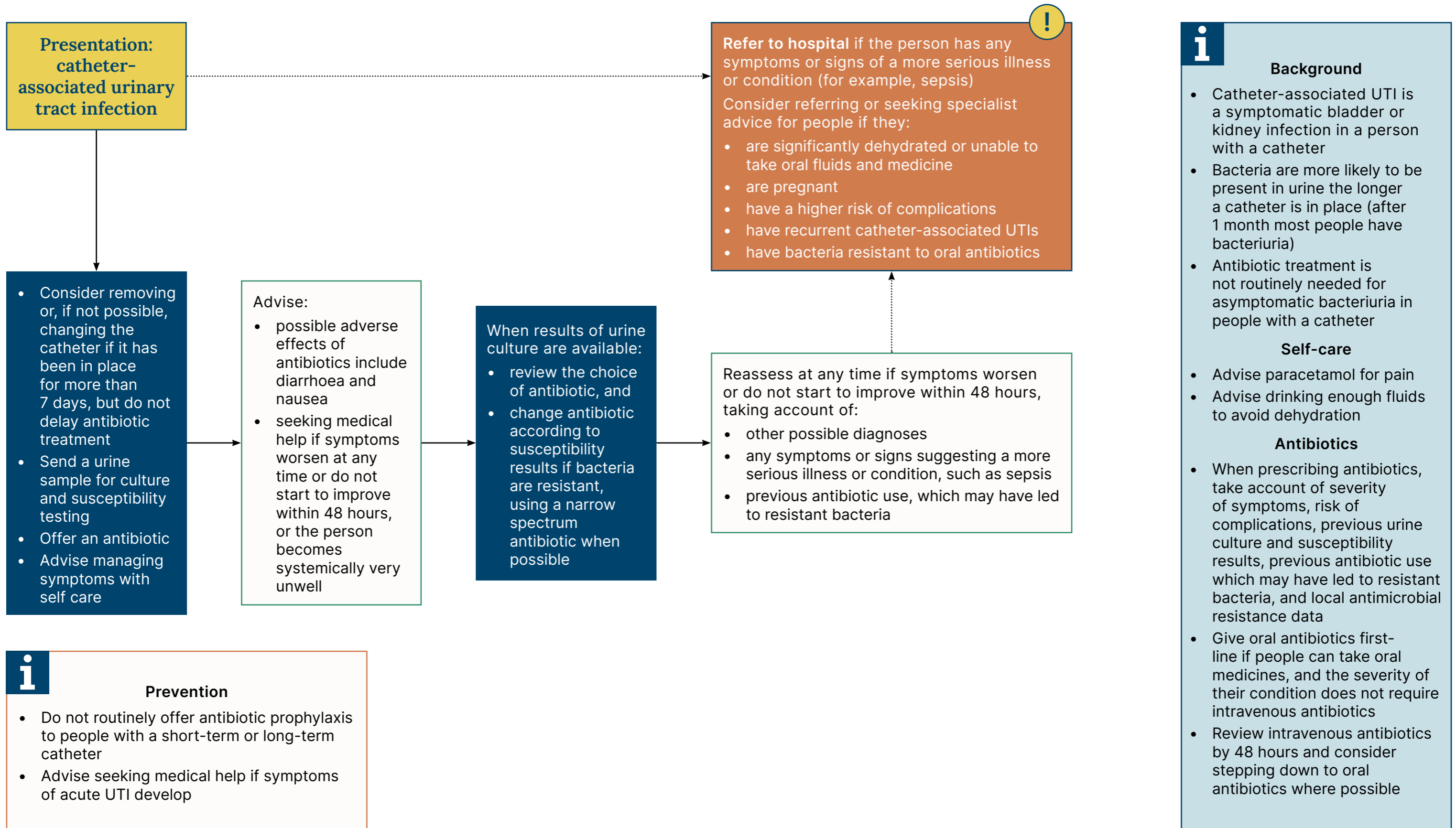



UTI (catheter): antimicrobial prescribing



UTI (catheter): antimicrobial prescribing

Choice of antibiotic for non-pregnant women and men aged 16 years and over

Antibiotic	Dosage and course length
First-choice oral antibiotics if no upper UTI symptoms	
Nitrofurantoin (if eGFR 45 ml/min or more)	100 mg modified-release twice a day (or if unavailable, 50 mg four times a day) for 7 days
Trimethoprim (if low risk of resistance)	200 mg twice a day for 7 days
Amoxicillin (only if culture results available and susceptible)	500 mg three times a day for 7 days
Second-choice oral antibiotic if no upper UTI symptoms (when first choice not suitable)	
Pivmecillinam (a penicillin)	400 mg initial dose then 200 mg three times a day for a total of 7 days
First-choice oral antibiotics if upper UTI symptoms	
Cefalexin	500 mg twice or three times a day (up to 1 to 1.5 g three or four times a day for severe infections) for 7 to 10 days
Co-amoxiclav (only if culture results available and susceptible)	500/125 mg three times a day for 7 to 10 days
Trimethoprim (only if culture results available and susceptible)	200 mg twice a day for 14 days
Ciprofloxacin (only if other first-choice antibiotics are unsuitable) 	500 mg twice a day for 7 days

Notes


For **all antibiotics**: see [BNF](#) for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, breastfeeding, and administering intravenous antibiotics. Check any previous urine culture and **susceptibility results** and antibiotic prescribing, and choose antibiotics accordingly.

For **intravenous antibiotics**: review by 48 hours and consider stepping down to oral antibiotics where possible.

For **nitrofurantoin**: this option may be used with caution if eGFR is 30 to 44 ml/min to treat uncomplicated lower UTI caused by suspected or proven multidrug resistant bacteria, and only if potential benefit outweighs risk (see [BNF information on nitrofurantoin](#)).


For **nitrofurantoin** and **pivmecillinam**: these options are only licensed for uncomplicated lower UTIs, and are not suitable for people with upper UTI symptoms or a blocked catheter.

For **trimethoprim**: a lower risk of resistance is likely if not used in the past 3 months, previous urine culture suggests susceptibility (but this was not used), and in younger people in areas where data suggests low resistance. Higher risk of resistance is likely with recent use and in older people in care homes.

 **Warning**: for **ciprofloxacin**, see [MHRA January 2024 advice for restrictions and precautions for using fluoroquinolone antibiotics](#) because of the risk of disabling and potentially long-lasting or irreversible side effects. These fluoroquinolones must now only be prescribed when other commonly recommended antibiotics are inappropriate.

For **gentamicin** and **amikacin**: therapeutic drug monitoring and assessment of renal function is required for adjusting doses (see [BNF information on gentamicin](#) and [BNF information on amikacin](#)).

Choice of antibiotic for non-pregnant women and men aged 16 years and over, continued

Antibiotic	Dosage and course length
First-choice intravenous antibiotics (if vomiting, unable to take oral antibiotics, or severely unwell). Antibiotics may be combined if susceptibility or sepsis is a concern	
Co-amoxiclav (only in combination or if culture results available and susceptible)	1.2 g three times a day
Cefuroxime	750 mg to 1.5 g three or four times a day
Ceftriaxone	1 to 2 g once a day
Gentamicin	Initially 5 mg/kg to 7 mg/kg once a day, subsequent doses adjusted according to serum gentamicin concentration
Amikacin	Initially 15 mg/kg once a day (maximum per dose 1.5 g once a day), subsequent doses adjusted according to serum amikacin concentration (maximum 15 g per course)
Ciprofloxacin (only if other first-choice antibiotics are unsuitable) 	400 mg twice or three times a day
Second-choice intravenous antibiotics: consult local microbiologist	

UTI (catheter): antimicrobial prescribing

Choice of antibiotic for pregnant women aged 12 years and over

Antibiotic	Dosage and course length
First-choice oral antibiotic	
Cefalexin	500 mg twice or three times a day (up to 1 to 1.5 g three or four times a day for severe infections) for 7 to 10 days
First-choice intravenous antibiotic (if vomiting, unable to take oral antibiotics, or severely unwell)	
Cefuroxime	750 mg to 1.5 g three or four times a day
Second-choice antibiotics or combining antibiotics if susceptibility or sepsis a concern: consult local microbiologist	

Notes

For **all antibiotics**: see [BNF](#) for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, breastfeeding, and administering intravenous antibiotics. Check any previous urine culture and **susceptibility results** and antibiotic prescribing, and choose antibiotics accordingly.

For **intravenous antibiotics**: review by 48 hours and consider stepping down to oral antibiotics where possible.

UTI (catheter): antimicrobial prescribing

Choice of antibiotic for children and young people under 16 years

Antibiotic	Dosage and course length
Refer children under 3 months to paediatric specialist and treat with intravenous antibiotics in line with the NICE guideline on fever in under 5s	
Children aged 3 months and over: first-choice oral antibiotics	
Trimethoprim (if low risk of resistance)	3 to 5 months, 4 mg/kg (maximum 200 mg per dose) or 25 mg twice a day for 7 to 10 days; 6 months to 5 years, 4 mg/kg (maximum 200 mg per dose) or 50 mg twice a day for 7 to 10 days; 6 to 11 years, 4 mg/kg (maximum 200 mg per dose) or 100 mg twice a day for 7 to 10 days; 12 to 15 years, 200 mg twice a day for 7 to 10 days
Amoxicillin (only if culture results available and susceptible)	3 to 11 months, 125 mg three times a day for 7 to 10 days; 1 to 4 years, 250 mg three times a day for 7 to 10 days; 5 to 15 years, 500 mg three times a day for 7 to 10 days
Cefalexin	3 to 11 months, 12.5 mg/kg or 125 mg twice a day for 7 to 10 days (25 mg/kg two to four times a day [maximum 1 g per dose four times a day] for severe infections) 1 to 4 years, 12.5 mg/kg twice a day or 125 mg three times a day for 7 to 10 days (25 mg/kg two to four times a day [maximum 1 g per dose four times a day] for severe infections) 5 to 11 years, 12.5 mg/kg twice a day or 250 mg three times a day for 7 to 10 days (25 mg/kg two to four times a day [maximum 1 g per dose four times a day] for severe infections) 12 to 15 years, 500 mg twice or three times a day (up to 1 to 1.5 g three or four times a day for severe infections) for 7 to 10 days
Co-amoxiclav (only if culture results available and susceptible)	3 to 11 months, 0.25 ml/kg of 125/31 suspension three times a day for 7 to 10 days (dose doubled in severe infection) 1 to 5 years, 0.25 ml/kg of 125/31 suspension or 5 ml of 125/31 suspension three times a day for 7 to 10 days (dose doubled in severe infection) 6 to 11 years, 0.15 ml/kg of 250/62 suspension or 5 ml of 250/62 suspension three times a day for 7 to 10 days (dose doubled in severe infection) 12 to 15 years, 250/125 mg or 500/125 mg three times a day for 7 to 10 days
Children aged 3 months and over: first-choice intravenous antibiotics (if vomiting, unable to take oral antibiotics or severely unwell). Antibiotics may be combined if susceptibility or sepsis a concern	
Co-amoxiclav (only in combination unless culture results confirm susceptibility)	3 months to 15 years, 30 mg/kg three times a day (maximum 1.2 g three times a day)
Cefuroxime	3 months to 15 years, 20 mg/kg three times a day (maximum 750 mg per dose), increased to 50 to 60 mg/kg three or four times a day (maximum 1.5 g per dose) for severe infections
Ceftriaxone	3 months to 11 years (up to 50 kg), 50 to 80 mg/kg once a day (maximum 4 g per day); 9 to 11 years (50 kg and above), 1 to 2 g once a day; 12 to 15 years, 1 to 2 g once a day
Gentamicin	Initially 7 mg/kg once a day, subsequent doses adjusted according to serum gentamicin concentration
Amikacin	Initially 15 mg/kg once a day, subsequent doses adjusted according to serum amikacin concentration

Children aged 3 months and over: for second-choice intravenous antibiotics, consult local microbiologist

Notes

See over page.

UTI (catheter): antimicrobial prescribing

Choice of antibiotic for children and young people under 16 years, continued

Notes

For **all antibiotics**: see [BNF for children](#) (BNFC) for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, and administering intravenous antibiotics. For prescribing in pregnancy, refer to the table on choice of antibiotic for pregnant women aged 12 and over. Age bands apply to average size and, in practice, age bands will be used with other factors such as the severity of the condition and the child's size. Check any previous urine culture and **susceptibility results** and antibiotic prescribing, and choose antibiotics accordingly. If a child or young person is receiving prophylactic antibiotics, treatment should be with a different antibiotic not a higher dose of the same antibiotic.

For **intravenous antibiotics**: review by 48 hours and consider stepping down to oral antibiotics where possible for a total antibiotic course of 10 days. If intravenous treatment is not possible, consider intramuscular treatment, if suitable.

For **trimethoprim**: a lower risk of resistance is likely if not used in the past 3 months, previous urine culture suggests susceptibility (but this was not used), and in younger people in areas where data suggests low resistance. Higher risk of resistance is likely with recent use.

For **gentamicin** and **amikacin**: therapeutic drug monitoring and assessment of renal function is required for adjusting doses (see [BNFC information on gentamicin](#) and [BNFC information on amikacin](#)).