East and North Hertfordshire Clinical Commissioning Group

NHS Herts Valleys Clinical Commissioning Group

GUIDANCE FOR THE MANAGEMENT OF INFECTION IN PRIMARY CARE WITHIN HERTFORDSHIRE

Issue Number	**3**
Date of Review	**2 years from date of issue**

NHS East and North Herts and NHS Herts Valley's CCGs are committed to being organisations within which diversity, equality and human rights are valued. We will not discriminate either directly or indirectly and will not tolerate harassment or victimisation in relation to gender, marital status (including civil partnerships), gender reassignment, disability, race, age, sexual orientation, religion or belief, trade union membership, status as a fixed-term or part-time worker, socio-economic status and pregnancy or maternity.

This document was prepared on behalf of NHS East and North Hertfordshire Clinical Commissioning Group and NHS Herts Valleys Clinical Commissioning Group by the Pharmacy and Medicines Optimisation Team from NHS East and North Hertfordshire CCG.

This document is available electronically or in a larger font or alternative format on request.

Document History

Policy Precedents	Guidance for the management of infection in primary care within Hertfordshire	July 2015, (updated January 2016)
Ratified by HMMC	8th June 2017	
Review Date	2 years from date of issue	

GUIDANCE FOR THE MANAGEMENT OF INFECTION

Contents

Purpose

To support the appropriate prescribing of antibiotics in primary care.

Disclaimer

Whilst every effort has been made to ensure the accuracy of this guideline, the authors cannot accept any responsibility for any errors or omissions. The prescriber should be aware of any side effects, drug interactions or patient specific contra-indications as detailed in the current British National Formulary or the Summary of Product Characteristics.

Changes from January 2016

- **Addition of choice of antibiotic for the following indication:**
  - Salivary Gland Infection (Sialadenitis)
  - Lower UTI in children
  - Upper UTI in children

- **Revised or new drug choices for:**

Condition	Changed from (January 2016)	Changed to (May 2017)
UTI in pregnancy	2nd line choice Trimethoprim 200mg BD (off label use) or Cefalexin♣ 500mg BD (less preferred)	2nd line choice Cefalexin♣ 500mg BD or Amoxicillin 500mg TDS if susceptible
UTI with catheter	1st line choice Trimethoprim 200mg BD	1st line choice Nitrofurantoin 100mg BD

	2nd line choice Nitrofurantoin 100mg BD MR or 50mg QDS	MR or 50mg QDS 2nd line choice Trimethoprim 200mg BD
UTI - recurrent (≥ 3 per year) in non-pregnant women over 14 years	1st line choice Trimethoprim 100mg nocte 2nd line choice Nitrofurantoin 50mg to 100mg nocte	1st line choice Nitrofurantoin (immediate release) 100mg nocte 2nd line choice Trimethoprim 100mg nocte

- **Revision / addition to comments or advice in the following sections:**
  - Principles of treatment. Link added for delayed prescribing
  - Educational resources – Removed as deemed as unnecessary
  - Pneumonia and C-reactive protein (CRP) test – Removed as deemed as unnecessary
  - Guidance on infection control in schools and other childcare settings. Updated to include conjunctivitis advice
  - Specific drug warnings – Removed as deemed as unnecessary
  - Reference sources used – Updated in view of new guidance
  - Pharyngitis / sore throat / tonsillitis – Replace Centor with feverPAIN score as per PHE
  - Lower respiratory tract infections – Removed as deemed as unnecessary
  - Acute bronchitis – Add 'do not routinely prescribe' in 1st line choice section
  - Acute exacerbation of COPD – Add "and increased shortness of breath and/or increased sputum volume"
  - Community acquire pneumonia – Add CRP65 score = 3
  - Urinary tract infections – See Appendix
  - *Chlamydia trachomatis* – Add opportunistically screen 15-24 years
  - *Trichomonas vaginalis* – Add breastfeeding
  - Bites (animal and human) – Have separate human and cat/dog sections
  - Dermatophyte infection of the skin – Add "If intractable, send skin scrapings, and if infection confirmed, use oral terbinafine/itraconazole. Scalp: discuss, oral therapy indicated."

Cumulative changes from November 2014 to January 2016

- **Addition of choice of antibiotic for the following indications:**
  - Otitis Externa (acute)
  - Bronchiectasis
  - UTI in women – no visible haematuria, not pregnant or catheterised
  - UTI in women – visible or non visible haematuria, not pregnant
  - Asymptomatic bacteriuria in pregnancy
  - Catheter in situ
  - UTI with catheter
  - Pilonidal sinus disease (discharging)
  - Post-operative wound infection

- **Revised or new drug choices for:**

Condition	Changed from (November 2014)	Changed to (April 2015)
Otitis media (acute)	Azithromycin 2nd line choice	Azithromycin removed from guidelines
Sinusitis (acute)	Amoxicillin 1st line choice	Amoxicillin 2nd line choice
Bronchitis (acute)	Doxycycline 1st line choice	Doxycycline 2nd line choice and clarithromycin added as a further 2nd line choice in penicillin allergy
Acute Exacerbation of COPD		Clarithromycin added as further 2nd line choice
Community acquired pneumonia	Clarithromycin and doxycycline 1st line choices	Clarithromycin and doxycycline 2nd line choices
Meningitis	Cefotaxime 2nd line choice	Cefotaxime removed from guidelines
UTI in men	Nitrofurantoin 1st line choice	Nitrofurantoin 2nd line choice and pivmecillinam added as further 2nd line

		choice
UTI – recurrent		Nitrofurantoin added as further 2nd line choice
Pyelonephritis (acute)	Co-amoxiclav 1st line choice	Co-amoxiclav 2nd line choice and cefalexin added as a 2nd line option for pregnant women
Clostridium difficile infection (CDI)		Fidaxomicin added as a further 2nd line choice
CDI recurrence		Fidaxomicin added as 1st line choice
Helicobacter pylori eradication		Metronidazole added as an option for 1st line choice in combination with amoxicillin and clarithromycin added as a further option for 2nd line choice
Threadworm	Piperazine/senna 1st line choice	Piperazine/senna removed from guidelines
Vaginal candidiasis in pregnancy		Miconazole 2% cream added as a 2nd line choice
Bacterial vaginosis	Metronidazole gel 1st line choice	Metronidazole gel 2nd line choice
Epididymo-orchitis	Co-amoxiclav 2nd line choice for over 35 years	Co-amoxiclav removed from guidelines and ofloxacin added as a further 2nd line choice for over 35 years
Pelvic inflammatory disease	Metronidazole plus ofloxacin 1st line choice and Ceftriaxone plus metronidazole plus doxycycline 2nd line choice	Ceftriaxone plus metronidazole plus doxycycline 1st line choice and metronidazole plus ofloxacin 2nd line choice
Helicobacter pylori eradication	PPI BD plus tripotassium dicitratobismuthate 240mg BD plus 2 unused antibiotics: amoxicillin 1G BD, metronidazole 400mg BD, tetracycline 500mg QDS, clarithromycin 500mg BD	PPI BD plus 2 unused antibiotics: amoxicillin 1G BD, metronidazole 400mg BD, tetracycline 500mg QDS, clarithromycin 500mg BD, levofloxacin 250mg BD

- **Revised dosage or frequency or duration of treatment for:**

Condition	Changed from (November 2014)	Changed to (April 2015)
Community acquired pneumonia	Course length 7 days for CRB65 = 0	Course length 5 days for CRB65 = 0
Community acquired pneumonia	Course length 10 days for CRB65 = 1	Course length 7 to 10 days for CRB65 = 1
UTI in pregnancy	Cefalexin 250mg QDS	Cefalexin 500mg BD
Clostridium difficile infection (CDI)	Metronidazole 400mg	Metronidazole 400mg to 500mg
Helicobacter pylori eradication	Tripotassium dicitratobismuthate 120mg QDS	Tripotassium dicitratobismuthate 240mg BD
Vaginal candidiasis in pregnancy	Course length 6 nights	Course length 7 days
Bacterial vaginosis	Course length for stat dose of metronidazole 7 days	Course length for stat dose of metronidazole 5 to 7 days
Epididymo-orchitis	Course length for over 35s 10 days	Course length for over 35s 10 to 14 days
Trichomonas vaginalis	Metronidazole 400mg	Metronidazole 400mg to 500mg
Acne (moderate or severe)	Course length 4 to 6 months	Course length up to 6 months
Bites (animal and human)	Metronidazole 400mg	Metronidazole 200mg to 400mg
Dermatophyte infection of the finger or toe nail	Amorolfine course length for toes 12 months	Amorolfine course length for toes 9 to 12 months
Shingles	Famciclovir 250mg	Famciclovir 500mg

- **Revision / addition to comments or advice in the following sections:**
  - Principles of treatment
  - Educational resources – addition of link to patient information leaflet
  - *Clostridium difficile* Infection

- Pneumonia and C-reactive protein (CRP) test
- Guidance on infection control in schools and other childcare settings
- Fosfomycin specific drug warning
- Nitrofurantoin specific drug warning
- Pivmecillinam specific drug warning
- Upper Respiratory Tract Infections
- Pharyngitis / Sore throat / Tonsillitis
- Otitis media (acute)
- Sinusitis (acute)
- Lower Respiratory Tract Infections (LRTIs)
- Bronchitis (acute)
- Acute Exacerbation of COPD
- Community acquired pneumonia
- Meningitis
- Urine dipstick testing
- UTI in pregnancy
- UTI in children
- UTI recurrent
- Pyelonephritis (acute)
- Prostatitis (acute)
- Gastroenteritis
- *Clostridium difficile* infection (CDI)
- CDI recurrence
- *Helicobacter pylori* eradication
- Threadworm
- Diverticulitis (acute)
- Vaginal candidiasis
- Vaginal candidiasis in pregnancy
- Bacterial vaginosis
- *Chlamydia trachomatis*

- Epididymo-orchitis
- *Trichomonas vaginalis*
- Pelvic inflammatory disease
- Acne (moderate or severe)
- Bites (animal and human)
- Dermatophyte infection of the nail
- Dermatophyte infection of the skin
- Eczema
- Leg ulcers
- PVL
- Shingles
- Treatment algorithms for management of UTI

Aims

The aims of these guidelines, in line with evidence based national guidelines and primary care priorities are to:

- Promote the safe, effective and economic use of antibiotics.
- Manage the prescribing of antibiotics thus reducing the incidence of antibiotic associated infections such as *Clostridium difficile* infection (CDI) and MRSA infection.
- Minimise the emergence of bacterial resistance to antibiotics within the community.
- Assist prescribers in selecting an appropriate antibiotic for commonly encountered infections.

Principles of treatment

- This guidance is based on the best available evidence but professional judgement should always be used and patients should be involved in the decision making process.
- Choices of antibiotic are based on clinical evidence and not on cost as the aim is to reduce the incidence of healthcare associated infections.

- Antibiotics should be initiated as soon as possible in severe infection.
- Prescribing of antibiotics should only occur where consideration has been given to the origin of infection, there is a clinical need and the presence of viral infection such as sore throat, coughs and colds, viral conjunctivitis has been excluded.
- **Antibiotics should not be prescribed during a telephone consultation apart from in exceptional circumstances**.
- Consider the use of a delayed prescription for infections such as simple urinary tract infections, acute sore throat, acute cough, acute sinusitis, common cold or the RCGP antibiotic information leaflet available at. https://goo.gl/R2ZgIv
- Where an antibiotic is indicated, the agent chosen should be the narrowest spectrum for the identified condition i.e. avoid broad spectrum antibiotics such as co-amoxiclav♣, cephalosporins♣ and quinolones♣.
- Always prescribe for the shortest duration (using broad spectrum antibiotics for long periods can promote resistance).
- Always prescribe generically.
- Avoid topical antibiotics unless indicated as they can promote resistance.
- Always check for allergy before prescribing an antibiotic.
- In pregnancy, take specimens to inform treatment, use this guidance alternative or seek expert advice. Penicillins, cephalosporins and erythromycin are not associated with increased risks. If possible, avoid tetracyclines, quinolones, aminoglycosides, azithromycin, clarithromycin, high dose metronidazole (2g stat) unless the benefits outweigh the risks. Short-term use of nitrofurantoin is not expected to cause foetal problems (theoretical risk of neonatal haemolysis). Trimethoprim is also unlikely to cause problems unless poor dietary folate intake, or taking another folate antagonist.
- For recurrent or resistant infection, please contact your local microbiologist for advice.

Clostridium difficile **Infection (CDI)**

- All antibiotic prescribing should be within the recommendations of this guideline for the shortest period.
- When prescribing an antibiotic for any indication in patients who have had a previous *Clostridium difficile* infection, advice should be sought from a microbiologist to avoid any potential relapse.
- Antibiotics that are associated with Clostridium difficile infection are highlighted in this guideline by the following symbol: ♣ and should be avoided in 'at risk' groups such as the elderly and those in institutions.
- Current evidence has shown that clindamycin♣ and second/third generation cephalosporins♣ such as cefuroxime♣, cefixime♣, cefotaxime♣ and ceftriaxone♣ are significantly more likely to cause CDI. Anecdotal evidence has also implicated

agents such as quinolones♣, first generation cephalosporins♣ and co-amoxiclav♣. These agents should therefore be used sparingly, especially in the elderly and for patients who live in institutions where CDI is present. They should also be avoided in patients who have previously been treated for CDI.

- There is evidence that proton pump inhibitors (PPIs) increase the susceptibility to *Clostridium difficile* infection and the prescribing of PPIs should therefore be considered carefully in at risk groups of patients and only be prescribed where there is a clear clinical indication. There should be a regular review of the ongoing need for a PPI. Guidance on the prescribing of PPIs to minimise the risk of *Clostridium difficile* infection can be found at: ENHCCG and HVCCG and guidance on the prescribing of PPIs in dyspepsia in adults is available at: Dyspepsia
- Where possible, the prescriber should be guided by laboratory results. Where this is not possible a narrow spectrum antibiotic should be selected.

Restricted antibiotics

These antibiotics are significantly more likely to cause CDI and are therefore restricted. They are marked by the following symbol: ♣ and include cephalosporins♣, quinolones♣ and co-amoxiclav♣. Prescribers are reminded that recommendations to prescribe restricted antibiotics appear in the following areas only:

Cephalosporins♣:

- 1st line in epididymo-orchitis
- 1st line in Pelvic inflammatory disease (PID) – high risk of gonorrhoea
- 2nd line in UTI in pregnancy
- 2nd line in Asymptomatic bacteriuria in pregnancy
- 2nd line acute pyelonephritis (pregnant)

Quinolones♣:

- 1st line in acute pyelonephritis
- 1st line in acute prostatitis
- 2nd line in Pelvic inflammatory disease (PID)
- 2nd line in diverticulitis

- 2nd line in epididymo-orchitis
- 2nd line in *Helicobacter pylori* eradication

Co-amoxiclav♣:

- 1st line in diverticulitis
- 1st line in bites
- 1st line in "dirty" post op wound infection
- 1st line in Salivary Gland Infection (Sialadenitis)
- 2nd line in acute pyelonephritis
- 2nd line in acute sinusitis (persistent symptoms)
- 2nd line in acute exacerbation of COPD (treatment failure)
- 2nd line in UTI in children (upper UTI)
- 2nd line in cellulitis (facial)

Guidance on Infection Control in Schools and Other Childcare Settings

Public Health England (PHE) have issued specific guidance to prescribers on how such infections should be managed and advice that can be given to carers. This is available at:https://www.gov.uk/government/publications/infection-control-in-schools-poster. PHE operate a website on 'microbes' that can be used in both primary and secondary schools. Plans and activities have been designed to complement the national curriculum and further information can be found at: e-Bug.

"Guidance on Infection Control in Schools and Other Childcare Settings" published by Public Health England (PHE), recommends that individuals with conjunctivitis are not excluded from schools or other childcare settings including nurseries. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/522337/Guidance_on_infection_control_in_schools.pdf .This guidance is consistent with that from the Royal Collage of General Practitioners (RCGP), which also suggests individuals are not kept away from school (unless they are feeling particularly unwell) http://www.rcgp.org.uk/-/media/Files/News/2016/RCGP-conjunctivtis-poster-2016.ashx?la=en

Reference Sources Used

- Public Health England et al. Patient leaflet 'treating your Infection' – published 2014. Accessed January 2017.
- Royal College of General Practitioners. TARGET Antibiotics toolkit. Accessed January 2017.
- National Institute for Health and Care Excellence. CG184 Dyspepsia and Gastro oesophageal reflux disease – published September 2014. Accessed January 2017.
- National Institute for Health and Care Excellence. CG69 Prescribing of antibiotics for self-limiting respiratory tract infections – July 2008. Accessed January 2017
- NICE Clinical Knowledge Summaries. Current evidence references for individual infections –a service provided by the National Institute for Health and Care Excellence. Accessed January 2017.
- National Institute for Health and Care Excellence. CG101 Management of Chronic Obstructive Pulmonary Disease in adults in Primary and Secondary Care – June 2010. Accessed January 2017.
- National Institute for Health and Care Excellence. CG191 Pneumonia: Diagnosis and Management of community and hospital acquired pneumonia in adults – December 2014. Accessed January 2017.
- British Thoracic Society. Community Acquired Pneumonia in Adults Guideline – updated 2015. Accessed January 2017.
- Public Health England. Meningococcal Disease – published July 2014. Accessed January 2017.
- National Institute for Health and Care Excellence. CG102 Bacterial meningitis and meningococcal septicaemia – September 2010. Accessed January 2017.
- National Institute for Health and Care Excellence. QS90 Urinary tract infections in adults – June 2015. Accessed January 2017.
- British Infection Association and Health Protection Agency. Diagnosis of UTI – Quick reference guide for primary care – published April 2011. Accessed January 2017.
- Public Health England. Extended spectrum beta lactamases – July 2014. Accessed January 2017.
- Scottish Intercollegiate Guidelines Network. SIGN 88 Management of suspected bacterial urinary tract infection in adults – updated July 2012. Accessed January 2015.
- National Institute for Health and Care Excellence. CG54 Urinary tract infection in children – August 2007. Accessed January 2017.
- Public Health England. *Clostridium difficile* infection – published July 2014. Accessed January 2017.
- Public Health England. *Helicobacter pylori* – updated September 2012. Accessed January 2017.

- British Association for Sexual Health and HIV. Current guidelines for individual genital tract infections. Accessed January 2017.
- Public Health England. Management and laboratory diagnosis of abnormal vaginal discharge – Updated July 2013. Accessed January 2017.
- Public Health England. Chlamydia – Updated November 2014. Accessed January 2017.
- NHS Hertfordshire Primary Care Medicines Management Group. Why are fungal nail infections not routinely treated by the NHS in Hertfordshire? Published July 2012. Accessed January 2017.
- Public Health England. Diagnosis and Management of PVL – *Staphylococcus aureus* Infections Quick reference guide for primary care – Published May 2009. Accessed January 2017.
- British National Formulary No 72 – September 2016. Accessed January 2017.
- UK Medicines Information. *Clostridium difficile* infection – which antimicrobials are implicated? Q&A 242.2aNovember 2012. Accessed January 2015.
- Public Health England. Management of Infection Guidance for Primary Care – for Consultation and Local Adaptation – 25/01/2017. Accessed January 2017.
- The Global Initiative for Chronic Obstructive Lung Disease - COPD Diagnosis and Management At-A-Glance Desk Reference – 2016 Accessed January 20175.

Acknowledgements

The authors would like to thank the many health care professionals whose insightful and valuable comments helped to shape this document.
Other NHS organisations.

Comments

Comments are welcome and should be directed to David Ladenheim – Senior Pharmaceutical Adviser and Pharmacy and Medicines Optimisation Team lead for antibiotics (East and North Herts CCG) at: david.ladenheim@enhertsccg.nhs.uk

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
UPPER RESPIRATORY TRACT INFECTIONS **NICE - Self-limiting respiratory tract infections**				
Pharyngitis / sore throat / tonsillitis	**Avoid antibiotics** as 90% resolve in 7 days without, and pain only reduced by 16 hours. Use FeverPAIN Score: Fever in last 24h, Purulence, Attend rapidly under 3d, severely Inflamed tonsils, No cough or coryza). Score 0-1: 13-18% streptococci, use NO antibiotic strategy; 2-3: 34-40% streptococci, use 3 day back-up antibiotic; >4: 62-65% streptococci, use immediate antibiotic if severe, or 48hr short back-up prescription. Always share self-care advice & safety net.	**Do not routinely prescribe antibiotics**. Consider a delayed prescribing strategy. Majority of infections are viral and resolve within 1 week.	Phenoxymethylpenicillin 500mg QDS	10 days
	CKS - Sore Throat Fever PAIN score		Penicillin Allergy: Clarithromycin 500mg BD Pregnant & Penicillin Allergy: Erythromycin 500mg QDS	5 days
Otitis media (acute)	60% of attacks resolve within 24 hours without antibiotics. They only reduce pain at 2 days and do not prevent deafness. Offer an immediate antibiotic prescription if: • Patient is systemically unwell • Patient at high risk of serious complications	**Do not routinely prescribe antibiotics**. For acute attacks with no systemic features advise paracetamol or ibuprofen for pain.	Amoxicillin or erythromycin (penicillin allergy). Consult current BNF for Children for doses.	5 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	• Patients with symptoms for > 4 days and are not improving. Consider 2 or 3 day delayed prescription or immediate antibiotics for pain relief if: • < 2 years with bilateral acute otitis media (AOM) or bulging membrane and ≥ 4 marked symptoms • All ages with otorrhoea CKS - Otitis media			
Otitis Externa (acute)	Remove or treat any aggravating or precipitating factors. Treat inflammation with a topical ear preparation and consider cleaning the external auditory canal if there is sufficient ear wax or debris to obstruct topical medication. Only consider adding an oral antibiotic for patients with severe infection. If an oral antibiotic is required, consider a 7 day course of flucloxacillin or clarithromycin if the patient is penicillin allergic. Do NOT prescribe chloramphenicol ear drops as they can cause dermatitis in about 10% of patients. Do NOT prescribe fluoroquinolone♣ ear drops (ciprofloxacin♣ or ofloxacin♣) as they are unlicensed. Fluoroquinolone♣ eye drops are also unlicensed for use in the ear. CKS - Otitis externa	**Do not routinely prescribe antibiotics** and advise use of adequate analgesia.	Acetic Acid 2% Spray TDS. For more severe cases (pain, deafness, discharge) consider a topical antibiotic with or without a corticosteroid.	7 days
Sinusitis (acute)	Many attacks are viral and symptomatic benefit of antibiotics is small – 80% resolve within 14 days without antibiotics. Consider an immediate script if patient is systemically unwell, has co-morbidities or when purulent nasal discharge is present.	**Do not routinely prescribe antibiotics** Advise use of adequate analgesia. Only	Amoxicillin 500 mg TDS or Clarithromycin 500mg BD or doxycycline 200mg stat then 100mg OD. Consider	7 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	CKS - Sinusitis	prescribe antibiotics for those at high risk of complications or when acute bacterial sinusitis is suspected.	erythromycin for pregnant women and co-amoxiclav♣ for persistent symptoms.	
LOWER RESPIRATORY TRACT INFECTIONS Low doses of penicillins are more likely to select out resistance. Do NOT use quinolones first line due to poor pneumococcal activity. Reserve all quinolones for proven resistant organisms.				
Bronchiectasis (infective exacerbation of non CF patients)	**Send sputum for culture and sensitivity testing BEFORE starting antibiotics**. If there is no previous bacteriology available, promptly prescribe an antibiotic as indicated and do not await the results of culture. Review the response to empirical treatment when culture and sensitivity results are available. . If culture and sensitivity results are available, prescribe according to advice or according to the CKS and BTS links below. CKS - Bronchiectasis BTS - Non CF Bronchiectasis	Amoxicillin 500mg TDS	Penicillin allergy Clarithromycin 500mg BD or Doxycycline 200mg stat then 100mg OD	10 to 14 days
Acute cough bronchitis (acute)	Symptom resolution can take 3weeks.. Antibiotic little benefit if no co-morbidity. The use of a delayed prescribing tactic and leaflets explaining the nature of the illness and why antibiotics are not necessary may be helpful. Consider immediate antibiotics if > 80 years and ONE of: hospitalisation in last year, oral steroids, diabetic, congestive heart failure OR > 65 years with 2 of above.	**Do not routinely prescribe antibiotics** Amoxicillin 500mg TDS	Doxycycline 200mg stat then 100mg OD or clarithromycin 500mg BD	5 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	CKS - Acute bronchitis NICE - Self-limiting respiratory tract infections			
Acute exacerbation of COPD	Treat exacerbations promptly with antibiotics if purulent sputum and increased shortness of breath and/or increased sputum volume.. Risk factors for antibiotic resistant organisms include co-morbidities, severe COPD, frequent exacerbations or antibiotic treatment within last 3 months. CKS - COPD NICE - COPD	Amoxicillin 500mg TDS or Doxycycline 200mg stat then 100mg OD	Clarithromycin 500mg BD or Co-amoxiclav♣ 625mg TDS (only if patient has antibiotic resistance factors such as comorbid disease, severe COPD, frequent exacerbations or antibiotic use in the last 3 months)	5 days
Community acquired pneumonia - treatment in the community	**Start antibiotics immediately**. Use **CRB65** score to help guide and review. 0 = suitable for home treatment. 1-2 = hospital assessment or admission. 3-4 = Urgent admission. Each scores 1: **C**onfusion (AMT<8); **R**espiratory rate > 30/minute; **B**P systolic <90 or diastolic ≤60; Age > **65**. If CRB65 score = 3 Give immediate IM Benzylpenicillin or oral amoxicillin (1G) or clarithromycin (500mg) in penicillin allergy if delayed admission or life threatening.	If CRB65 score = 0 Amoxicillin 500mg TDS	Clarithromycin 500mg BD or Doxycycline 200mg stat then 100mg OD	5 days (review at 3 days and extend to 7-10 days if poor response)

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	NICE - Pneumonia CKS - Pneumonia BTS - CAP	If CRB65 score = 1,2 and patient at home Amoxicillin 500mg TDS AND Clarithromycin 500mg BD or doxycycline 200mg stat then 100mg OD		7 to 10 days
MENINGITIS				
Suspected meningococcal disease	**Transfer all patients to hospital immediately**. If time before hospital admission, and non-blanching rash, give IV benzylpenicillin or cefotaxime, unless definite history of hypersensitivity. - Secondary prevention should only be prescribed after consulting a public health doctor PHE - Meningococcal disease NICE - Meningococcal disease CKS - Meningitis	Adults and children aged 10 years and over Benzylpenicillin IV (preferable) or IM 1200mg, children aged 1 to 9 years 600mg, children aged under 1 year 300mg	Withhold benzylpenicillin only in children and young people who have a clear history of anaphylaxis after a previous dose; a history of a rash following penicillin is not a contraindication.	
URINARY TRACT INFECTIONS				
URINARY TRACT INFECTIONS: Nitrofurantoin is first line but is contraindicated if eGFR is < 45ml/minute/1.73 m^2 (In patients with an eGFR of 30-44ml/minute/1.73 m^2 only use if resistance and no alternative). Advice on when to perform a urine dipstick test can be found here. **Empirical antibiotics should be guided by previous microbiology result if available**				

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
UTI in adults (lower)	**Women** (16 to 65 years)**:** Treat women with severe or ≥3 symptoms Mild or < 2 symptoms: Offer pain relief and consider a back-up or delayed prescription. If urine not cloudy, 97% Negative Predictive Value (NPV) of no UTI. If urine cloudy, use dipstick to guide treatment: Where nitrite, leucocytes and blood are all negative 76% NPV. Nitrite plus blood or leucocytes 92% Positive Predictive Value (PPV) of UTI. Provide PHE UTI leaflet **Men** (16 to 65 years)**:** Consider prostatitis and send MSU. If symptoms are mild or non-specific, use negative dipstick to exclude UTI. **>65 years men and women: Do not treat or send sample for culture in asymptomatic elderly** with positive dipsticks since asymptomatic bacteriuria is very common. Diagnosis and treatment must be based on symptoms. Treat if fever >38°C or 1.5°C above baseline twice in 12h AND dysuria OR >2 other symptoms. **Treatment failure in men or women**: always perform culture. PHE - Urine SIGN - UTI guidelines CKS - UTI (lower) women	Nitrofurantoin 100mg BD (MR) or 50mg QDS *Nitrofurantion is contraindicated in patients with an eGFR of less than 45ml/min/1.73 m2. However, a short course (3-7days) may be used with caution in patients with an eGFR of 30-44ml/min/1.73 m2.	Trimethoprim 200mg BD (if GFR<45ml/min) or Pivmecillinam 400mg stat then 200mg TDS **(Pivmecillinam may be reported as Mecillinam. It is NOT suitable if penicillin allergic)**	Women: 3 days Men: 7 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	CKS - UTI (lower) men RCGP - UTI clinical module SAPG - UTI			
UTI in pregnancy	**MSU should always be taken to confirm sensitivity.** Start antibiotics in all with significant bacteriuria, even if asymptomatic. Short-term use of nitrofurantoin is unlikely to cause problems to the foetus. CKS - UTI in pregnancy CKS - UTI visible or non visible haematuria SIGN - UTI guidelines PHE - Urine	Nitrofurantoin 100mg BD (MR) or 50mg QDS (**Note:** Risk of haemolytic effects on the new-born if used in third trimester)	Cefalexin♣ 500mg BD or Amoxicillin 500mg TDS if susceptible	7 days
UTI with catheter (16 to 65 years)	• DON'T give prophylactic antibiotics for changes of the catheter unless there is a history of symptomatic UTI or trauma due to catheter change • DON'T use dipstick testing to diagnose UTI in catheterised patients • DON'T treat asymptomatic bacteriuria as this is very common in catheterised patients. Treatment does not reduce mortality or prevent symptomatic episodes, but increases risk of side	Nitrofurantoin 100mg BD MR or 50mg QDS	Trimethoprim 200mg BD	7 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	effects and antibiotic resistance • Do consider catheter replacement/removal to avoid the development of resistant pathogens • DO regularly review the need for the catheter and remove as soon as no longer required • DO ensure that there is a patient specific catheter plan / care regimen i.e. Catheter Passport • DO ensure urine samples are only obtained from a catheter sampling port using an aseptic technique • DO treat if patient is systemically unwell or pyelonephritis is suspected (antibiotics will not eradicate asymptomatic bacteriuria)			
	CKS - UTI with catheter - no haematuria - women CKS - UTI in men with an indwelling catheter SIGN - UTI guidance NICE - Urinary tract infections in adults			
Lower UTI in children (≤ 16 years)	Children < 3 months - Refer for emergency assessment but do not take an MSU as this will not alter management in primary care. Child ≥ 3 months - Use positive nitrite to guide. Start antibiotics and send pre-treatment MSU. Imaging: only refer if child <6 months, or recurrent or atypical UTI.	Trimethoprim or nitrofurantoin (see BNF for children for doses) Note: Consider tablets as a lower cost option if appropriate	Cefalexin (see BNF for children for doses) Note: Consider tablets as a lower cost option	3 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	CKS - UTI in children NICE - Urinary tract infection in children			
Upper UTI in children (≤ 16 years)		Co-amoxiclav ♣ (see BNF for children for doses)	Cefixime♣ (see BNF for children for doses)	7 – 10 days
UTI prophylaxis for recurrent UTIs: **First line:** Advise simple measures, incl. hydration & analgesia. Cranberry products work for some women, but good evidence is lacking. **Second line**: Standby (3 days) or post-coital antibiotics (STAT). **Third line:** Antibiotic prophylaxis (depending on strains as below). **Prophylactic antibiotics in recurrent UTI (different strains):** When symptoms flare up ask patient to drop a sample with the surgery and start a treatment 3-day course of antibiotics (Nitrofurantoin 100mgs BD or Trimethoprim 200mgs BD). Offer a 5-7-day course if patient has renal abnormalities or dysfunction and immunosuppression. Consider offering a prescription for a 'stand-by' antibiotic to be used for future episodes of suspected UTIs if episodes are frequent and renal tract abnormalities such as renal calculi have been excluded following investigations by a specialist. **Prophylactic antibiotics in relapsed UTI (UTI with the same strain of organism):** Consider prophylaxis for 3-6 months with an antibiotic which the organism is susceptible to (after reviewing with urine culture results and discussing with Microbiology). This gives time for bladder wall to shed and clear the infection. Antibiotic choice as below			
UTI - recurrent (2 in 6 months or ≥ 3 per year) in non-pregnant women over 14 years	**SEE IMPORTANT GUIDANCE NOTES** **UTI prophylaxis for recurrent UTIs ABOVE. Consider referral to urologist or microbiologist for investigations if required** CKS - UTI recurrent	Nitrofurantoin (immediate release) 100mg ON	Trimethoprim 100mg ON	3 - 6 month trial **THEN review**
Pyelonephritis (acute) (16 to 65 years)	**MSU should always be taken to confirm sensitivity**. If no response within 24 hours or there is clinical	Ciprofloxacin♣ 500mg BD		**7 days** for ciprofloxacin

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	deterioration, arrange for admission.		Co-amoxiclav♣ 625mg TDS	**14 days** for co-amoxiclav
	CKS - Pyelonephritis		For pregnant women Cefalexin♣ 500mg BD	10 to 14 days
Prostatitis (acute)	**MSU should always be taken to confirm sensitivity.** 4 weeks treatment may prevent chronic infection. Quinolones♣ are more effective as they achieve higher prostate levels. If patient is sexually active, chlamydia needs to be excluded	Ciprofloxacin♣ 500mg BD	Trimethoprim 200mg BD (off label use)	4 weeks
	CKS - Prostatitis BASHH - Prostatitis			
GASTRO-INTESTINAL TRACT INFECTIONS				
Gastro-enteritis	**Antibiotics are not recommended for adults with diarrhoea of unknown pathology**. Fluid replacement is essential and check travel, food, hospital and antibiotic history as *C. difficile* is increasing. Please send stool specimens from suspected cases of food poisoning and post antibiotic use and notify Public Health England after seeking advice from a public health doctor if an outbreak is suspected. CKS - Gastroenteritis CKS – Travellers' diarrhoea prevention and advice			
Clostridium difficile Infection (CDI)	When prescribing an antibiotic for any indication in patients who have had a previous *Clostridium difficile* infection, advice should be sought from a microbiologist to avoid any potential relapse. Stop all antibiotics unless it is absolutely essential that they are continued in which case the patient should be carefully monitored for deterioration (consider hospital admission in these circumstances) and review need for PPI therapy.	Metronidazole 400mg to 500mg TDS (1st/2nd episodes)	Vancomycin 125mg QDS (3rd episode or if severe or if type 027 confirmed). Fidaxomicin 200mg BD should be considered for patients with severe CDI who are considered at high risk	10 - 14 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	Definition of severe: Temperature >38.5oC, or WCC >15, or rising creatinine or signs/symptoms of severe colitis		for recurrence, only after discussion with a microbiologist	
	PHE - *Clostridium difficile*			
CDI recurrence	Discuss management with a consultant microbiologist for advice on sending specimens and treatment options. Sending repeat specimens within 28 days of a positive test are not helpful due to ongoing presence of toxins in the gut. Recurrent disease occurs in about 20% of patients treated initially with either metronidazole or vancomycin. The same antibiotic that was used initially can be used to treat the first recurrence. Withhold antibiotic treatment if symptoms mild.	Fidaxomicin 200mg BD (discuss with microbiologist)	Vancomycin 125mg QDS	14 days
	PHE - *Clostridium difficile*			
Helicobacter pylori eradication (positive test)	Check antibiotic history. Each course of clarithromycin, metronidazole or quinolone increases risk of antimicrobial resistance. Do not use either metronidazole or clarithromycin if used in the past year for any infection. SEE CURRENT BNF FOR INFORMATION. It is not usually necessary to continue PPI therapy but if the ulcer is large, haemorrhaging or perforated then PPI treatment can be continued for 3 weeks. Discuss treatment with local gastroenterologists to ensure compliance with local guidelines. If diarrhoea develops, consider *Clostridium difficile* and review treatment need.	PPI (eg Lansoprazole 30mg BD) plus amoxicillin 1G BD with either Clarithromycin 500mg BD or Metronidazole 400mg BD OR PPI (eg Lansoprazole 30mg BD) plus Clarithromycin 250mg BD with Metronidazole 400mg BD		7 days
			PPI BD plus 2 unused antibiotics: amoxicillin	14 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	PHE - *Helicobacter pylori*		1G BD, metronidazole 400mg BD, tetracycline 500mg QDS, clarithromycin 500mg BD, levofloxacin♣ 250mg BD	
Threadworm	Treat all household contacts. Advise morning showers/baths and general hand hygiene for 2 weeks PLUS wash sleepwear, bed linen, dust and vacuum on day one. Also clean bathroom thoroughly, by damp dusting surfaces with cloth rinsed frequently in hot water. For children under the age of 6 months and pregnant women, physical removal of eggs and hygiene measures should be used for 6 weeks. CKS - Threadworm	Mebendazole 100mg stat (for adults and children over 6 months but unlicensed in children under 2 years)		Stat dose and repeated after 14 days if infestation persists
Diverticulitis (acute)	Broad spectrum antibiotics should be prescribed to cover both anaerobes and Gram-negative rods. Paracetamol should be prescribed for pain (avoid NSAIDs and opioid analgesics where possible due to increased risk of diverticular perforation) and the patient should be advised to consume clear liquids only. Solid food can be gradually introduced as symptoms improve over 2 to 3 days. Review within 48 hours or sooner if symptoms deteriorate. CKS - Acute Diverticulitis	Co-amoxiclav♣ 625mg TDS	Metronidazole 400mg TDS plus Ciprofloxacin♣ 500mg BD in penicillin allergy	7 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
GENITAL TRACT INFECTIONS - BASHH GUIDELINES. Refer all patients and contacts with suspected STIs to GUM clinic.				
Guidelines - BASHH				
Vaginal candidiasis	Evidence shows that oral triazoles are as effective as vaginal imidazoles. Avoid oral triazoles in pregnancy. There are many other options for treatment including a 3 day course of clotrimazole 200mg pessary and a 6 day course of clotrimazole 100mg pessary. Many treatments are available to buy 'over the counter'. CKS - Candidiasis PHE - Vaginal candidiasis	Clotrimazole cream 10% PV or clotrimazole 500mg pessary	Fluconazole 150mg oral	STAT dose
Vaginal candidiasis in pregnancy	Counsel patient that applicators may be used but care must be taken to avoid damage to the cervix. Pessaries may be inserted by hand. For vulval symptoms, consider prescribing topical clotrimazole cream in addition to intravaginal clotrimazole or miconazole. CKS - Candida in pregnancy	Clotrimazole 100mg pessary	Miconazole 2% intravaginal cream one applicatorful BD	7 days
Bacterial vaginosis	A stat dose of metronidazole 2g is associated with a higher relapse rate than a 7 day course. Avoid 2g stat dose in pregnancy. Topical treatment gives similar cure rates but is more expensive.	Metronidazole 400mg BD or 2g stat		7 days
			Clindamycin 2% vaginal cream 5g at night	7 days
			Metronidazole 0.75% vaginal gel 5g at night	5 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	CKS - Bacterial vaginosis BASHH - Bacterial vaginosis BASHH - Bacterial vaginosis (PIL)			
Chlamydia trachomatis	Opportunistically screen all aged 15-24 years. All people with a positive chlamydia test should be offered treatment, support to notify partners and testing for other STIs. This service can be provided by GPs or GUM clinics. Refer to BASHH guidelines in pregnancy or breastfeeding as doxycycline is contraindicated and test for cure 6 weeks after treatment (5 weeks with erythromycin) due to lower cure rate in pregnancy.	Azithromycin 1g		STAT dose
	CKS - Chlamydia PHE - Chlamydia BASHH - Chlamydia		Doxycycline 100mg BD	7 days
Epididymo-orchitis	Use ofloxacin♣ for all cases where patient is allergic to cephalosporins♣ and/or doxycycline. If quinolones♣ are contraindicated, co-amoxiclav♣ 625mg TDS for 10 days can be used.	Due to any sexually transmitted pathogen Ceftriaxone♣ 500mg IM (stat) PLUS doxycycline 100mg BD for 10 to 14 days	Under 35 years and/or high risk of sexually transmitted infection (non - gonoccocal) Doxycycline 100mg BD or ofloxacin♣ 200mg BD	14 days
	CKS - Epididymo-orchitis BASHH - Epididymo-orchitis BASHH - Epididymo-orchitis (PIL)		Over 35 years and/or low risk of sexually transmitted infection Ciprofloxacin♣ 500mg BD (10 days) or Ofloxacin♣ 200mg BD (14 days)	10 to 14 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
Trichomonas vaginalis	Refer to GUM clinic and treat partners simultaneously. Avoid 2g stat dose in pregnancy or breastfeeding. CKS - Trichomoniasis BASHH - Trichomonas vaginalis BASHH - Trichomonas vaginalis (PIL)	Metronidazole 400mg or 2g stat	Tinidazole 2g stat	5 – 7 days
Pelvic Inflammatory Disease (PID)	Refer patients and contacts to GUM clinic. Test for *N. Gonorrhoeae* and Chlamydia. There is emerging clinical resistance to quinolones♣ and they therefore should not be used for patients at high risk of gonococcal infection. BASHH - PID (PIL) BASHH - PID	Ceftriaxone♣ 500mg IM (single dose) plus metronidazole 400mg BD plus doxycycline 100mg BD if gonorrhoea likely	Metronidazole 400mg BD plus ofloxacin♣ 400mg BD	14 days
SKIN INFECTIONS				
Acne (moderate or severe)	For mild acne, a topical retinoid such as adapalene should be used first line. Oral antibiotics and topical antibiotics should not be prescribed together. For moderate or severe acne, prescribe an oral antibiotic in combination with a topical retinoid or benzoyl peroxide. Tetracyclines should not be used in pregnancy, breastfeeding or in children under the age of 12 as they are deposited in teeth and bones. CKS - Acne	Lymecycline 408mg OD or Oxytetracycline 500mg BD	Erythromycin 500mg (2x250mg) BD (in pregnancy or if tetracyclines not tolerated)	Up to 6 months Discontinue when further improvement is unlikely.
Bites (animal and human)	Human: Thorough irrigation is important.	Co-amoxiclav♣ 375mg - 625mg TDS (animal and	Animal bites (penicillin allergy) Metronidazole	7 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	Assess risk of tetanus, rabies, HIV, hepatitis B/C. Antibiotic prophylaxis is advised. Cat or Dog: Give prophylaxis if cat bite/puncture wound; bite to hand, foot, face, joint, tendon, ligament; immunocompromised/diabetic/asplenic/cirrhotic/ presence of prosthetic valve or prosthetic joint.	human)	400mg TDS plus doxycycline 100mg BD	
			Human bites (penicillin allergy) Metronidazole 200mg to 400mg TDS plus clarithromycin 250mg to 500mg BD	7 days
	CKS - Bites			
Bites (insect)	Treat as for cellulitis only if infected. Fever/lymphangitis are indicators for treatment. Hot/sore bites may be due to local histamine release.	Flucloxacillin 250mg - 500mg QDS	Clarithromycin 250mg – 500mg BD (penicillin allergy)	7 days
	CKS - Insect bites			
Boils	Antibiotics are not always necessary but can be considered if the lesion is large or there is associated fever or cellulitis, there are co-morbidities e.g. diabetes or complications are more likely because of the site affected e.g. face. Self-care advice should also be given	Flucloxacillin 250mg – 500mg	Clarithromycin 250mg – 500mg BD (penicillin allergy) or erythromycin 250mg – 500mg (2x250mg) QDS (in pregnancy)	7 days
	CKS - Boils			
Cellulitis - mild or moderate	Patients who are afebrile and otherwise healthy should be treated as indicated with a single antibiotic. If response is slow, treat for a further 7 days. Consider referring patients who have recurrent cellulitis, the elderly and those who are vulnerable to infection.	Flucloxacillin 500mg QDS	Clarithromycin 500mg BD (penicillin allergy)	7 days
			Co-amoxiclav♣ (for facial cellulitis) 625mg	

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	CKS - Cellulitis		TDS	
Conjunctivitis	Most infections are viral, self-limiting and will clear within 1-2 weeks without treatment (even if they are bacterial). Chloramphenicol is available to buy over the counter for patients over the age of 2 years. CKS - Conjunctivitis	Local cleansing of affected eye(s) using boiled, cooled water can be recommended before use of topical antibiotics.	Chloramphenicol 0.5% drops 2 hourly for 2 days then 4 hourly whilst awake or chloramphenicol 1% eye ointment at night or fusidic acid eye drops 1% BD	For 48 hours after resolution
Dermatophyte infection of the finger or toe nail	Take behind the nail scrapings. Treatment should only be started if infection is confirmed. If symptoms are not troublesome or patients are not at increased risk of developing side effects, then self care measures should be considered. ENHCCG have stated that the treatment of dermatophyte infections is a LOW priority.	Terbinafine 250mg OD		Fingers - 6 to 12 weeks and toes - 3 to 6 months
			Amorolfine 5% topical paint (very superficial infections only) once or twice a week	Fingers - 6 months and toes – 9 to 12 months
	Fingers require 2 pulsed courses and toes require at least 3 courses CKS - Fungal nail infection		Itraconazole pulsed therapy 200mg BD	1 week with subsequent courses repeated after 21 days
Dermatophyte infection of the skin	Send skin scrapings and consider *oral* terbinafine or itraconazole if intractable. Topical terbinafine is as effective as clotrimazole. If intractable, send skin scrapings, and if infection confirmed, use oral terbinafine/itraconazole. Scalp: discuss, oral therapy indicated.	Clotrimazole 1% cream BD-TDS		For 1-2 weeks after the infected area has healed
		Terbinafine 1% cream BD (not licenced for use		7-14 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	CKS - Fungal skin infection	in children)		
Eczema	If there are no visible signs of infection, the use of antibiotics either alone or in combination with corticosteroids, encourages resistance and does not improve healing. Consider infection if there is no response to emollients or topical steroids. In infected eczema, treat as per impetigo below. CKS - Eczema			
Impetigo	Topical treatments should be reserved for localised/minor infection to prevent resistance developing.	Fusidic acid 2% cream/ointment TDS (non bullous)		5 days
		Flucloxacillin 500mg QDS (bullous and non bullous)		7 days
			Clarithromycin 250-500mg BD (penicillin allergy – bullous and non bullous)	7 days
	CKS - Impetigo			
Leg Ulcers	**Ulcers always colonise at some point. Antibiotics do not improve healing unless there is active infection.** If response is slow, treat for a further 7 days. Swabs and antibiotics are only indicated if there is either cellulitis or evidence of clinical infection e.g. inflammation, redness, pyrexia, increased pain or enlarging ulcer. Send pre-treatment swab in active infection and review antibiotics after culture results. Refer for specialist opinion in severe infection e.g. diabetics.	Flucloxacillin 500mg QDS	Clarithromycin 500mg BD	7 days
	CKS - Leg Ulcers			
Mastitis	Antibiotic treatment is recommended if the woman has an infected nipple fissure, symptoms do not improve or are worsening after 12-24 hours despite effective milk removal or bacterial culture is positive. Antibiotics indicated are only excreted in very small amounts and	Flucloxacillin 500mg QDS	Erythromycin 250mg – 500mg QDS	14 days

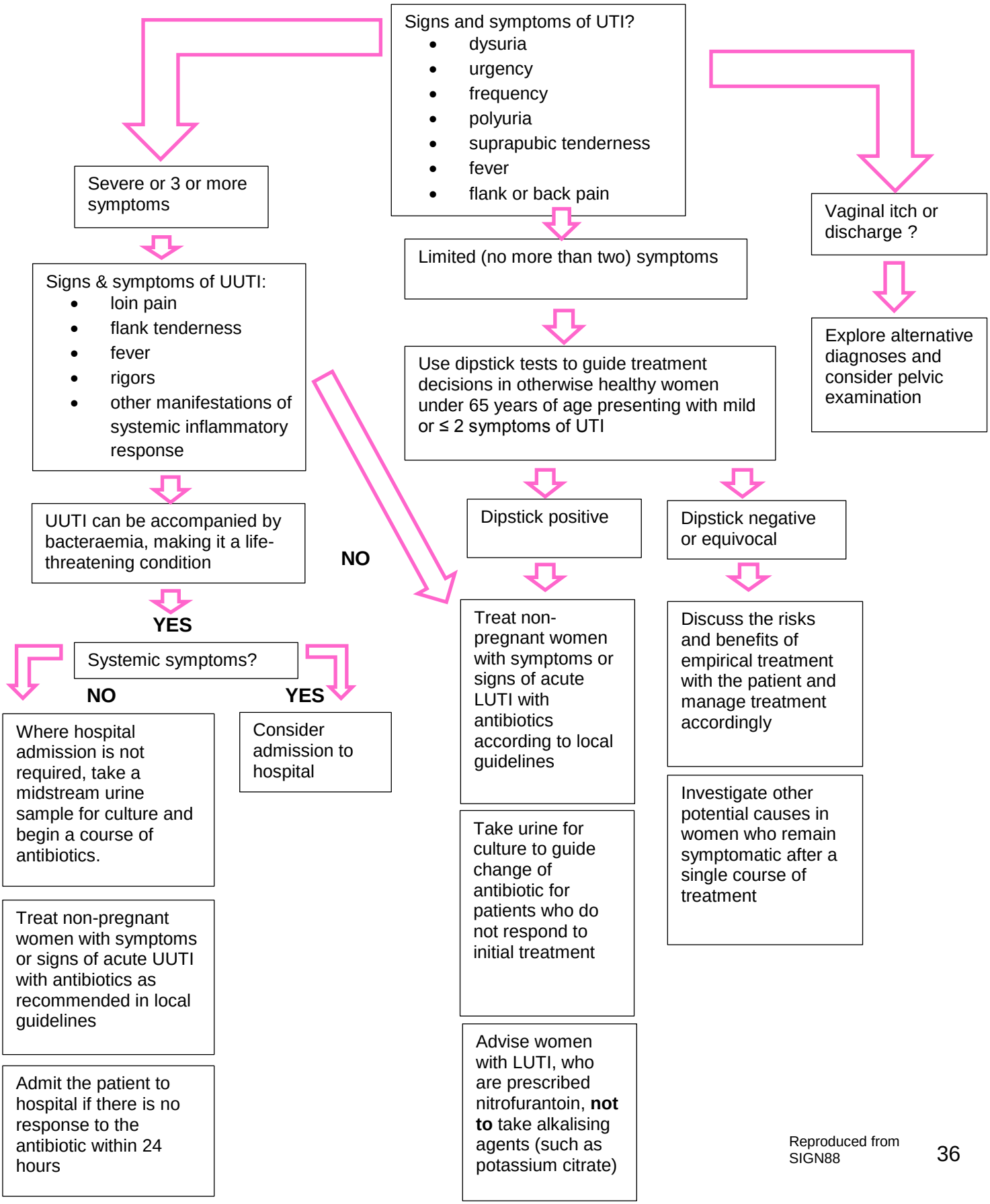
Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	the infant should not be affected but occasionally stools may be looser or more frequent or the infant may be more irritable. The woman should continue to breastfeed and paracetamol can be used to relieve discomfort in addition to warm compresses on the breast or a warm bath/shower. CKS - Mastitis			
Pilonidal sinus disease (discharging)	Consider treatment with antibiotics if cellulitis is suspected. Refer patients to a colorectal or general surgical unit for treatment, urgency depending on clinical judgement. Offer paracetamol for pain and/or fever and consider NSAIDs if pain is not controlled.	Flucloxacillin 500mg QDS	True penicillin allergy Clarithromycin 500mg BD (or erythromycin 500mg QDS if pregnant or breastfeeding) PLUS Metronidazole 400mg TDS	7 days
	CKS - Pilonidal sinus disease			
Post-operative wound infection	CKS - Infected laceration	Flucloxacillin 500mg QDS ('clean' surgery)	Clarithromycin 500mg BD (penicillin allergy)	7 days
		Co-amoxiclav♣ 625mg TDS (contaminated abdominal or pelvic surgery)	Clarithromycin 500mg BD plus Metronidazole 400mg TDS	
PVL	Panton-Valentine Leukocidin (PVL) is a toxin produced by 4.9% of *S.aureus* from boils/abscesses. The bacteria can rarely cause severe invasive infections in healthy people. Send swabs if recurrent boils/abscesses. Risks: close contact in communities or sports, poor hygiene, eczema. PHE - PVL			
Scabies	Treat whole body from ear/chin downwards including under the nails. The very young (<2 years), elderly and immunocompromised should also apply treatment to the face and scalp. Treat ALL household and sexual contacts within 24 hours.	Permethrin 5% dermal cream	Malathion 0.5% aqueous liquid – in permethrin allergy	Repeat after 7 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	CKS - Scabies			
VIRAL INFECTIONS				
Chicken Pox (Varicella zoster)	If pregnant, immunocompromised or neonatal seek urgent specialist advice. Consider aciclovir if onset of rash is < 24 hours and patient is over 14 years; or severe pain; or dense/oral rash; or secondary household case; or smoker. If patients develop life-threatening complications such as encephalitis, pneumonia or CNS deterioration they should be sent immediately to hospital. It is recommended that non-immune immunocompromised patients or pregnant women who come into contact with chicken pox are given Varicella-Zoster immunoglobulin (VZIG) if they meet the criteria according to the current 'green' book. Supplies can be obtained from PHE Colindale on 020 8327 7471.	Aciclovir 800mg five times a day		7 days
	CKS - Chickenpox			
Herpes Simplex (oral)	Counsel patient that treatment needs to be initiated at the onset of symptoms before vesicles appear and that topical antivirals only affect the course of the current episode - they do not cure the individual or prevent further recurrence.	Cold sores resolve after 7-10 days without treatment. Topical antivirals applied prodromally reduce duration by 12-24 hours.	Aciclovir 5% topical cream five times a day	5 days

Infection	Rationale/Comments	1st Line Choice	2nd Line Choice	Duration
	CKS - Herpes			
Shingles (Herpes zoster)	If pregnant or immunocompromised, seek urgent specialist advice. Treat if over 50 years and within 72 hours of the rash or if there is active ophthalmic infection, non- truncal involvement, moderate/severe pain or rash. CKS - Shingles	Aciclovir 800mg five times a day	Valaciclovir 1g TDS or famciclovir 500mg TDS or famciclovir 750mg OD Use if compliance is a problem because cost is considerably greater than aciclovir	7 days
DENTAL INFECTIONS				
Dental Abscess	Advise the patient to seek treatment from a dental practitioner. Only prescribe an antibiotic for patients who are systemically unwell or if there are signs of severe infection such as fever, lymphadenopathy, cellulitis or diffuse swelling or if there is a high risk of complications. If severe: refer to hospital. CKS - Dental abscess	Amoxicillin 500mg TDS or phenoxymethylpenicillin 500mg - 1G QDS In severe or spreading infection add metronidazole 400mg TDS	Clarithromycin 500mg BD (penicillin allergy) In severe or spreading infection add metronidazole 400mg TDS	5 days
Salivary Gland Infection (Sialadenitis)		Co-amoxiclav♣ 625mg TDS	Clindamycin 450mg QDS	10-14 days

Appendix 1

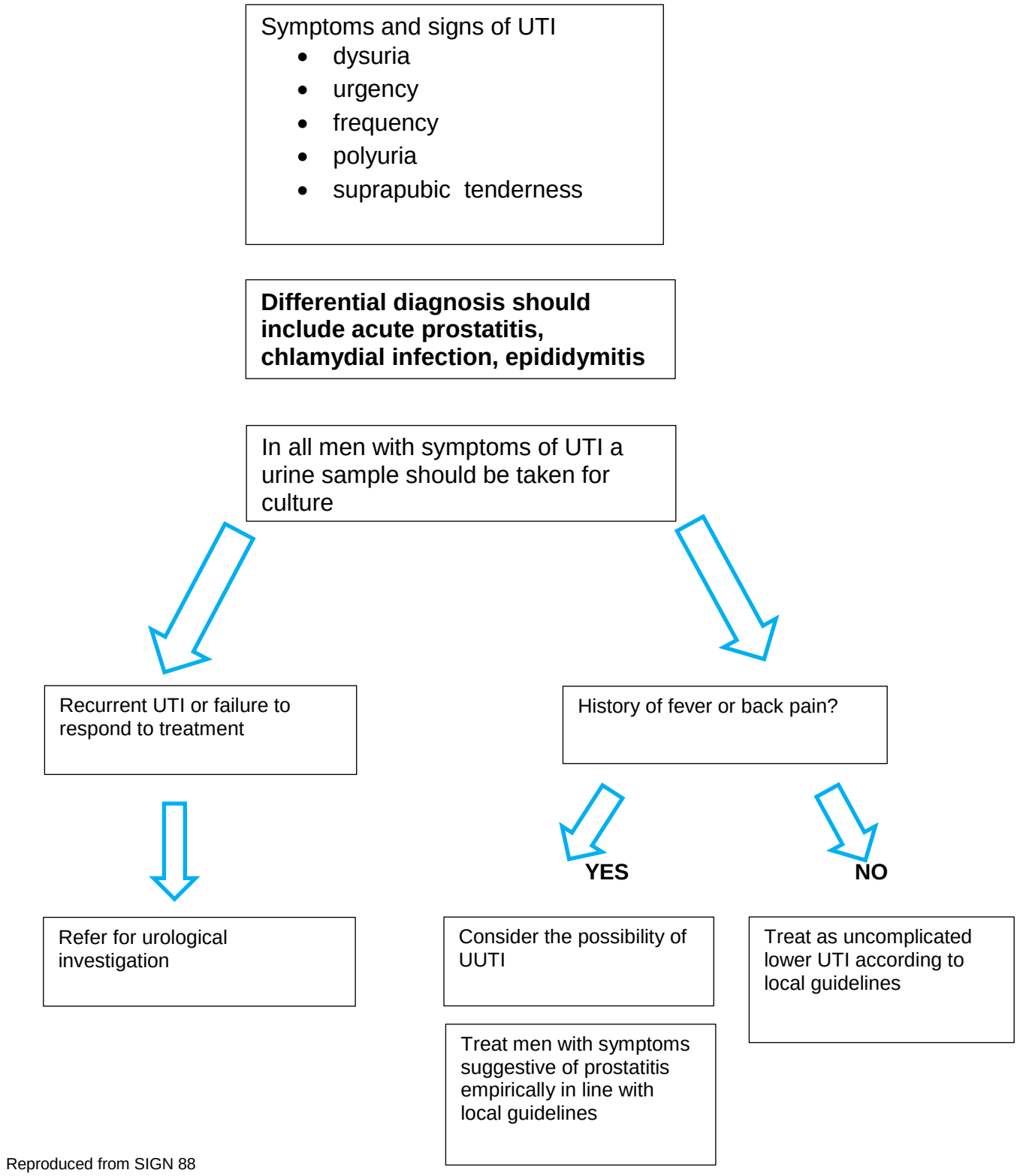
MANAGEMENT OF SUSPECTED UTI IN WOMEN (Not Pregnant)



Reproduced from SIGN88

Appendix 2

MANAGEMENT OF SUSPECTED UTI IN ADULT MEN

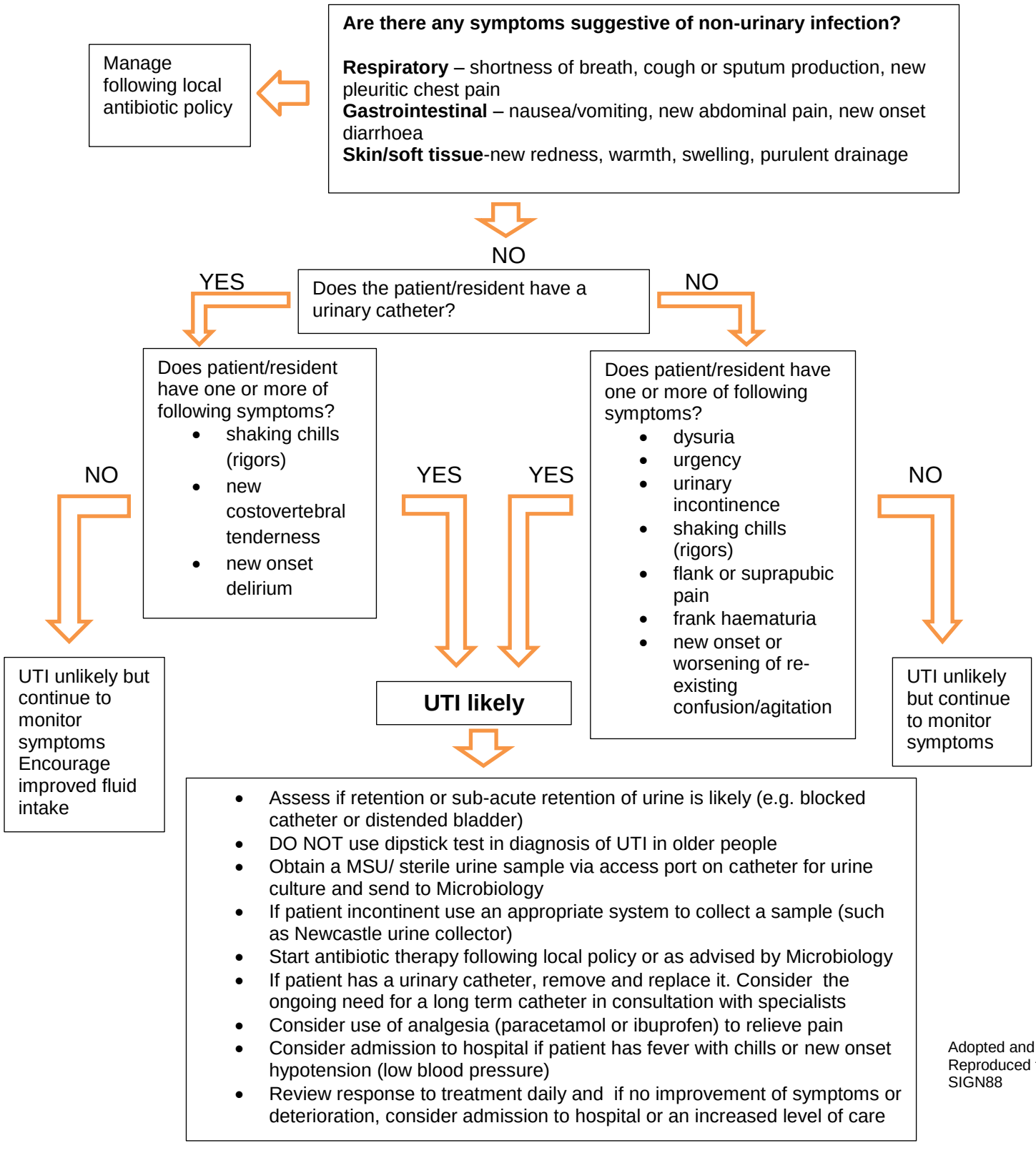


Reproduced from SIGN 88

Appendix 3

DIAGNOSIS AND MANAGEMENT OF SUSPECTED UTI IN OLDER PEOPLE Over 65 years old

Decision aid to guide management of patients/residents with fever defined as temperature >37.9ºC or 1.5ºC increase above baseline occurring on at least two occasions in last 12 hours.
Hypothermia (low temperature of <36ºC) may also indicate infection, especially those with comorbidities.
Be alert to non-specific symptoms of infection such as abdominal pain, alteration of behaviour or loss of diabetes control.



Adopted and Reproduced from SIGN88

THIS PAGE IS INTENTIONALLY BLANK