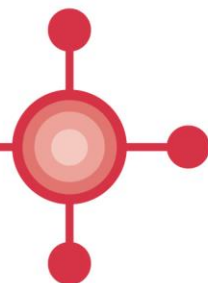


All Wales Medicines Strategy Group

Grŵp Strategaeth Meddyginiaethau Cymru Gyfan



Primary Care Empirical Urinary Tract Infection Treatment Guidelines

July 2018

This document has been prepared by All Wales Antimicrobial Guidance Group (AWAGG), with support from the All Wales Prescribing Advisory Group (AWPAG) and the All Wales Therapeutics and Toxicology Centre (AWTTC), and has subsequently been endorsed by the All Wales Medicines Strategy Group (AWMSG).

Please direct any queries to AWTTC:

All Wales Therapeutics and Toxicology Centre
University Hospital Llandough
Penlan Road
Llandough
Vale of Glamorgan
CF64 2XX

awttc@wales.nhs.uk
029 2071 6900

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GLOSSARY

BASHH	British Association for Sexual Health and HIV
BD	Twice daily
BNF	British National Formulary
CKS	Clinical Knowledge Summaries
EAU	European Association of Urology
GFR	Glomerular filtration rate
MC&S	Microscopy, culture and sensitivities
M/R	Modified-release
MSU	Mid-stream urine
NICE	National Institute for Health and Care Excellence
PHE	Public Health England
QRG	Quick reference guide
SIGN	Scottish Intercollegiate Guidelines Network
SPC	Summary of Product Characteristics
TDS	Three times daily
UKTIS	United Kingdom Teratology Information Service
UTI	Urinary tract infection

APPROPRIATE PRESCRIBING OF ANTIBIOTICS IN THE TREATMENT OF URINARY TRACT INFECTION IN PRIMARY CARE

Ensure appropriate dosing—adjusted for age, body weight, renal and hepatic function—and consider potential drug interactions and adverse drug reactions. See SPC or BNF for further details.

Infection	Formulary Choice	Adult Dose (unless otherwise specified)	Duration of Treatment
UTI in adults (no fever or flank pain) PHE QRG EAU 2017 SIGN 88 NICE CG139 NICE QS90 NICE CKS women NICE CKS men	Treat according to sensitivities on recent MSU results if available, otherwise treat empirically Do not treat asymptomatic bacteriuria except in pregnancy , or in exceptional circumstances after consultation with a relevant specialist team (e.g. urology, renal transplant teams, etc.); it is common in adults > 65 years but is not associated with increased morbidity. Catheter in situ: antibiotics will not eradicate asymptomatic bacteriuria ; only treat if systemically unwell or pyelonephritis likely. Do not use prophylactic antibiotics for catheter changes unless history of catheter-change-associated UTI or trauma (NICE and SIGN guidance). Men: If symptoms mild/non-specific, use negative dipstick to EXCLUDE UTI. If infection is indicated, consider prostatitis and send pre-treatment MSU. Nitrofurantoin is not recommended for men with suspected prostate involvement because it is unlikely to reach therapeutic levels in the prostate. Resistance to many agents is increasing, particularly in the elderly (> 65 years). If high risk of resistance, send urine for MC&S. Risk factors for resistance: Care home resident, recurrent UTI, hospitalisation for > 7 days in the last 6 months, unresolving urinary symptoms, recent travel to areas of high antimicrobial resistance (outside northern Europe & Australasia), previous resistant UTI. Complicated infection defined as all males, females with renal impairment, abnormal urinary tract, poorly controlled diabetes or immunosuppression.		
	Patient <65 years and NO risk factors for resistance	Nitrofurantoin (if GFR over 45 mL/min) or Trimethoprim	100 mg m/r BD 200 mg BD
Patient ≥ 65 years or risk factors for resistance present	First line: Nitrofurantoin (if GFR over 45 mL/min) (Trimethoprim can be used if a recent MSU shows sensitivity)	100 mg m/r BD (200 mg BD)	Uncomplicated - 3 days Complicated - 7 days
	Second line: Pivmecillinam (Warning: β-lactam, do not use if allergic to penicillin) or Fosfomicin	400 mg TDS 3 g sachet	Uncomplicated - 3 days Complicated - 7 days Women: 3 g PO stat (plus additional 3 g dose 3 days later if complicated UTI) Men: 3 g PO stat plus 3 g dose 3 days later (Prescribing in men and complicated UTIs are both off-label)

Infection	Formulary Choice	Adult Dose (unless otherwise specified)	Duration of Treatment
Acute prostatitis BASHH NICE CKS	Send MSU for culture and start antibiotics. A 4 week course may prevent chronic prostatitis. Fluoroquinolones achieve higher prostate levels.		
	First line: Ciprofloxacin or Ofloxacin	500 mg BD	14–28 days (review at 14 days)
	Second line: Trimethoprim (if known sensitivities and fluoroquinolone not appropriate)	200 mg BD	
Acute pyelonephritis NICE CKS	If admission not needed, send MSU for MC&S and start antibiotics. If no response within 24 hours, admit.		
	Ciprofloxacin	500 mg BD	7 days
	or Co-amoxiclav	625 mg TDS	7 days
UTI in pregnancy PHE QRG NICE CKS women UKTIS – amoxicillin UKTIS – cephalosporins	Send MSU for culture and start antibiotics. Short-term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus. Avoid at term and close to or during labour or delivery due to risk of neonatal haemolysis. This includes patients with threatened pre-term labour.		
	First line: Nitrofurantoin (Avoid at term - may produce neonatal haemolysis)	100 mg m/r BD	7 days
	Amoxicillin (If susceptible MC&S results)	500 mg TDS	7 days
	Second line: Cefalexin	500 mg BD	7 days

Infection	Formulary Choice	Adult Dose (unless otherwise specified)	Duration of Treatment
Lower UTI in children PHE QRG NICE	Send pre-treatment MSU for all children with suspected UTI. Child < 3 months: refer urgently for assessment. Child ≥ 3 months: use positive nitrite to guide antibiotic use. Imaging: only refer if child < 6 months, or recurrent or atypical UTI.		
	First line: Nitrofurantoin or Cefalexin	See BNF for Children*	3 days
	Second line: Trimethoprim	See BNF for Children*	3 days
	If susceptible (MC&S): Amoxicillin	See BNF for Children*	3 days
Upper UTI in children PHE QRG NICE	Refer all cases to a paediatrician for further investigation. Send pre-treatment MSU for all children with suspected UTI. Child < 3 months: refer urgently for assessment. Child ≥ 3 months: use positive nitrite to guide antibiotic use. Imaging: only refer if child < 6 months, recurrent or atypical UTI.		
	First line: Co-amoxiclav	See BNF for Children*	10 days
*Dosages in Children: Details of drug dosage and administration can be found in the BNF for Children			