable
- **Thousands of sepsis survivors (up to 50%) suffer from post-sepsis syndrome due to long-term, life-changing effects from sepsis**
  - **Older adult sepsis survivors**
    - **60% of hospitalizations for severe sepsis associated with deteriorated cognitive and physical function post sepsis**
    - **3.3 times greater chance of moderate to severe cognitive impairment occurring after a sepsis episode than for other hospitalizations**

For more information regarding post-sepsis syndrome, visit http://www.sepsis.org/sepsis/post-sepsis-syndrome/

SEPSIS CAUSE/RISK FACTORS:

- **Any** infection, from a small break in the skin integrity or an infection after a routine surgery or procedure can trigger sepsis
- Pneumonia, UTIs, and abdominal infections are the most common causes of sepsis
- Individuals **over 65 years of age** have a higher risk factor, as well as those with:
  - Impaired immune systems
  - Chronic illnesses (e.g., diabetes, AIDS, cancer, and kidney or liver disease)
  - Severe burns or wounds

SEPSIS TREATMENT:

- As soon as sepsis or suspected sepsis is identified, treat as a medical emergency
- The risk of death from sepsis increases by 7.6 percent with every hour that passes before treatment begins
- No specific diagnostic tools or treatment for sepsis
- The Surviving Sepsis Campaign created treatment bundles to be completed within 3 and 6 hours of time of presentation;* hospitals are required to follow these "bundles" for treating sepsis or suspected sepsis

Sepsis Alliance is an organization dedicated to raising sepsis awareness among heath care professionals and the general public. For more information, visit http://www.sepsis.org

See page 4 for Resources

TO BE COMPLETED WITHIN 3 HOURS:

- Measure lactate level**
- Obtain blood cultures prior to administration of antibiotics
- Administer broad spectrum antibiotics
- Administer 30 mL/kg crystalloid for hypotension or lactate ≥4mmol/L

**"Time of presentation" the time of triage in the emergency department or, if presenting from another care venue, from the earliest chart annotation consistent with all elements of severe sepsis or septic shock ascertained through chart review*

***An elevated blood lactate level is associated with a higher risk for developing septic shock and a poor outcome*

SEPSIS SIGNS/SYMPTOMS

- No single sign/symptom of sepsis
- **Any** signs/symptoms of infection as well as **any or combination** of these symptoms

S Shivering, fever, or very cold

E Extreme pain or general discomfort ("worst ever")

P Pale or discolored skin, clammy or sweaty skin

S Sleepy, difficult to rouse, confused or disoriented

I "I feel like I might die"

S Short of breath, rapid heart rate

(From Sepsis Alliance: http://www.sepsis.org/sepsis/definition/#)

SEPSIS PREVENTION

- Adhere to proper and consistent hand hygiene practices
- Follow Standard Precautions and aseptic technique -especially for injections, venipunctures, and infusion therapy
- Appropriate disinfection of medical equipment
- Vaccination of staff and residents
- Appropriate cleaning and treatment of any skin breakdown or wound
- Close monitoring for any signs/symptoms of sepsis, if residents have infections
- Assure prompt physician notification if sepsis suspected – say "I am concerned about sepsis," contact emergency medical services and transfer to acute care setting

Remedi Superstar Nurse

GIFTY APPINNIA, RN
Crown Pointe Care Center, Columbus, OH

CONGRATULATIONS to Gifty Appinnia, RN, at Crown Pointe Care Center in Columbus, OH, for being chosen as the Remedi Superstar Nurse. Gifty was nominated by her DON, Lynn Gutridge. Per Lynn, "Gifty is our night supervisor. For the past 12 years, she has been a nurse and employed at Crown Pointe. She is caring and compassionate to all the residents and staff. If a resident is having a bad day, Gifty will spend time with the resident. She serves as a liaison to the physicians, residents, and resident families. If a staff member needs assistance, Gifty will offer support in any way she can by helping with admissions and discharges, resident care, and answering questions from residents and their families. If she does not know the answer to a question, she will seek to find the answer. Gifty is the ultimate team player."

Email your Superstar Nurse nomination(s) to Rebecca.Ogden@RemediRx.com

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continued from page 1

- **NOROVIRUS:** A Texas nursing home was surveyed during February of 2016 and cited for an "L" level deficiency (immediate jeopardy, widespread scope) at F tag 441. The findings centered on an outbreak of norovirus which affected 35 residents and 16 staff members, but had the potential to affect all residents. The surveyors observed that the facility failed to limit contact between symptomatic and asymptomatic residents, failed to train and monitor staff on appropriate hand hygiene, failed to provide adequate and effective cleaning of symptomatic residents' rooms to prevent cross contamination, and failed to have an effective system in place to alert residents, visitors, and staff regarding the outbreak. Sanctions imposed by CMS included a civil money penalty of $81,023.00 and a denial of payment for new admission.

- **TUBERCULOSIS:** During October of 2016, a complaint survey was conducted at a Maryland nursing home. A "J" level deficiency (immediate jeopardy, isolated scope) was cited at F tag 441 because the facility failed "to ensure timely follow-up of the treatment and management of multiple residents who were identified at risk for exposure to a serious infectious disease." The deficiency report noted the diagnosis of tuberculosis in both a resident and staff member. An investigation by the local health department resulted in a recommendation that 19 residents receive "prophylactic medication to treat latent TB." This recommendation, however, was not acted upon for approximately one year. A civil money penalty of $8000.00 was imposed by the state survey agency but that amount paled in comparison to the $1,400,000.00 penalty imposed by CMS.

These deficiencies highlight themes often found in high-level deficiencies: numerous staff members and various disciplines failing to meet the standard of care, negative outcomes or the likelihood of negative outcomes affecting many residents, communication failures, prolonged time frames of non-compliance, and the absence of effective systems and processes. As the prevention of healthcare-acquired infections is a Health and Human Services quality initiative, providers should expect intense scrutiny of practices related to infection control. To succeed, leaders in nursing homes should make infection control a priority and part of their facility culture. As with most successful endeavors in LTC, it really does "take a village" to keep residents free from serious infections.

Note: Bill was a surveyor with the Maryland State Survey Agency from 1988 until 2001. He became Chief Nurse of the agency in 2001 and remained in that position until joining Remedi SeniorCare in 2013.

Sepsis: Prevent a Potential Deadly Outcome from an Infection

continued from page 3

Resources:

1. http://www.sepsis.org/files/sepsis-fact-sheet.pdf; https://www.cdc.gov/sepsis/pdfs/sepsis-fact-sheet.pdf
2. https://www.cdc.gov/sepsis/index.html
3. http://www.sepsis.org
4. http://www.survivingsepsis.org/Bundles/Pages/default.aspx