



Western
Health

ASBU Management in LTC Project



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Objectives

- Introduce the problem
- Review Best Practice Recommendations
- WH Implementation
- Explain WH Program
- CBLTC Outcomes to date

Asymptomatic bacteriuria

more common in seniors > 65 years

- Females – 25%
- Males – 15%

Increases with age > 80 years

- Up to 50% in females
- Up to 30% in males

Asymptomatic bacteriuria

Unfortunately many residents are treated for ASBU. This inappropriate treatment can cause:

- CDI
- AROs
- Increases pressure on remaining antibiotics

Best Practice Recommendations

- AMMI “Symptom Free Pee, Let it Be”
- PHO “UTI Program”

Best Practice Recommendations

- Obtain urine cultures **only** when residents have the indicated clinical S&S of a UTI.
- Obtain and store urine cultures properly.
- Prescribe antibiotics only when specified criteria have been met, reassess once urine culture and susceptibility results have been received.

Key Practice Changes LTC

- **Do not** screen routinely, annually, or on admission
- **Do not** prescribe antibiotics for Asymptomatic bacteriuria residents
- **Do not** collect urine samples on residents unless they have signs and symptoms of a UTI

WH Implementation

- Met with managers/VP
- CBLTC to be “intervention site” and BSGLTC to be the “control site”
- Developed our education power point
- Developed a pre and post test
- Worked with managers and educators to schedule everyone during the month of March for a one hour session
- Provided all units with tools

WH Program

- Focused on CBLTC home
- Targeted education to all front line staff and physicians with residents at CBLTC
- Provided tools/resources reminders
- Provided education for families/residents
- Working with our lab to get pre and post implementation data on the number of C&S sent.

1. Bacteria in the urine without symptoms of an infection are called asymptomatic bacteriuria.

- True
- False

Unless a resident has the specific urinary signs and symptoms of a UTI, urine should not be cultured and antibiotics should not be prescribed.

- True
- False

The following factors on their own indicate a UTI: 1) pyuria; 2) cloudy urine; 3) dehydration; 4) foul urine; 5) change in colour of urine; and 6) falls.

True

False

How to collect a proper urine specimen?

Collect midstream or clean catch urine.

Collect urine using an in and out urinary catheter

Collect urine in sterile bedpan

A &

All of the above

Steps to collecting urine are as follows except for:

Wash hands appropriately and thoroughly; include date and time

Refrigerator immediately

When patient meets the definition of a UTI

When patient has foul smelling or cloudy urine

When positive urine culture should be treated.

When

When collecting mid-stream urine you should carry out the following except:

Use an approved sterile container.

Wear gloves with hand hygiene

Remove the lid from the empty container and carefully set the lid upside down,

Making sure not to touch the inner surface of the lid.

Collect urine in a sterile bedpan

Which is a sign and symptom of a UTI?

Dark, cloudy urine

Dehydration

Question

A and D

B and C

C

All of the above

Elderly resident with a temperature of 37° C could be considered fever.

True
False

Which statement is not a best practice for long term care residents?

Obtain urine cultures only when residents have the indicated clinical signs and symptoms

Obtain and store urine cultures properly

Perform routine annual and admission screening for UTI

Prescribe antibiotics only when a specified criteria has been met

Education

- Signs and symptoms of UTI in elderly:
 - Fever: 1.1° C above baseline
 - Stressed importance of temperature monitoring for at least 48 hours
- Delirium causes
- Dispelled myths for “foul smelling urine”
 - Hydration requirements

Education continued

- When and HOW to collect and store a urine for culture and sensitivity
 - Additional sessions implemented for LPNs for competency on in and out catheterization (on going and I have A LOT of requests)
- How to interpret results
- Appropriate antibiotic selection, including dose, route, and duration
- DOCUMENTATION

Some resources used

Symptom-Free Pee: LET IT BE

A national initiative to stop inappropriate antibiotic use for asymptomatic bacteriuria in long-term care residents.

Asymptomatic bacteriuria (bacteria in the urine with no symptoms) is colonization of the bladder that occurs frequently in the elderly, especially those with diabetes, immobility, fecal incontinence, prostatic enlargement, or post-menopausal changes.

ANTIBIOTICS NOT INDICATED!

Asymptomatic bacteriuria is not an infection

➔ **Do not test urine even if foul-smelling, dark, or cloudy**

For hemodynamically stable residents with cognitive changes, seek other causes: drug interactions / side effects, dehydration, sleep disturbances, sensory deprivation, hypoxia, hypoglycemia, constipation, etc.

Note: Falls, decreased appetite, verbal aggression, wandering, confusion, and disorientation alone are not indications for urine testing.

HOLD URINE TESTING:

- ➔ **Monitor frequently**
- ➔ **Rehydrate / push fluids for 24 hours if not contraindicated**

Possible urinary tract infection if at least **TWO** are present:

- Fever / rigors
- Flank pain / suprapubic pain
- Pain on urination
- New frequency
- Hematuria
- New incontinence

Dipsticks are not recommended due to poor predictive value. Urine culture ideally should be submitted in preservative.

➔ **Send urine for urinalysis and urine culture**

IT IS HARD TO IGNORE A POSITIVE URINE TEST...

Unnecessary testing in colonized residents results in unnecessary antibiotics, which lead to adverse events (antibiotic resistance / failure, *C. difficile* infection, GI upset, etc.)

For more directions and guidance:
www.ammi.ca
#SymptomFreeLetItBe



UTI Program: When to collect a urine specimen for culture and susceptibility for non-catheterized resident



Send a specimen if the resident has the following symptoms:

Resident has new difficult or painful urination (Acute dysuria)

Or

Clinical Signs & Symptoms of a UTI

Two or more of the following:

- **Fever** (Oral temperature greater than 37.9°C or 1.5°C above baseline on 2 consecutive occasions within 12 hours)
- **New flank pain or suprapubic pain or tenderness**
- **New or increased urinary frequency, urgency**
- **Gross hematuria**
- **Acute onset of delirium in residents with a dvanced dementia***

*Notes:

- The following behavioural changes on their own do not indicate a UTI unless clinical symptoms develop (see box above):
 - Worsening functional status
 - Worsening mental status, increased confusion, delirium or agitation
- Falls should not be considered a presentation of infection



Do not collect a urine specimen

Unless a resident has symptoms of a urinary tract infection

Do not send a specimen for any of the following factors alone:

- **Pyuria or cloudy urine**
- **Fever (if non-catheterized)**
- **Smelly urine**
- **Change in urine colour**
- **Positive dipstick**
- **Dehydration**
- **Change in mental status**
- **Change in behaviour or function**
- **Falls**
- **Family request**

This resource is part of Public Health Ontario's Urinary Tract Infection (UTI) Program. For more information please visit www.publichealthontario.ca/UTI or email ipac@pahpo.ca.

Causes of Delirium in the Elderly (DELIRIUMS Acronym)

D

- Dehydration
- Depression
- Drugs
- New drug, increased dose or drug interaction. Including but not limited to:
 - Narcotics/opioids (especially meperidine [Demerol])
 - Benzodiazepines
 - Corticosteroids
 - Drugs with “anticholinergic” properties (effects may be additive), such as antihistamines (e.g., diphenhydramine [Benadryl]); hydroxyzine (Atarax); dimenhydrinate (Gravol); diphenoxylate/atropine (Lomotil); some antidepressants (e.g., amitriptyline, nortriptyline, desipramine, imipramine, doxepin, paroxetine); ranitidine (Zantac); muscle relaxants (e.g., cyclobenzaprine [Flexeril], methocarbamol); antipsychotics (e.g., clozapine, olanzapine, quetiapine); bladder agents (e.g., oxybutynin, tolterodine, darifenacin, solifenacin); benztropine; amantadine; carbamazepine, etc.
 - Anti-seizure medications
 - Digoxin if drug levels are too high
 - Multiple medications; multiple psychoactive drugs
 - Drug withdrawal (e.g., sedatives/benzodiazepines, alcohol, nicotine, some antidepressants)

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Causes of Delirium in the Elderly (DELIRIUMS Acronym)

E

- Electrolyte abnormalities (hypo-/hypermnatremia (low or high serum sodium), hypo-/hypercalcemia (low or high serum calcium))
- Endocrine disorders (e.g., thyroid or adrenal dysfunction)
- ETOH (alcohol) and other drug withdrawal

L

- Liver failure

I

- Infections (especially respiratory, skin, urinary tract)
- Impaired oxygenation (e.g., from exacerbations of chronic obstructive pulmonary disease, congestive heart failure, myocardial infarction)

R

- Renal failure
- Retention of urine or stool (constipation)
- Recent change in surroundings or emotional stress

I

- Immobilization (catheters or restraints)
- Injuries
- Increased pressure in the brain (intracranial)

U

- Untreated/undertreated pain

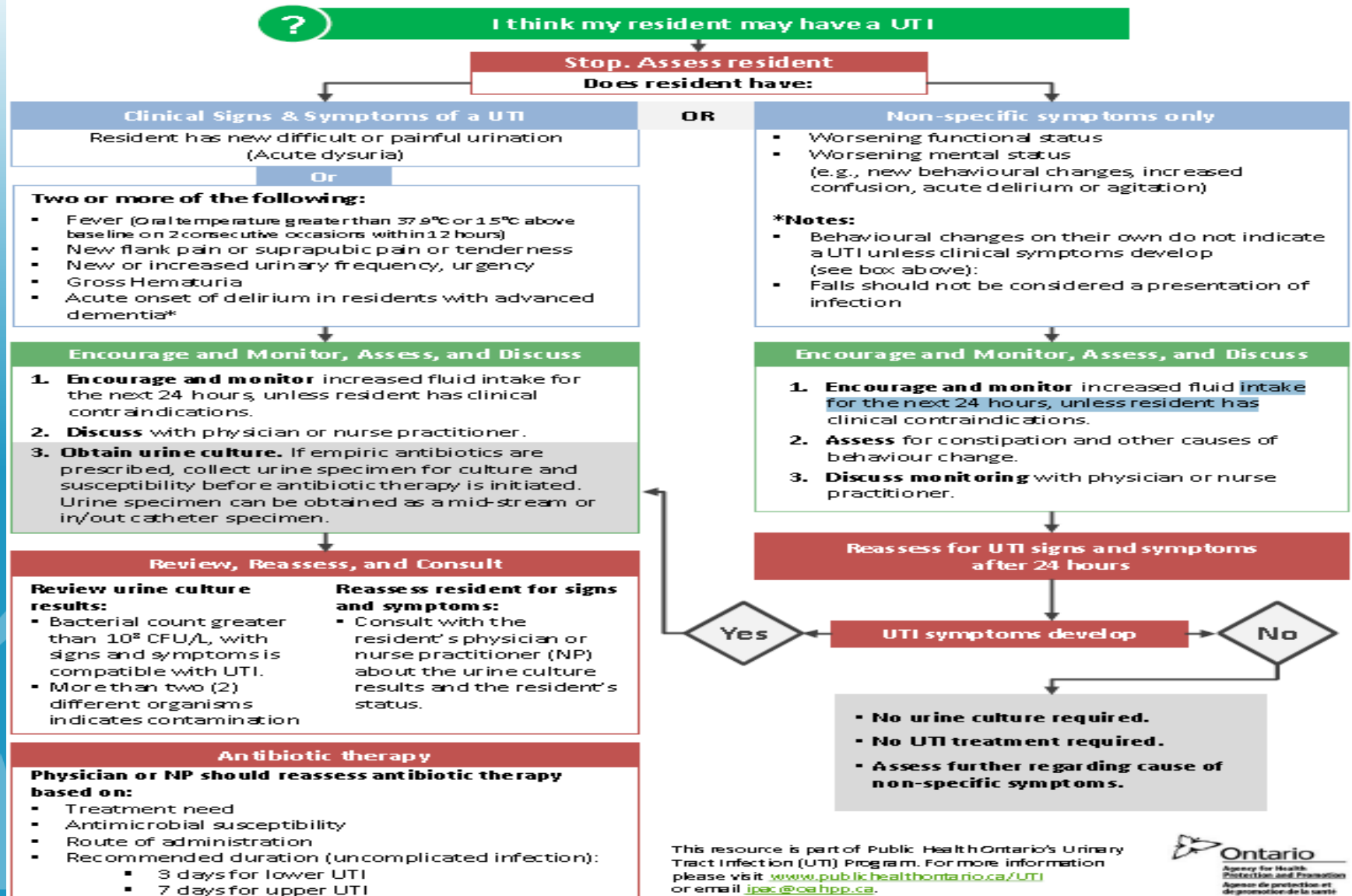
M

- Metabolic disorders (e.g., hypo-/hyperglycemia [low or high blood sugar levels], hypo-/hyperthermia [low or high body temperature])
- Malnutrition (including thiamine, folate or B12 deficiency)

S

- Sleep deprivation
- Sensory impairment (hearing or vision—e.g., lack of/ill-fitting hearing aids or glasses)
- Stroke

UTI Program: Assessment algorithm for urinary tract infections (UTIs) in medically stable non-catheterized residents



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Resident and Family Communication/Update

Date _____

We are presently watching _____ for signs of a urinary tract infection.

Over the next 24 hours, we will be:

- ✓ Watching for signs of infection and monitoring temperature.
- ✓ Encouraging or assisting with increased fluid intake as appropriate.
- ✓ Encouraging or assisting with increased mobility as appropriate.

Result/Outcome

- Assessment is finished. There are no signs of infection; no further action is needed.
- There may be a urinary tract infection. A urine specimen has been sent to the laboratory for testing.
- Antibiotics have *not* been started—we are waiting for the laboratory test results.
- Antibiotics have been started and will be reassessed after the laboratory test results are known.

If you have any questions, please speak to the nurse on duty.

Health care provider name (please print): _____ Signature: _____

RPN RN Nurse practitioner Physician

Cut along the dotted line

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RPN RN Nurse practitioner Physician

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CBLTC Outcomes

to date:

- about 95% staff have been trained
 - Pre test scores = 53% on average
 - Post test scores = 87% on average
- rine cultures sent April month:
- 2016 = 44
 - 2017 = 27

References

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- Public Health Ontario
<https://www.publichealthontario.ca/en/BrowseByTopic/IPAC/Pages/UTI.aspx>
- Zalmanovici TA, Lador A, Sauerbrun-Cutler MT, Leibovici L. Antibiotics for asymptomatic bacteriuria. Cochrane Database Syst Rev. 2015;4:CD009534. Available from: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009534.pub2/full>

FYI, hand hygiene risk

- FINGER PIERCING! It is a thing and it's here!



