NORTHERN IRELAND MEDICINES MANAGEMENT

Public Health Agency | HSC

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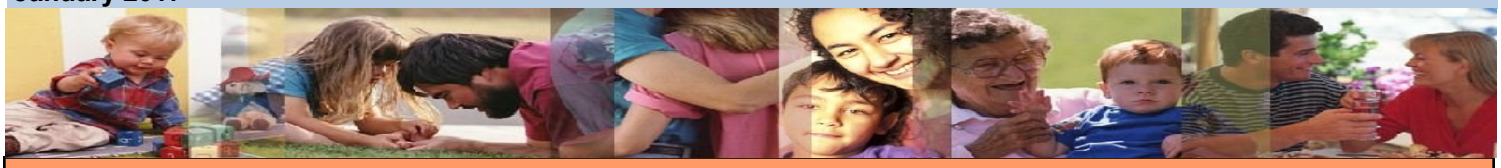
Health and Social Care Board



Newsletter Supplement: Urinary Tract Infections (UTIs)

How to Manage UTIs in Different Patient Groups

For full information refer to NI Formulary

Uncomplicated UTIs in Adults

Symptoms of UTI include dysuria, frequency, suprapubic tenderness, urgency, polyuria, haematuria, and fever ≥ 38°C.

Prescribe empirical antibiotic treatment if symptoms are severe or ≥ 3 symptoms of UTI and NO vaginal discharge/irritation.

Females under 65:

Do not routinely culture urine unless

- suspected pyelonephritis,
- failed antibiotic treatment or persistent symptoms,
- recurrent UTI,
- abnormalities of genitourinary tract,
- renal impairment.

Trimethoprim or	200mg	BD	Females: 3 days Males: 7 days
Nitrofurantoin or	50mg QDS or 100mg M/R BD		Females: 3 days Males: 7 days
Pivmecillinam (contraindicated in penicillin hypersensitivity)	400mg stat then 200mg	TDS	Females: 3 days Males: 7 days

Males under 65:

Send a pre treatment MSU OR if symptoms are mild/non-specific, use a negative nitrite and leucocytes to exclude UTI. Consider differential diagnosis, e.g. prostatitis, or chlamydia if sexually active.

Pregnant women

Pregnant women: Asymptomatic UTI

Dipsticks are not appropriate for diagnosing asymptomatic bacteriuria in pregnancy.

Treat following **TWO MSU results** with the same organism and treat as per laboratory reported culture and sensitivity.

Pregnant women: Symptomatic UTI

Send pre-treatment MSU for culture and sensitivity testing – indicate on laboratory request form that the sample is from a pregnant patient.

Commence **empirical** treatment with **cefalexin**, then deescalate treatment from cefalexin if appropriate when laboratory culture and sensitivity is available.

First line	Cefalexin	500mg	BD	7 days
Penicillin allergic	Nitrofurantoin (do not use at term / use with caution in third trimester)	50mg QDS or 100mg M/R BD		7 days
	Trimethoprim [off-label] (avoid in first trimester or if patient has low folate status or is on folate antagonist, e.g. antiepileptic medication)	200mg	BD	7 days

Recurrent Urinary Tract Infections in Women (>3 UTIs / year)

Diagnosis of recurrent UTI should be based on **laboratory reported culture and sensitivity and on clinical judgement –** the number of recurrences regarded as clinically significant depends on the risks of infection and the impact on the patient.

Prophylactic antibiotics

The patient should be counselled at an early stage that antibiotic prophylaxis is not usually a life-long treatment. Antibiotics are given in this way to allow a period of bladder healing which makes UTIs much less likely. There is no evidence that they have additional benefit beyond 6 to 12 months treatment, therefore prophylactic antibiotics should be reviewed regularly and **discontinued ideally after 6 months.**

Trimethoprim or	100mg	Nocte	Prophylactic use at night — take before going to bed, after emptying bladder. Maximum treatment — 6 months, then review.
Nitrofurantoin	50 — 100mg	Nocte	

Action for GPs

⇒ Review all patients on continuing prophylaxis for UTIs, including those within long-term care facilities (LTCFs). In most cases, it would be appropriate to stop the antibiotic if treatment has continued for more than 6 months.

⇒ Antibiotics for acute conditions should not be put onto repeat prescriptions, and long-term antibiotics (for **any** condition) should have a definite review / stop date.

Action for pharmacists

⇒ Ensure that patients who receive prophylactic antibiotics for more than 6 months are flagged to both GPs and care home staff for review.

Acute Pyelonephritis

For clinical management, including admission criteria see NICE Clinical Knowledge Summaries.

If admission is not needed, send MSU for culture and sensitivities, and start antibiotics.

If no response within 24 hours, admit.

Urgent admission to hospital: rarely, patients with acute pyelonephritis present with sepsis, multiple organ system dysfunction, shock and / or acute renal failure.

Ciprofloxacin	500mg	BD	7 days
Co-amoxiclav	625mg	TDS	14 days
If lab report shows sensitive: Trimethoprim	200mg	BD	14 days

Males and Females over 65 years

Do not treat asymptomatic bacteriuria, as it is very common and not associated with increased morbidity. Treating does not reduce mortality, or prevent symptomatic episodes, but does increase the chance of side effects and antibiotic resistance.

Cultures and Dipsticks

1. Urine culture in the over 65s: only send urine for culture if there are two or more signs of infection, especially dysuria, fever >38^{0}C, or new incontinence.
2. Dipsticks should NOT be used to diagnose UTI in older people, as diagnosis in this group should be made on the basis of urinary symptoms and signs of sepsis identified as part of a full clinical assessment.
3. Do NOT send urine for culture if an older patient, with no symptoms or other signs of a UTI, produces a positive leucocyte or nitrite dipstick reaction as part of the overall examination process (see point 1).

The Public Health Agency (PHA) has developed a decision aid, based on SIGN Guideline 88, '*Management of suspected bacterial urinary tract infection in adults'* to guide the management of a suspected UTI in older patients who are ***living in residential or nurse homes***. This is available on the NI Formulary website and is re-produced on the following page.

Catheter associated UTI

Antibiotics will not eradicate asymptomatic bacteriuria; only treat if systemically unwell or pyelonephritis likely

- Do not treat asymptomatic bacteriuria in those with indwelling catheters, as bacteriuria is very common.
- Treating with antibiotics does not reduce mortality or prevent symptomatic episodes, but does increase side effects and antibiotic resistance.
- Only send urine for culture in catheterised patients if there are features of systemic infection. Continuing antibiotic therapy for urinary tract infection should be based on laboratory reported culture and sensitivity. A seven day course of antibiotics is recommended in **symptomatic patients** and then review progress.
- **Do not offer prophylactic antibiotics routinely** when changing catheters in patients with long-term indwelling urinary catheters.

However, always:

⇒ Exclude other sources of infection.

⇒ Check that the catheter drains correctly and is not blocked.

⇒ Consider need for continued catheterisation. There should always be an appropriate indication for the use of urinary catheters and they should only be in place for as long as needed.

⇒ The catheter should normally be changed before / when starting antibiotic treatment. Allow the patient to remain without the catheter for as long as possible between removal of the catheter and insertion of a new catheter.

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DIAGNOSIS AND MANAGEMENT OF SUSPECTED UTI IN OLDER PEOPLE >65 YEARS OLD (Nursing Residential Home Setting)

Decision aid to guide management of residents reported to G.P. / OOHs with suspected UTI by a nursing / residential home

Confirm that resident has had temperature > 37.9◦C / < 36◦C on two occasions during a 12 hour period (at least 30 minutes apart.

Confirm that the resident does not have any non-urinary symptoms of infection and that they have two / more of the following:

Does patient/resident have two or more of following?

1. Shaking chills (Rigors)
2. New onset / increased confusion / agitation
3. Pain in flank (side of body) or suprapubic (above pubic bone) or new lower central back pain.
4. Visible blood in urine
5. Urinary catheter insitu
6. New onset of / increase in incontinence of urine
7. Pain when passing urine
8. Urgent need to pass urine
9. Having to pass urine more often than normal

YES

NO

UTI likely

- Check that care home has sent urine sample for culture & sensitivity (C&S) & decide whether or not to treat empirically or wait for culture & sensitivity results See management notes
- Advise care home to push fluids (if not on restricted fluid intake) & report any deterioration in resident.
- When results of urine sample are available **check if resident is still symptomatic** and treat in accordance with NI Management of Infection Guidelines for primary care.
- If urinary catheter is in place consider the need to instruct home to remove it versus the need for catheter to stay in place.

UTI unlikely but advise care home to continue to monitor the resident's symptoms for 72 hours (4 hourly temperature recordings & continuous observation for signs & symptoms of infection) & report any deterioration.

MANAGEMENT NOTES

Diagnosis of UTI is based on clinical assessment *not* laboratory testing as the presence of bacteria in the urine alone without signs of infection (asymptomatic bacteriuria) does not indicate a UTI.

- The frequency of asymptomatic bacteriuria increases with age and is common among Care Home residents
- Dipstick urinalysis **should not** be used to help diagnose UTI in residents > 65 years of age.
- Antibiotic therapy should not be initiated prior to receipt of C&S results (unless medical status is deteriorating rapidly).
- If required, selection of an antibiotic before C&S results are available should be based on NI Management of Infection Guidelines for primary care

http://cms.horizonsp.co.uk/viewer/nipha

Adapted from SIGN 88: Management of suspected bacterial urinary tract infection in adults July 2006 (updated July 2012) by Health protection Team, Public Health Agency (Northern Ireland), November (2015).

This newsletter has been produced for GPs and pharmacists by the Regional Pharmacy and Medicines Management Team. If you have any queries or require further information on the contents of this newsletter, please contact one of the Pharmacy Advisors in your local HSCB office:

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