ANTIMICROBIAL GUIDELINES

UPPER RESPIRATORY TRACT INFECTIONS v2

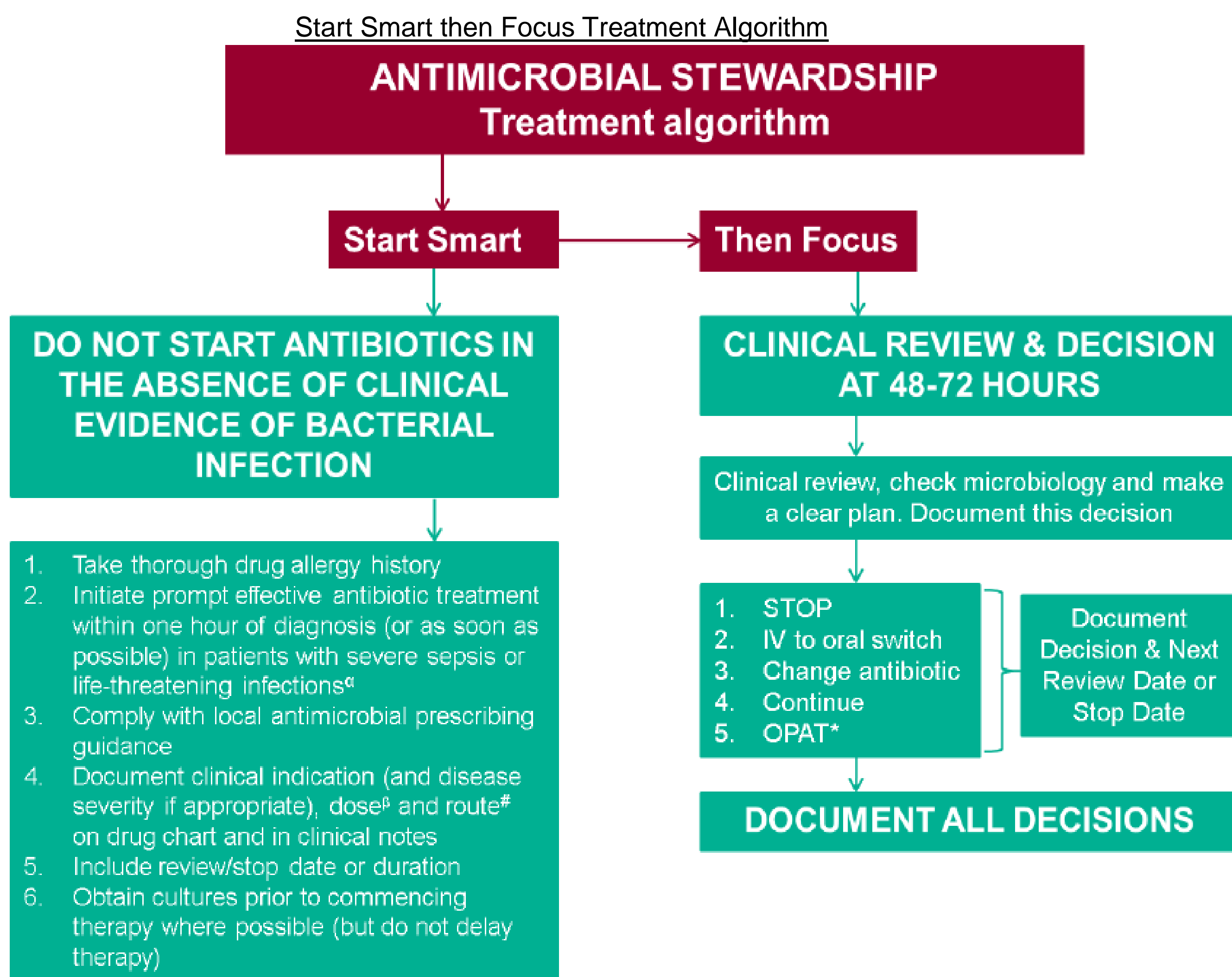
This section covers

- Acute sore throat in adults and children (p g3-5)
- Scarlet fever (pg 6)
- Quinsy/acute peritonsillar abscess (pg 7)
- Acute otitis media (pg 8)
- Acute otitis externa (pg 10)
- Sinusitis (Acute Rhinosinusitis) (pg 11)
- Acute Bacterial Parotitis (pg 12)
- Ludwig's Angina (pg 13)

Start Smart then Focus

A Start Smart - then Focus approach is recommended for all antibiotic prescriptions.

Start Smart then Focus Treatment Algorithm



Fluoroquinolone antibiotics: In March 2019, the MHRA issued restrictions and precautions for the use of fluoroquinolone antibiotics because of rare reports of disabling and potentially long-lasting or irreversible side effects (see Drug Safety Update for details). NICE is currently reviewing recommendations relating to fluoroquinolone antibiotics.

IMPORTANT – Fluoroquinolone Antibiotics (MHRA March 2019)
Systemic (by mouth, injection, or inhalation) fluoroquinolones (Ciprofloxacin, Levofloxacin, Moxifloxacin, Ofloxacin, Delafloxacin) can very rarely cause long-lasting (up to months or years), disabling, and potentially irreversible side effects, sometimes affecting multiple systems, organ classes, and senses

Consideration should be given to official guidance on the appropriate use of antibacterial agents. The new EU restrictions closely align with existing UK national guidance. The restrictions should not prevent use of a fluoroquinolone for serious or severe infections if this is consistent with UK national guidance or where there are microbiological grounds, and where the benefit is thought to outweigh the risk.

If you have any queries on choice of antibiotic please consult a microbiologist

IV Antimicrobials
Prescribing and administration of IV antimicrobials must only happen in services where colleagues are trained and competent to prescribe and administer IV treatments

Version	Change Detail	Date
1	Put in place for new organisation	November 19
2	Reviewed Updated to reflect NICE guidance	March 23

For review November 2025

Based on current NICE and/or UKHSA guidance

BNF hosts antimicrobial summary guidance on behalf of NICE and PHE - BNF Publications

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ACUTE SORE THROAT in ADULTS and CHILDREN

Definition: An acute, usually viral infection of the palatine tonsils; usually bilateral. Secondary bacterial infection can occur. It can be associated with cervical lymphadenopathy. Always consider infectious mononucleosis. Patients may present with sore throat, pain on swallowing, otalgia and dysphagia.
It is in most cases, a self-limiting infection and most people will not need an antibiotic (see below). Group A beta-haemolytic streptococcus (GABHS) is the most common bacterial pathogen in sore throat. Complications of sore throat caused by a GABHS infection are generally rare in adults and children but can be suppurative (including quinsy [peri-tonsillar abscess], acute otitis media and acute sinusitis) or non-suppurative (including acute rheumatic fever and acute glomerulonephritis.

Use **FeverPAIN or Centor to assess symptoms**

FeverPAIN score (1 point for each)	Centor score (1 point for each)
Fever	Tonsillar exudate
Purulence	Tender anterior cervical lymphadenopathy or lymphadenitis
Attend within 3 days or less	History of fever
Severely inflamed tonsils	No cough
No cough or coryza	

FeverPAIN 0-1 or Centor0-2 - NO ANTIBIOTIC
FeverPAIN 2-3 - NO ANTIBIOTIC or BACKUP ANTIBIOTIC
FeverPAIN 4-5 or Centor 3-4 - IMMEDIATE or BACK UP ANTIBIOTIC

In all cases advise

- **Sore throat can last 1 week**
- **Manage symptoms with self-care**
    - **Paracetamol and/or Ibuprofen**
    - **Drink adequate fluid**
    - **Some evidence that medicated lozenges may help**

When no antibiotic is given advise

- **Antibiotic is not needed**
- **Seek medical help if symptoms worsen rapidly or significantly, do not start to improve after 1 week or the person becomes very unwell**

With a back-up antibiotic prescription advise

- **Antibiotic is not needed immediately**
  Obtain the medication prescribed if no improvement in 3-5 days or if symptoms worsen

With an immediate antibiotics prescription, advise

- **Seek medical help if symptoms worsen rapidly or significantly or the person becomes very unwell**
- **If recurrent infection and prescribing Phenoxymethylpenicillin, prescribe for longer than 5 days in line with the guidelines below**

Acute Sore Throat in Adults

<table>
<tr><th>Severity</th><th>1st line</th><th>Penicillin Allergy (see explanatory notes)</th></tr>
<tr><td>FeverPAIN 0-1

Or
Centor 0-2</td><td colspan="2">SELF CARE and safety net
Advise PARACETAMOL or if preferred and suitable, IBUPROFEN for pain
Medicated lozengers may help pain in adults</td></tr>
<tr><td>FeverPAIN 2-3</td><td>No prescription
OR
Back up prescription of

PHENOXYMETHYLPENICILLIN 500mg FOUR TIMES A DAY orally

OR

1g TWICE A DAY orally

Treatment duration : 5-10 days</td><td>No prescription
OR
Back up prescription of

CLARITHROMYCIN 250-500mg TWICE A DAY orally

Treatment duration: 5 days</td></tr>
<tr><td>FeverPAIN 4-5

OR
Centor 3-4</td><td>Immediate treatment if systemically unwell or at risk of complications

Or

Backup prescription

PHENOXYMETHYLPENICILLIN 500mg FOUR TIMES A DAY orally

Or

1g TWICE A DAY orally

Treatment duration : 5-10 days</td><td>Immediate treatment if systemically unwell or at risk of complications

Or

Backup prescription

CLARITHROMYCIN 250-500mg TWICE A DAY orally

Treatment duration: 5 days</td></tr>
</table>

Visual summary of NICE prescribing gudiance (NG 84)- Sore throat (acute) antimicrobial prescribing
Sore throat (acute) in adults: antimicrobial prescribing (nice.org.uk)

Acute Sore Throat in CHILDREN

Severity	1st line	Penicillin Allergy (see explanatory notes)
FeverPAIN 0-1 Or Centor 0-2	SELF CARE and safety net Advise PARACETAMOL or if preferred and suitable, IBUPROFEN for pain	
FeverPAIN 2-3	No prescription OR Back up prescription of PHENOXYMETHYLPENICILLIN- see dosing below	No prescription OR Back up prescription of CLARITHROMYCIN See dosing below
FeverPAIN 4-5 OR Centor 3-4	Immediate treatment with PHENOXYMETHYLPENICILLIN- if systemically unwell or at risk of complications Or Backup prescription of PHENOXYMETHYLPENICILLIN- See dosing below	Immediate treatment with CLARITHROMYCIN if systemically unwell or at risk of complications Or Backup prescription of CLARITHROMYCIN See dosing below
	PHENOXYMETHYLPENICILLIN 1 to 11 months: 62.5 mg FOUR TIMES A DAY, OR 125 mg TWICE A DAY 1 to 5 years: 125 mg FOUR TIMES A DAY or 250 mg TWICE A DAY 6 to 11 years: 250 mg FOUR TIMES A DAY OR 500 mg TWICE A DAY 12 to 17 years: 500 mg FOUR TIMES A DAY OR 1g TWICE A DAY FOR 5 TO 10 DAYS Treatment duration : 5-10 days	CLARITHROMYCIN 1 month to 11 years: Under 8 kg: 7.5 mg/kg TWICE A DAY 8 to 11 kg: 62.5 mg TWICE A DAY 12 to 19 kg: 125 mg TWICE A DAY 20 to 29 kg: 187.5 mg TWICE A DAY 30 to 40 kg: 250 mg TWICE A DAY 12 to 17 years: 250 mg to 500 mg TWICE A DAY Treatment duration: 5 days

Visual summary of NICE prescribing gudiance (NG 84)- Sore throat (acute) antimicrobial prescribing

Sore throat (acute) in adults and children: antimicrobial prescribing (nice.org.uk)

SCARLET FEVER

Definition: Scarlet fever (sometimes called scarlatina) is an infectious disease caused by bacteria called Streptococcus pyogenes, or group A streptococcus (GAS). The same bacteria can also cause impetigo. It is characterised by a rash, which usually accompanies a sore throat. Scarlet fever is mainly a childhood disease and is most commonly seen between the ages of 2 and 8 years. It is highly contagious and is spread by close contact with someone carrying the bacteria. It takes around 2 to 5 days to develop symptoms after exposure to these bacteria. Prompt treatment with appropriate antibiotics significantly reduces the risk of complications. Vulnerable individuals (immunocompromised, the co-morbid, or those with skin disease) are at increased risk of developing complications

		Penicillin Allergy (see explanatory notes)
1ST LINE	**PHENOXYMETHYLPENICILLIN TABLETS 500mg FOUR TIMES A DAY orally** **Treatment duration: 10 days**	**CLARITHROMYCIN 250mg- 500mg TWICE A DAY orally** **Treatment duration: 5 days**

Optimise analgesia and give safety netting advice

For children’s dosing refer to BNFc

QUINSY/ACUTE PERITONSILLAR ABSCESS

Definition: Usually resulting as a complication of acute tonsillitis/pharyngitis with abscess formation between the tonsil and lateral pharyngeal wall. Normally unilateral, rarely bilateral. The affected tonsil is pushed medially towards or even across the mid line. Pain can be severe, associated with otalgia, trismus, dysphagia and drooling of saliva. Patients are usually pyrexial and systemically unwell.

If abscess present refer to the acute trust for incision and draining. A swab of the abscess pus should be sent to Microbiology for culture and sensitivities.

Quinsy/acute peritonsillar abscess

Severity	1st line	Penicillin Allergy (see explanatory notes)
1st line	BENZYLPENICILLIN 1.2g FOUR TIMES A DAY IV plus METRONIDAZOLE 500mg THREE TIMES A DAY IV Typical duration 7 days but for group A streptococcus duration is 10 days	CLINDAMYCIN 1.2g FOUR TIMES A DAY IV Typical duration 7 days but for group A streptococcus duration is 10 days
IV to oral switch	CO-AMOXICLAV 625mg THREE TIMES A DAY orally Typical duration 7 days but for group A streptococcus duration is 10 days	CLINDAMYCIN 450mg FOUR TIMES A DAY orally Typical duration 7 days but for group A streptococcus duration is 10 days

ACUTE OTITIS MEDIA

Definition: Acute otitis media is a self-limiting infection of the middle ear. It can be caused by viruses or bacteria, and both are often present at the same time. It is common in young children between 6 months and 2 years of age and usually occurs as part of an upper respiratory tract infection. In most children acute otitis media resolves without treatment.
The most common bacterial causes of acute otitis media are *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis* and *Streptococcus pyogenes.* Recurrent acute otitis media may lead to chronic suppurative otitis media (cholesteatoma) for which surgical intervention is usually the treatment of choice.
Otitis Media presents as severe otalgia and deafness. The tympanic membrane is red and bulging, perforation can occur leading to purulent otorrhoea. Often the otalgia settles when perforation occurs

Advise:

- **Otitis Media can last 3 days to a week**
- **Most children and young people get better within 3 days WITHOUT antibiotics**
- **Manage symptoms with self-care**
  - **Paracetamol and/or ibuprofen**
  - **Evidence suggests that decongestants or antihistamines do not help symptoms**
- **Otorrhoea or under 2 years with infection in both ears: No prescription or back up or immediate antibiotic**
- **Otherwise: no prescription or back up antibiotic**
- **Systemically very unwell or high risk of complications: immediate antibiotic**

Acute otitis media

1st LINE	**Consider EARDROPS containing an anaesthetic and an analgesic if there is no eardrum perforation or otorrhoea** **PHENAZONE 40mg/g with LIDOCAINE 10mg/g EARDROPS** **FOUR drops in the affected ear THREE times a day for up to 7 days**	
		Penicillin Allergy (see explanatory notes)
2ND LINE	**No prescription** **OR** **Back up prescription** **OR** **Immediate antibiotic** **AMOXICILLIN THREE TIMES A DAY orally** **1 month to 11 months** **125mg THREE TIMES A DAY** **1 year to 4 years** **250mg THREE TIMES A DAY** **5 years to 17 years**	**No prescription** **OR** **Back up prescription** **OR** **Immediate antibiotic** **CLARITHROMYCIN TWICE A DAY orally** **Under 8kg 7.5mg/kg TWICE A DAY** **8kg to 11kg 62.5mg TWICE A DAY** **12kg to 19kg 125mg TWICE A DAY** **20kg to 29kg 187.5mg TWICE A DAY** **30kg to 40kg 250mg TWICE A DAY** **Treatment duration: 5 - 7 days**

	500mg THREE TIMES A DAY **Treatment duration: 5-7 days**	
3RD LINE **(worsening symptoms or 1st line treatment for 2-3 days)**	**CO-AMOXICLAV THREE TIMES A DAY orally** **1 month to 11 months,** **0.25ml/kg of 125mg/31 suspension THREE TIMES A DAY** **1 year to 5 years** **5ml of 125mg/31 suspension THREE TIMES A DAY** **6 years to 11 years** **5ml of 250mg/62 suspension THREE TIMES A DAY** **12 years to 17 years** **250/125mg or 500/125mg tablets THREE TIMES A DAY** **Treatment duration: 5-7 days**	**CLARITHROMYCIN 500mg TWICE A DAY orally** **Treatment duration: 5 - 7 days**

Summary of NICE prescribing for Acute Otitis media

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ACUTE OTITIS EXTERNA

Definition: Acute otitis externa is inflammation of the skin of the external auditory meatus. Acute severe otitis externa may be caused by *Stapholococcus aureus* or Beta-haemolytic Streptococci. Patients may present with otalgia, otorrhea and deafness. The skin of the external auditory meatus is oedematous and inflamed. The ear canal may be blocked with discharge. In fungal infections hyphae can be seen microscopically

Malignant Otitis Externa is defined as an uncommon but potentially fatal and aggressive infection of the external ear canal. If left untreated it can lead to cartilage and bone involvement with adjacent cranial nerve involvements. It may be seen in diabetics and in immunocompromised patients. It is often caused by *Pseudomonas aeruginosa* but can be associated with a fungal infection

If cellulitis or disease extends outside of ear canal or there are systemic signs of infection consider referral to exclude malignant otitis externa

Acute otitis externa

1ST LINE	**Analgesia for pain relief** **Apply localised heat such as a warm flannel**	
2ND LINE	**Topical acetic acid 2% spray** **1 SPRAY THREE TIMES A DAY** **Treatment duration 7 days** **OR** **Topical neomycin sulphate with corticosteroid** **3 drops THREE TIMES A DAY** **Treatment duration 7 days (min) to 14 days (max)**	
If cellulitis or disease extends outside of ear canal **Or** **Systemic signs of infection**	**FLUCLOXACILLIN 500mg FOUR TIMES A DAY orally** **Treatment duration: 7 days** **Refer to exclude malignant otitis externa**	**CLARITHROMYCIN 500mg TWICE A DAY** **Treatment duration: 7 days** **Refer to exclude malignant otitis externa**

For children's dosing refer to BNFc

SINUSITIS (Rhinosinusitis)

Definition: Acute sinusitis (also known as rhinosinusitis) is inflammation of the nose and the paranasal sinuses. Symptoms include nasal blockage or obstruction or a nasal discharge. Facial pain and hyposmia/anosmia may be present. Evidence of a mucopurulent discharge from the middle meatus within the nose is required evidence to support the diagnosis
It is self-limiting and usually triggered by a viral infection of the upper respiratory tract (for example, a common cold). Only about 2% of cases are complicated by bacterial infection, but it is very difficult to distinguish these.
Symptoms can last for 2 to 3 weeks – most people will get better within this time without treatment, regardless of cause (bacteria or virus).
Antibiotics are not needed for most people. Withholding antibiotics is unlikely to lead to complications.

Sinusitis

		Penicillin Allergy (see explanatory notes)
1st Line Symptoms for 10 days or less	**NO ANTIBIOTIC - Advise:** Antibiotic is not needed**,** sinusitis usually last 2-3 weeks**,** manage symptoms with self-care **and w**hen to seek help	
Minor/moderate **Symptoms with no improvement for more than 10 days**	**No antibiotic** **Or** **Back up antibiotic**- advise antibiotic not needed immediately and obtain the medication prescribed if no improvement in 7 days or if symptoms worsen rapidly or significantly	
Minor/moderate **Symptoms with no improvement for more than 10 days**	**PHENOXYMETHYLPENICILLIN TABLETS 500mg FOUR TIMES A DAY orally** **Treatment duration : 5 days**	**DOXYCYCLINE 200mg ON DAY ONE, THEN 100mg DAILY orally (not in under 12s)** **OR** **CLARITHROMYCIN 500mg TWICE A DAY orally** **Treatment duration : 5 days**
Moderate Systemically very unwell **OR** **high risk of complication** **remember safety issues if considering a fluoroquinolone	**Immediate antibiotic** **CO-AMOXICLAV 500/125mg THREE TIMES A DAY orally** **Treatment duration : 5 days**	**Immediate antibiotic** **CLARITHROMYCIN 500mg TWICE A DAY orally** **Or** **LEVOFLOXACIN (**Fluoroquinolone antibiotic **) **500mg TWICE A DAY orally** **Treatment duration : 5 days**

For children's dosing refer to BNFc

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Summary of NICE prescribing for Sinusitis

with you, for you

NHS
Gloucestershire Health and Care
NHS Foundation Trust

ACUTE BACTERIAL PAROTITIS

Definition: Acute bacterial parotitis is usually unilateral swelling of parotid gland with potential abscess formation. It can be associated with poor dental hygiene, dental caries and dehydration. The most common cause is *Staph aureus* (could be *meticillin resistant Staph aureus* - MRSA). The parotid gland is acutely tender, swollen with inflammation of the soft tissues. It can be associated with trismus and a stone may be palpable in the parotid duct or visible on a plain X-ray
Take a parotid duct pus swab for bacterial culture if pus seen from parotid duct

		Penicillin Allergy **(see explanatory notes)**
Minor **1st line**	**FLUCLOXACILLIN 500mg FOUR TIMES A DAY orally** **if anaerobic infection suspected/poor dentition add:** **METRONIDAZOLE 400mg THREE TIMES A DAY orally**	**CLINDAMYCIN 450mg FOUR TIMES A DAY orally**
If current /previous MRSA positive	**If current /previous MRSA positive use:** **DOXYCYCLINE 200mg DAILY orally** **if anaerobic infection suspected/poor dentition add:** **METRONIDAZOLE 400mg THREE TIMES A DAY orally** **Duration 5 days but up to 10-14 days may be needed for some infections**	**If current /previous MRSA positive use:** **DOXYCYCLINE 200mg DAILY orally** **if anaerobic infection suspected/poor dentition add:** **METRONIDAZOLE 400mg THREE TIMES A DAY orally** **Duration 5 days but up to 10-14 days may be needed for some infections**

LUDWIG'S ANGINA

Definition: Ludwig's angina is a bacterial submandibular and sublingual indurated cellulitis without abscess formation. Infection begins in the floor of the mouth and causes brawny submandibular swelling that may cause airway obstruction. It presents as submandibular, brawny, indurated cellulitis. Tongue may be pushed towards the roof of the mouth due to mouth floor swelling. Eating and swallowing may be difficult and breathing difficulty indicates airway compromise. Fever is usually present.

Ludwig's Angina

		Penicillin Allergy **(see explanatory notes)**
1st line If current/previous MRSA positive	**BENZYLPENICILLIN 1.2g FOUR TIMES A DAY IV (increasing to 2.4g FOUR TIMES A DAY IV if severe systemic toxicity)** **Plus** **METRONIDAZOLE 400mg THREE TIMES A DAY orally** If current/previous MRSA positive add **TEICOPLANIN every 12 hours IV for 4 doses then ONCE DAILY** **Dose** **Less than 50kg: 400mg** **50-74kg: 600mg** **75-100kg: 800mg** **more than 100kg: 1000mg** Maintain treatment pending pre-dose (trough) level on Day 5. Target level 15-60mg/L **Typical duration: 7-10 days**	**CLINDAMYCIN 1.2g FOUR TIMES A DAY IV** If current/previous MRSA positive add **TEICOPLANIN every 12 hours IV for 4 doses then ONCE DAILY** **Dose** **Less than 50kg: 400mg** **50-74kg: 600mg** **75-100kg: 800mg** **more than 100kg: 1000mg** Maintain treatment pending pre-dose (trough) level on Day 5. Target level 15-60mg/L **Typical duration: 7-10 day**
IV to ORAL switch	**AMOXICILLIN 500mg FOUR TIMES A DAY orally** **Plus** **METRONIDAZOLE 400mg THREE TIMES A DAY orally** If current/previous MRSA positive add **DOXYCYCLINE 200mg DAILY orally** **Typical duration: 7-10 days**	**CLINDAMYCIN 450mg FOUR TIMES A DAY orally** If current/previous MRSA positive add **DOXYCYCLINE 200mg DAILY orally** **Typical duration: 7-10 days**