ProCare **HospiceCare** *January/February Edition 2016*

On-Demand Clinical News

To Treat or Not to Treat Urinary Tract Infections in Hospice Patients

Sheri Irvine, PharmD

Hospice patients often have symptoms that are attributed to urinary tract infections (UTI's), but these may be a result of other comorbid conditions during end of life.

Factors that can make a UTI or cause a false positive:

- Catheters-Increase risk of bacteria growth; patients are often treated for UTI's when catheter appears to be malodorous or cloudy, however the catheter may just need to be changed.
- Incontinence-Patients who are already incontinent due to age or co-morbidities can be misdiagnosed. However, they may potentially go untreated when necessary because symptoms are attributed to their preexisting condition.
- Receiving antipyretics or analgesics-patients often receive Tylenol and/or NSAID's, which can mask a fever caused by UTI's
- Cognition-UTI's are often treated due to altered mental status; however, patients often exhibit changes in mental status due to disease progression or end of life processes. This can be confusing as it is sometimes hard to differentiate between changes as a result of existing conditions or due to infection.
- History of recurrent UTI- Patients with chronic UTI's are preemptively treated if they experience any typical symptoms of a UTI, however this may be unnecessary as patient could be having symptoms of comorbidities or those that come with end of life processes.

Knowing that urinary tract infections are largely misdiagnosed, the decision to treat a urinary tract infection requires an individualized clinical approach. Studies show that treating patients with UTI's to help with symptom management is beneficial, when compared to treating other types of infections, like upper respiratory tract infection. On the other hand, treating UTI's unnecessarily can lead to resistance, increased costs, decreased quality of life, or side effects associated with antibiotics. The most important factor in deciding whether or not to treat a hospice patient is simply knowing your patient. Attached is an algorithm to assist in the decision making process of treating a UTI in hospice patients.

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Hypoglycemia Protocol for Hospice Patients

Sheri Irvine, PharmD

Deciding whether or not to treat hypoglycemia in hospice patients can be difficult. Providers often balance risk versus benefit and costs of treatment. There are no well-studied guidelines for hospice patients that determine when hypoglycemia should be treated and with what type of therapy. However, after researching the topic, the information provided in this article may assist with making patient specific recommendations for course of action.

Risk Factors/Causes:

- Medications: Sulfonylurea, Tramadol, Insulin, etc.
- Disease: renal failure, decreased gluconeogenesis from liver failure or tumors that secrete insulin-like growth factors, diabetes
- Comorbidities: mask hypoglycemia symptoms like dementia, AMS, and delirium

Signs/Symptoms:

- tachycardia, palpitations, diaphoresis, tremulousness, nausea, hunger, irritability, confusion, blurred vision, tiredness, difficulty speaking, and headaches

Tests:

- Patients with a recent history of hypoglycemia may utilize routine finger stick glucose testing to prevent unwanted symptoms of hypoglycemia. Appropriate in a care setting that allows monitoring and death is not imminent. Clinicians, patients and surrogate must discuss option.

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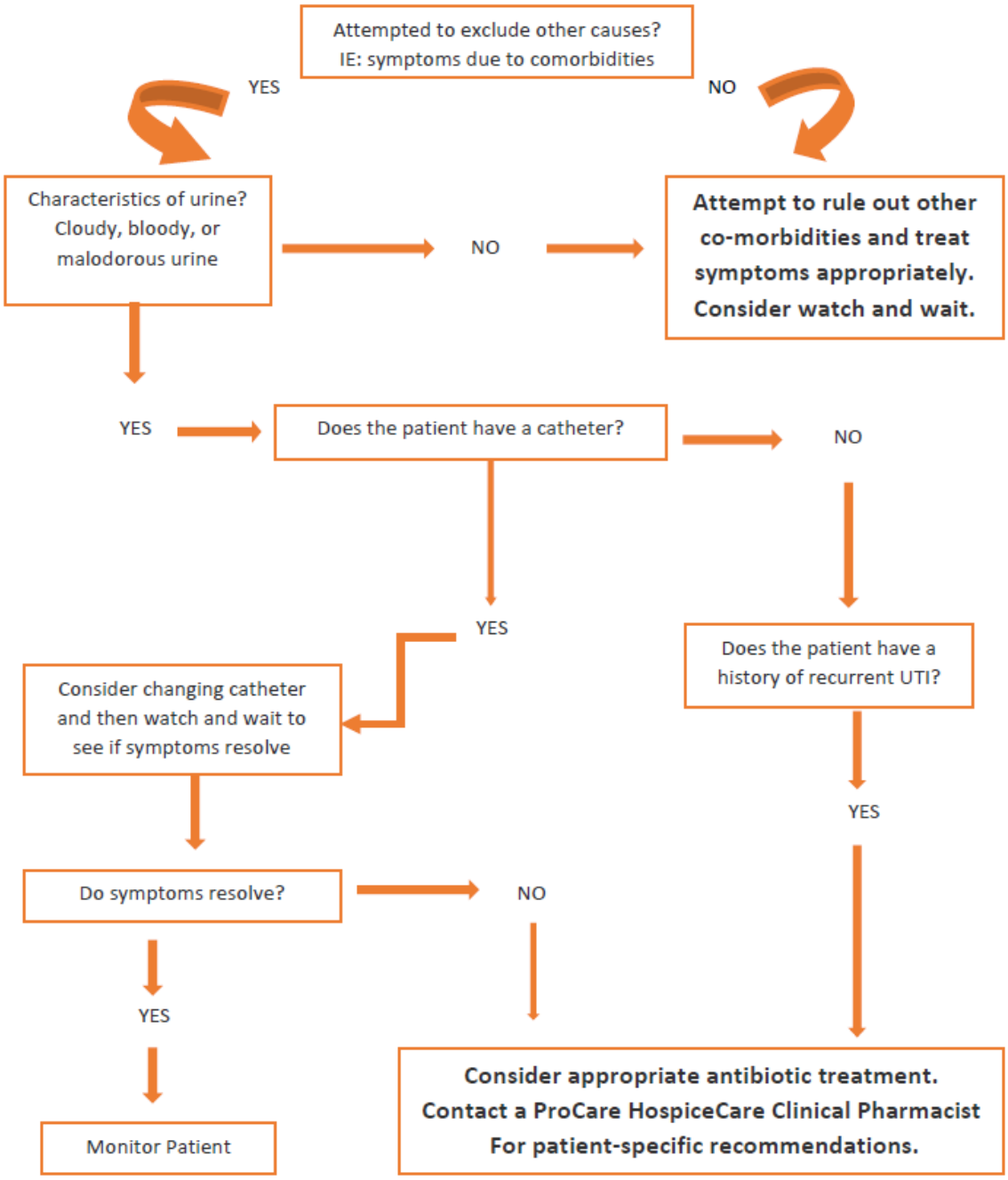
Algorithm to Aid Decision to Treat Urinary Tract Infections in Hospice Patients

Is the patient symptomatic?

Classic symptoms: increased urgency, frequency, dysuria, elevated temperature, altered mental status
Other signs of infection: hypotension, tachycardia, tachypnea, rales, respiratory distress, anorexia,



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Treatment Based on Hospice Goals	
What is Patient's PPS Score?	Desired Quality of life?
10%: Consider not treating hypoglycemia and treat symptoms 10-40%: Discuss with patient, caregiver/family, option to not treat hypoglycemia and just treat symptoms >40%: Consider treatment of hypoglycemia	Convenience, non-invasive, non-disruptive, and consistent with goals of care

Hypoglycemia Treatment Options	
Drug	Pros/Cons
Bolus of D50W IV: 25 g of Dextrose in 50 mL of fluid	Pros: Immediate onset Cons: Requires IV access
Oral Glucose Tabs	Pros: Inexpensive, easy to administer to those who can swallow Cons: May take up to 30 minutes to work
Glucagon	Pros: Can be given IM or subq, works within 5 minutes Con: Expensive, patient must have adequate liver glycogen stores to be effective

If your decision with health care providers, patient, and caregivers is to prolong life the following tables can assist in choosing the appropriate treatment:

BG less than 70 mg/dL, symptomatic, Patient Unconscious/Aggressive/ NPO		
Action/Treatment	Test	Follow-up treatment
D/C contributing medications IV access: Give 50 mL (25 grams) D50 IVP over 2-5 minutes No IV access: Give 1 mg Glucagon SC x1 and start IV access STAT.	Check BG and treat q 15 min until BG > 70 mg/dL without symptoms or, BG> 80 mg/dL. Glucagon should only be repeated x1	If able to swallow, give 15 g carbohydrate to avoid recurrence Suggestions: • 4 oz of milk or juice • Additional protein as tolerated like a sandwich or peanut butter Still NPO/unconscious/aggressive: • IV ACCESS: continue 5% Dextrose, recheck BG in 1 hour NO IV ACCESS: IV fluids with Dextrose. Check BG in 1 hour, follow treatment per IV access

BG 45-100 mg/dL, Patient Conscious/Cooperative/Able to Swallow		
Action/Treatment	Test	Follow-up treatment
D/C contributing medications Give 15-30 g carbohydrate Suggestions: 4-6 oz juice or milk 1-2 TBSP jelly or sugar 4-6 glucose tablets 1-2 tubes Dextrose Gel	Check BG and treat q15 min until BG > 70 mg/dL without symptoms or, or BG > 80 mg/dL	If able to swallow, give 15 g carbohydrate to avoid recurrence Suggestions: • 4 oz of milk or juice • Additional protein as tolerate • Sandwich, peanut butter Becomes NPO/unconscious/aggressive: Follow *Unconscious/Aggressive/ NPO*

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There are some situations based on patient and family preference that comfort care and symptom management are appropriate. The most common risk of hypoglycemia is seizures. The use of benzodiazepines would be the most appropriate treatment option. Lorazepam 1-2 mg PO/SL/PR/IM q 15 min to max of 6 mg/episode or, Diazepam 5-10 mg PO/PR q 10 min to max of 60 mg/episode are both commonly used to treat seizures.

The most important step in the treatment of hypoglycemia in hospice patients is the discussion of goals with the patient or caregivers. This will assist in determining what steps to take when necessary. Also recognizing the risk factors and symptoms will also reduce complications of low blood sugars. Depending on goals there are many options available that are clinically and cost effective for our patients.

References:

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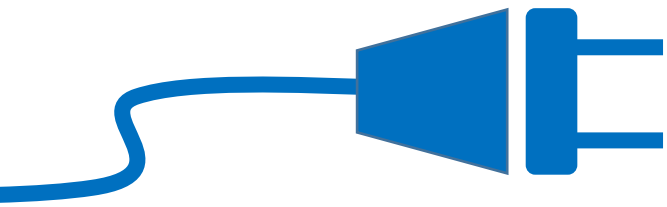

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Presenter: Nate Hedrick, PharmD
Tuesday, January 12, 2016 at 3:00pm ET; Wednesday, January 13, 2016 at 12:00pm ET

February: "Unique Routes of Administration in the Hospice Setting"
Presenter: Brett Gillis, PharmD
Tuesday, February 9, 2016 at 3:00pm ET; Wednesday, February 10, 2016 at 12:00pm ET

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