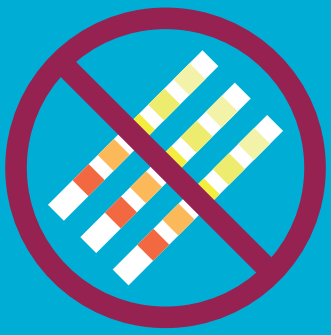
Staff Handbook

Assessment of Urinary Tract Infection (UTI) in Older People



SKIP THE DIP

for urinary tract infections in over 65s

RESIST

A quality improvement initiative to increase awareness of current best-practice guidance in assessment of UTI in people 65 years and over living in residential care facilities

Version 1.0 September 2023

FOREWORD

Antimicrobial resistance is recognised as one of the greatest potential threats to human health.

Reduction of harm in relation to antibiotic use and antimicrobial resistance is a key priority for the HSE.

Urinary tract infection (UTI) is the most common infection treated with antibiotics in older persons residential care facilities (RCFs).

The HSE “SKIP THE DIP for urinary tract infections in over 65s” quality improvement initiative aims to increase awareness of current best-practice guidance in assessment of UTI in people aged 65 years and older in residential care facilities.

Content produced by:

HSE Community Antimicrobial Pharmacists Group

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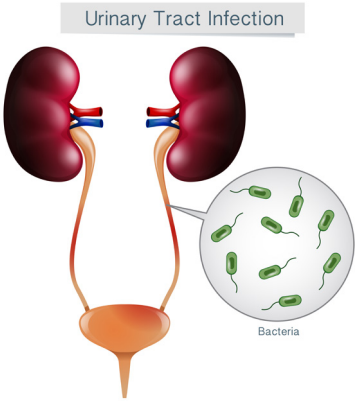
CONTENTS

Introduction to urinary tract infection (UTI)



UTI is caused by bacteria entering the bladder through the urethra (the tube connected to your bladder that allows pee to leave your body) and multiplying within the urine in the bladder. Bacteria may also travel up to the kidneys and cause a kidney infection (pyelonephritis) which can lead to blood stream infection and possibly sepsis.

These bacteria are usually the resident's own bowel bacteria. The bacteria may also be introduced through the presence of a urinary catheter.

UTI is the most common reason for antibiotics in residential care facilities (RCFs) in Ireland[1]. Older people living in RCFs are more vulnerable to infection, often having multiple illnesses, continence issues and in some instances temporary or indwelling urinary catheters. All of these factors increase the risk of UTI.

Accurate diagnosis and treatment of UTI is a key priority for the HSE due to increasing antimicrobial resistance and challenges in treating complicated UTI.

[1]Report of the findings of the Extended Point Prevalence Survey (PPS) of Antimicrobial Use in HSE Older Persons Residential Care Facilities 2020/2021, HSE Community Antimicrobial Pharmacists Group (refer to www.antibioticprescribing.ie).

Signs and symptoms of UTI

The signs and symptoms that a resident may have when they have a UTI can differ depending on whether they have a urinary catheter or not.

Without a urinary catheter

Does the resident meet the following criteria?

New onset dysuria (pain, burning and discomfort on passing urine) alone
or two or more of:

- Fever (Temperature greater than 37.9°C, or 1.5 °C above baseline) **or** shaking/chills **twice in last 12 hours**
- New urinary frequency
- New urinary urgency
- New onset of urinary incontinence
- New suprapubic/flank pain or tenderness
- Visible blood in the urine
- New onset or worsening delirium/debility (confusion/ agitation/ functional deterioration)

With a urinary catheter

Does the resident meet the following criteria?

One or more of:

- New suprapubic/flank pain
- Fever (Temperature greater than 37.9°C, or 1.5°C above baseline) **or** shaking/chills **twice in last 12 hours**
- New onset or worsening delirium/debility (confusion/ agitation/ functional deterioration)
- Visible blood in the urine

Refer to decision aid on page 10 for more information

Why SKIP THE DIP for UTI in over 65s?

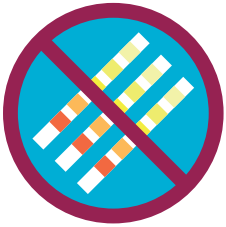
Bacteria can live in the urinary tract of older people without causing an infection.

Approximately half of persons aged 65 years or older, without symptoms of a UTI, will show urine dipstick positive for nitrites or leucocyte esterase, or a urine culture that will show presence of bacteria.

This is called “asymptomatic bacteriuria”. This is not harmful in the absence of signs and symptoms of infection.

Antibiotics provide no benefit in asymptomatic bacteriuria in older persons and may cause unnecessary harm.

For all persons aged 65 years and older, the use of urine dipsticks in assessing for evidence of a UTI is not a useful guide to management and is not recommended[2].



Urine dipsticks are likely to be positive if there are bacteria in urine, whether they are causing an infection or not.

[2] HSE position statements on Use of Dipstick Urinalysis to Assess for Evidence of Urinary Tract Infection in Adults (refer to www.antibioticprescribing.ie).

Myths and truths about UTI

MYTH	TRUTH
Dark or smelly urine = UTI	Dark or smelly urine is not an indicator of UTI in the absence of signs and symptoms and may be suggestive of dehydration
Urine should be sterile, therefore bacteria in the urine = UTI	Urine is not sterile, asymptomatic bacteriuria is common. Incidence of asymptomatic bacteriuria increases with age: • Up to 50% of residents over 65 years • Up to 100% of residents catheterised for over 4 weeks

What about hydration?

Keeping urine flowing through the bladder regularly is one of the main ways of protecting the body against infection.

Preventing dehydration and recognising the signs of dehydration are key interventions that you can make to reduce the risk of UTI.

Using the colour chart, if a resident's urine is darker, it could signify dehydration. In residents who are not fluid restricted, increasing their fluid intake can reduce the risk of UTI.

Antibiotics: more harm than good?

Antibiotics are essential for the management of many infections. We depend on them for essential treatments including transplants, hip replacements and many more.

They are a precious resource - the more we use them, the less they work due to resistant bacteria emerging.

To keep antibiotics working, it is important that we only use them when there is clinical evidence of an infection.

Giving antibiotics for asymptomatic bacteriuria means an older person is five times more likely to experience side-effects[3].

Some risks with using antibiotics are:

- Side-effects (for example rash, stomach upset, thrush)
- *Clostridioides difficile* infection (C.diff), a potentially life-threatening bowel infection
- **Antibiotic resistance:** resistant bacteria can easily spread in residential care facilities, so people who have not received antibiotics may also be at risk
- Medication interactions

[3] Krzyzaniak N et al. Antibiotics versus no treatment for asymptomatic bacteriuria in residents of aged care facilities: a systematic review and meta-analysis. British Journal of General Practice, September 2022.

How do I assess for UTI without a dipstick test?

- Focus on the signs and symptoms of UTI
- The HSE Decision aid for the management of suspected UTI in older persons in residential care is a tool to support the evaluation and management of a resident with suspected UTI (see next page)
- In suspected UTIs with non-specific signs and symptoms consider other possible causes, for example dehydration
- If there are specific signs and symptoms of a UTI, follow the decision aid algorithm in conjunction with medical advice
- If there are signs of sepsis, or if symptoms worsen, seek immediate medical advice

For guidance on the use of antibiotics for urinary tract infection refer to **www.antibioticprescribing.ie**

IN SUMMARY

1. **Bacteria in the urine can be normal in older people**
2. **Urine dipsticks are not recommended to assess for evidence of UTI in people 65 years of age and older**
3. **Diagnosis of a UTI should be made on clinical assessment of signs and symptoms**
4. **Use the decision aid to guide the management of suspected UTI in older persons**
5. **Using antibiotics when when they are not needed can cause unnecessary side effects and promote antimicrobial resistance**

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Decision aid for management of suspected urinary tract infection (UTI) in older persons (aged 65 years and over) in residential care

RESIST

This decision-aid is designed for staff in residential care settings to help evaluate residents with suspected UTI or collect information for discussion with medical staff.

UTI suspected: Urinary signs and symptoms, abnormal temperature, non-specific signs and symptoms.

Consider other causes of urinary signs and symptoms such as Genitourinary Syndrome of Menopause (vulvovaginal atrophy), urethritis, sexually transmitted infections, and prostatitis.

Do not perform urine dipsticks: Bacteria can live in the urinary tract without causing an infection. Approximately half of persons aged 65years and older who have no symptoms will have a positive dipstick urinalysis and urine culture, without an actual UTI. This "asymptomatic bacteriuria" is not harmful, antibiotics are not beneficial and can cause harm.

Does the resident have an indwelling urinary catheter?

No

Does the resident meet the following criteria?

- □ New onset dysuria alone **OR**

***2 or more of*:**

- □ Fever (Temperature >37.9°C, or 1.5°C above patient's baseline) **OR** shaking chills, twice in the last 12 hours *
- □ New urinary frequency
- □ New urinary urgency
- □ New onset urinary incontinence
- □ New suprapubic/flank pain or tenderness
- □ Visible haematuria
- □ New onset or worsening delirium/ debility (confusion/ agitation/ functional deterioration) *

*Non-verbal residents may not reach the threshold of 2 criteria, clinical judgement is advised.*If fever/chills and/or delirium/ debility only: Consider other causes before treating for UTI (See Box 1 below)*

Check vitals and consider other local/national resources for sepsis and/or delirium management.

Yes

UTI UNLIKELY

- Consider other causes of symptoms (*Box 1*).
- Ensure adequate hydration.
- Continue to monitor resident for 72hrs. Re-evaluate if worsening symptoms.

Yes

Does the resident meet the following criteria?

***1 or more of*:**

- □ New suprapubic/flank pain
- □ Fever (Temperature 37.9°C, or 1.5°C above patient's baseline) **OR** shaking chills, twice in the last 12 hours *
- □ New onset or worsening delirium/ debility (confusion/ agitation/ functional deterioration) *
- □ Visible haematuria

** If fever/chills and/or delirium/debility only: consider other causes before treating for UTI (See Box 1 below).*

Check vitals and consider other local/national resources for sepsis and/or delirium management.

Check for catheter blockage AND consider catheter removal or replacement

No

UTI UNLIKELY

- Consider other causes of symptoms (*Box 1*).
- Ensure adequate hydration.
- Continue to monitor resident for 72hrs. Re-evaluate if worsening symptoms.

UTI LIKELY

1. Send urine culture if feasible, before antibiotics are given.
2. **a)** If mild symptoms, consider back-up antibiotics in women without catheter and with low risk of complications.
   OR
   b) Offer immediate antibiotics using local/ national antibiotic prescribing guidelines. If urinary catheter in place for over 14 days, the catheter should be replaced (or ideally removed) as soon as possible but do not delay antibiotics.
3. Review antibiotic choice when culture result available, and in accordance with treatment response
4. Ensure adequate hydration.

If worsening signs or symptoms consider: admission or start/change antibiotic

BOX 1: CHECK for other causes of fever and/or delirium if relevant (PINCH ME)

Are there any symptoms suggestive of non-urinary infection such as?
Respiratory - shortness of breath, cough or sputum production, new pleuritic chest pain
Gastrointestinal - nausea/vomiting, new abdominal pain, new onset diarrhoea
Skin/soft tissue - new redness, warmth, swelling, purulent drainage

□ **P: Pain**	□ **M: Medication** (e.g. hypnotics, opioids)
□ **IN: INfection**	
□ **C: Constipation**	
□ **H: Hydration/ Nutrition**	□ **E: Environment change**

If yes, manage according to local/national guidelines

This booklet was developed by
the HSE Community Antimicrobial Pharmacists Group

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