# Clinical Standard Operating Procedure (SOP) PAEDIATRIC VTE VENOUS THROMBOPROPHYLAXIS

SETTING	Bristol Royal Hospital for Children

FOR STAFF Medical and nursing staff

PATIENTS Children aged under 16 years

## STANDARD OPERATING PROCEDURE

#### Background

The great majority of venous thrombo-embolic (VTE) disease in children occurs in sick children with multiple co-morbidities and an indwelling central venous catheter (CVC). In general, there is no proven role for thromboprophylaxis in this patient group and identification of those few patients in whom it may be helpful is best done by specialist treating teams.

"Adult-type" VTE (deep venous thrombosis and pulmonary embolism not associated with CVC) is rare and occurs primarily in post-pubescent children/those weighing >40kg.

It is possible to reduce the risk of VTE by:

- Maintaining good hydration
- Encouraging mobilisation when possible
- Using graduated compression stockings (TEDs)

Intermittent calf compression may be beneficial for long operations or prolonged immobility on intensive care.

The role of prophylactic low molecular weight heparin such as enoxaparin is not well established in children. Those children for whom the benefit of enoxaparin is likely to outweigh any increased risk of bleeding are best identified at consultant level within the specialist treating team. Complex/high risk cases may be discussed with a paediatric haematology consultant.

#### Guideline

All inpatients weighing > 40 Kg who are expected to have reduced mobility for at least 24 hours should be considered for TED stockings.

TED stockings should be correctly fitted.

Contraindications to TED stockings may include injury, disease or an arterial line in that limb.

Elective surgery patients should be assessed for use of TEDs using the attached tool.

Intermittent calf compression should be considered for long operations and for some patients in Paediatric Intensive Care at the discretion of the clinical team.



NICE guideline: venous thromboembolism - reducing the risk. January 2010.

University Hospitals Bristol NHS

 RELATED
 Name of document

 DOCUMENTS
 DMS address ie http://nww.avon.nhs.uk/dms/download.aspx?did=nnnn

SAFETY None

QUERIES Contact Dr generation, Ext generation or

#### BACKGROUND READING

NICE guideline: venous thromboembolism – reducing the risk. January 2010.

Thromboprophylaxis in a pediatric hospital: a patient-safety and quality-improvement initiative. Raffini L, Trimarchi T, Beliveau J, Davis D. Pediatrics 2011;127(5):e1326-32

Perioperative thromboprophylaxis in children: development of a guideline for management. Jackson PC, Morgan JM. Pediatric Anesthesia 2008;18(6):478-87

Venous thromboembolic complications (VTE) in children: first analyses of the Canadian Registry of VTE. Andrew M et al. Blood 1994; 83: 1251-1257

## Clinical Guideline OPEN LONG BONE FRACTURES

- SETTING Bristol Royal Hospital For Children
- **FOR STAFF** Nursing and Medical Children's Emergency Department (CED), Orthopaedics, Plastics
- **PATIENTS** Children with open long bone fractures

## 1. Overview

This clinical guideline is intended to ensure the safe, effective and timely treatment of open long bone fractures in children. Long bones are defined as the humerus, radius, ulna, femur, tibia and fibula. An open fracture is a fractured long bone with an associated traumatic wound or break in the skin which allows bacteria to reach the deeper tissues. This may only be a small (>1cm) puncture wound.

This guidance has been adapted from the BOA/BAPRAS guidelines, BOAST 4: The management of severe open lower limb fractures.

This can be accessed online on the BOA website at <a href="https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf">https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf</a>

## 2. Clinical Guidelines

These are split into 3 parallel streams each running simultaneously

- Investigation
- Management
- Communication

## 2a. Investigation

- ABC Approach, identify and treat life threatening injuries first. Open long bone fractures occur following high energy mechanisms of injury and other serious injuries may be present.
- 2. Assess limb neurovascular status, wound and compartments. Assess the limb's perfusion by palpating distal pulses and for capillary refill. Perform an accurate examination of the motor and sensory function. Assess for symptoms and signs of

compartment syndrome. Expose the extent of the wound.

- 3. Assess the Tetanus immunisation status of the child
- 4. Re-Assess the limb's neurovascular status following straightening and splinting.
- **5.** Arrange appropriate x-rays. These should include AP and lateral views of the full extent of the fractured bone, including the joint above and below.

#### **2b. Management**

- Initial Analgesia. Simple analgesia should be given immediately. Consider the use of Entonox or intra-nasal opiates.
- 2. Obtain IV access. Ensure adequate analgesia and sedation, if required.
- 3. Give IV Antibiotics.

This must be done in CED as early administration of antibiotics reduces infection rate in open fractures. The BOA guidelines recommend Co-Amoxiclav or Cefuroxime. If the patient is penicillin allergic then Clindamycin should be used.

4. Remove gross contamination from the wound, take a photograph of the wound using the department's camera then place in patients notes, apply a saline soaked dressing then straighten and splint the limb.

## **2c. Communication**

- Senior CED medical review immediately. Senior medical staff should be alerted of the presence of a patient with an open fracture (in the department or being transferred here) immediately.
- 2. CED to inform Orthopaedic Registrar Immediately, contact the Clinical Site Team and book a bed
- 3. Orthopaedic Registrar should review ASAP and discuss with Plastics Registrar.
- 4. A Consultant led combined Ortho/Plastics plan for debridement and fixation should be made.
- 5. Email <u>PaediatricMajorTrauma@UHBristol.nhs.uk</u> to notify the Major Trauma team of eligible patient.





https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf

#### RELATED DOCUMENTS

http://www.boa.ac.uk/publications/boa-standards-for-trauma-boasts/

"Photography using the digital camera in the Children's Emergency Department" available at: <u>http://nww.avon.nhs.uk/dms/Default.aspx?sid=0&s2id=1164</u>

#### ABBREVIATIONS

BAPRAS	British Association of Plastic,
	Reconstructive and
	Aesthetic Surgeons
BOA	British Orthopaedic Association
BOAST	British Orthopaedic Association
	Standards for Trauma

#### **QUERIES** Please contact:

Consultant Orthopaedic Surgeon

Consultant Orthopaedic Surgeon

, Paediatric Major Trauma Nurse Co-Ordinator

OR Orthopaedic Registrar on call via switchboard



- SETTING Bristol Royal Hospital for Children
- FOR STAFF All staff treating paediatric surgical patients who require antibiotics

MICRO

Microbiology empirical guidelines

- Indication stated on chart
- Cultures and sensitivities
- Review / stop date on chart
- Oral switch from IV
- **PATIENTS** Paediatric surgical patients who require prophylaxis or treatment with antibiotics

#### GUIDANCE

- In complex patients with multiple pathologies, the choice of therapy should be discussed on an individual basis with a consultant and/or medical microbiologist. This guideline does not cover the surgical prophylaxis for NICU patients.
- \*Penicillin allergy patients with a history of anaphylaxis, urticaria or rash immediately after penicillin administration (type 1 allergy) should not receive a penicillin, cephalosporin or other βlactam antibiotic. Discuss alternative antibiotic treatment with Microbiology.

Methicillin Resistant Staphylococcus Aureus (MRSA):

- 1) For prophylaxis if the patient is known to have/has had MRSA, refer to the MRSA option in the guidelines below.
- 2) Additionally, in elective surgery prescribe topical Mupirocin 2% nasal ointment tds to anterior nares and Octenisan® washes daily for 5 days, with surgery at day 5.
- 3) See the Topical MRSA eradication guideline for full details.
- 4) If treating a post-operative infection consider MRSA status.
- If the patient is colonised or infected with other multi-resistant organisms discuss with Microbiology.
- Consult the BNF for Children for further details on dosing.
- Antibiotic doses assume children with normal renal function and may require modification in renal impairment
- See the Paediatric Gentamicin guideline for full details on prescribing and administration
- Prophylaxis: Document on the anaesthetic chart the antibiotics received, the time given, and the knife to skin time. Document on the drug chart the antibiotics received.
- Review antibiotic treatment once culture and sensitivity results are known.
- Corrected gestational age (CGA) is the neonate's total age expressed in weeks from the start of the mothers last menstrual period.

 Agents with a short half-life should be re-administered if the procedure is over 4 hours (see table below)

Drug	Re-dosing time
Co-amoxiclav	4 hours
Amoxicillin	4 hours
Cefuroxime	4 hours
Metronidazole	N/A unless very prolonged surgery of 12 hours
Gentamicin	N/A
Teicoplanin	N/A
Vancomycin	N/A

#### **Prophylaxis**

Procedure		Antibiotic therapy	Length of course	Comments				
GASTROINTESTIN	GASTROINTESTINAL							
Upper gastrointestinal surgery		<b>Co-amoxiclav</b> 30mg/kg IV (max 1.2grams)	Single dose on induction only	If concerned about MRSA please see box above				
	Penicillin allergy* not type 1 allergy - see header	Cefuroxime* 50mg/kg IV (max 1.5grams)						
	Penicillin allergy type 1 allergy - see header Or MRSA	≤ 28 days: 16mg/kg IV > 28 days: 10mg/kg IV (max 400mg/dose)						
	positive	plus <b>Gentamicin</b> 5mg/kg IV (max 520mg/dose) <u>Gentamicin guideline for</u>						
Lower intestinal surgery		Amoxicillin 30mg/kg IV (max 1gram) plus Metronidazole	Single dose on induction only	If antibiotics have been given in the last 24 hours please discuss with				
		<2 months 15mg/kg load (if continuing use 7.5mg/kg tds) ≥2months 7.5mg/kg (max 500mg/dose)		Microbiology				
		plus <b>Gentamicin</b> 5mg/kg IV (max 520mg/dose) <u>Gentamicin guideline for</u> <u>children</u>						
	Penicillin allergy* not type 1 allergy - see header	Cefuroxime* 50mg/kg IV (max 1.5grams) plus Metronidazole						
		<pre>&lt;2 months 15mg/kg load (if continuing use 7.5mg/kg tds) ≥2months 7.5mg/kg (Max 500mg/dose)</pre>						

Procedure		Antibiotic therapy	Length of course	Comments
	Penicillin allergy type 1 allergy - see header Or MRSA positive	Teicoplanin ≤ 28 days: 16mg/kg IV > 28 days: 10mg/kg IV (max 400mg/dose) plus Metronidazole <2 months 15mg/kg load (if continuing use 7.5mg/kg load (if continuing use 7.5mg/kg tds) ≥2months 7.5mg/kg (Max dose 500mg) plus Gentamicin 5mg/kg IV (max 520mg/dose) Gentamicin guideline for children		
Barium enema and rectal biopsy And contrast Only for children < 12 months		Amoxicillin 30mg/kg IV (max 1gram) plus Metronidazole <2 months 15mg/kg stat (Stat dose only) ≥2months 7.5mg/kg stat (Max dose 500mg) plus Gentamicin 5mg/kg IV (max 520mg/dose) Gentamicin guideline for children	Single dose at start of procedure For out-patient prophylaxis, Co-amoxiclav Doses for 125/31 suspension: Single doses only Neonate – 5 years 0.25ml/kg	Do not administer teicoplanin and gentamicin together. Ensure the cannula is flushed between drugs.
	Penicillin allergy* not type 1 allergy - see header	Cefuroxime* 50mg/kg IV (max 1.5grams) plus Metronidazole <2 months 15mg/kg stat (Stat dose only) ≥2months 7.5mg/kg stat (max 500mg/dose)	250/62 suspension: 6-11 years 0.15ml/kg 11-18 years 375mg Oral doses should be given 1 hour before the procedure	

Procedure		Antibiotic therapy	Length of course	Comments
Acute Appendicitis (Non-perforated or normal appendix)	Penicillin allergy type 1 allergy - see header Or MRSA positive	Teicoplanin         ≤ 28 days: 16mg/kg IV         > 28 days: 10mg/kg IV         (max 400mg/dose)         plus Metronidazole         <2 months 15mg/kg load         (Stat dose only)         ≥2months 7.5mg/kg IV         (max 500 mg/dose)         plus Gentamicin 5mg/kg IV         (max 520mg/dose)         Gentamicin quideline for         children         Amoxicillin         30mg/kg IV         (max 1 gram/dose)         plus Metronidazole         <2 months 15mg/kg load         (if continuing use 7.5mg/kg load         (if continuing use 7.5mg/kg load         (if continuing use 7.5mg/kg load         (max 500mg/dose)         ≥2months 7.5mg/kg load         (if continuing use 7.5mg/kg tds)         ≥2months 7.5mg/kg load         (if continuing use 7.5mg/kg tds)         ≥2months 7.5mg/kg load         (if continuing use 7.5mg/kg load         (if continuing use 7.5mg/kg load         (if continuing use 7.5mg/kg load         (max 500mg/dose)         plus Gentamicin 5mg/kg IV single         dose         (max 520mg)         Gentamicin 5mg/kg IV single <th>Single dose</th> <th>Comments</th>	Single dose	Comments
	Penicillin allergy* not type 1 allergy - see header	Cefuroxime* 50 mg/kg IV (max 1.5 grams/dose) plus Metronidazole <2 months 15mg/kg load (if continuing use 7.5mg/kg tds) ≥2months 7.5mg/kg (Max 500mg/dose)	Single dose	

Procedure		Antibiotic therapy	Length of course	Comments
	Penicillin allergy* type 1 allergy - see header Or MRSA positive	Teicoplanin ≤ 28 days: 16mg/kg IV > 28 days: 10mg/kg IV (max 400mg/dose) plus Metronidazole <2 months 15mg/kg load (if continuing use 7.5mg/kg load (if continuing use 7.5mg/kg tds) ≥2months 7.5mg/kg (Max 500mg/dose) plus Gentamicin 5mg/kg IV (max 520mg/dose) Gentamicin guideline for	Single dose	Do not administer teicoplanin and gentamicin together. Ensure the cannula is flushed between drugs.
		<u>children</u>		
ORTHOPAEDICS				De set e la la la la
procedure		<ul> <li>&lt; 3 months: 30mg/kg IV</li> <li>On induction and one further dose 12 hourly</li> <li>3 months - 18 years: 30mg/kg IV (max 1.2grams) on induction, and for two further doses 8 hourly</li> </ul>	Dose for 24 hours Additional further doses only at the discretion of the consultant.	teicoplanin and gentamicin together. Ensure the cannula is flushed between drugs.
	Penicillin allergy* not type 1 allergy - see header	Cefuroxime* < 7 days: 50mg/kg IV bd 7 - 20 days: 50mg/kg IV tds 21 - 28 days: 50mg/kg IV qds >1 month- 18 years: 50mg/kg IV tds (max 1.5grams/dose) Toigoplanin	Dose for 24 hours Additional further doses only at the discretion of the consultant.	
	Yenicillin allergy* type 1 allergy - see header Or MRSA positive	≤ 28 days: 16mg/kg IV > 28 days: 10mg/kg IV (max 400mg/dose) plus Gentamicin 5mg/kg IV (max 520mg/dose) Gentamicin guideline for <u>children</u>		

Procedure		Antibiotic therapy	Length of course	Comments
Recent External Fixation proceeding to Open Reduction Internal Fixation		Teicoplanin ≤ 28 days: 16mg/kg IV > 28days: 10mg/kg IV (max 400mg/dose) plus Gentamicin 5mg/kg IV single dose (max 520mg/dose) <u>Gentamicin guideline for</u> <u>children</u>	Single dose on induction	Do not administer teicoplanin and gentamicin together. Ensure the cannula is flushed between drugs.
ENT				
Cochlear implants		<b>Co-amoxiclav</b> 30mg/kg IV (max 1.2grams)	Single dose on induction only	Do not administer teicoplanin and gentamicin
	Penicillin allergy* not type 1 allergy - see header	<b>Cefuroxime*</b> 50mg/kg IV (max 1.5grams)		together. Ensure the cannula is flushed between drugs.
	Penicillin allergy* type 1 allergy - see header Or MRSA positive	Teicoplanin ≤ 28 days: 16mg/kg IV > 28 days: 10mg/kg IV (max 400mg/dose) plus Gentamicin 5mg/kg IV (max 520mg/dose) <u>Gentamicin guideline for</u> <u>children</u>		urugs.
Infected Tympanoplasty or		<b>Co-amoxiclav</b> 30mg/kg IV (max 1.2grams)	Single dose on induction only	Do not administer teicoplanin and gentamicin
Mastoidectomy	Penicillin allergy* not type 1 allergy - see header	<b>Cefuroxime*</b> 50mg/kg IV (max 1.5grams)		together. Ensure the cannula is flushed between drugs.
	Penicillin allergy* type 1 allergy - see header Or MRSA positive	Teicoplanin ≤ 28 days: 16mg/kg IV >28 days: 10mg/kg IV (max 400mg/dose) plus Gentamicin 5mg/kg IV (max 520mg/dose) <u>Gentamicin guideline for</u> <u>children</u>		J
UROLOGY				
Urological procedures		<b>Co-amoxiclav</b> 30mg/kg IV (max 1.2grams)	Single dose on induction only	

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Procedure		Antibiotic therapy	Length of course	Comments
Catheters / stents left in situ post-operatively		Trimethoprim < 1 month: 2mg/kg po bd 1 month - 12 years: 4mg/kg po bd (max 200mg/dose) 12 - 18 years: 200mg po bd	Up to a maximum of 1 week. Further prophylaxis at Urology consultants discretion	
Major urinary tract reconstruction		IV ANTIBIOTICS: Amoxicillin < 7 days: 30mg/kg IV bd 7 - 28 days: 30mg/kg IV tds 1 month - 18 years: 30mg/kg IV tds (max 1gram/dose) plus Metronidazole <2 months 15mg/kg load (if continuing use 7.5mg/kg tds) ≥2months 7.5mg/kg tds (max 500mg/dose) plus Gentamicin* 5mg/kg IV daily (max 520mg/dose) Gentamicin guideline for children	Until absorbing orally (then see oral option below)	
	Penicillin allergy* (not type 1 allergy - see header)	IV ANTIBIOTICS: Cefuroxime* <7 days: 50mg/kg IV bd 7 - 20 days: 50mg/kg IV tds 21 - 28 days: 50mg/kg IV qds 1 month – 18years: 50mg/kg IV tds (max 1.5grams/dose) plus Metronidazole <2 months 15mg/kg load (if continuing use 7.5mg/kg tds) ≥2months 7.5mg/kg tds (Max 500mg/dose)	Until absorbing orally (then see oral option below)	

Procedure		Antibiotic therapy	Length of course	Comments
	Penicillin allergy* (type 1 allergy - see header) Or MRSA positive	Teicoplanin ≤ 28 days: 16mg/kg IV loading dose then 24 hours later 8mg/kg IV daily > 1 month: 10mg/kg IV bd (3 doses) then 6mg/kg daily (max 400mg/dose) plus Metronidazole <2 months 15mg/kg load (if continuing use 7.5mg/kg tds) ≥2months 7.5mg/kg tds (max 500mg/dose) plus Gentamicin* 5mg/kg IV daily (max 520mg/dose) Gentamicin quideline for children	Until absorbing orally (then see oral option below)	Do not administer teicoplanin and gentamicin together. Ensure the cannula is flushed between drugs
		THEN ORAL ANTIBIOTICS: Trimethoprim < 1 month: 2mg/kg po bd 1 month - 12 years: 4mg/kg po bd (max 200mg/dose) 12 - 18 years: 200mg po bd	One week maximum	
		THEN PROPHYLAXIS: Trimethoprim < 1 month: 2mg/kg po nocte 1 month - 12 years: 2mg/kg po nocte (max 100mg/dose) 12 - 18 years: 100mg po nocte	Until catheter is removed	

## Treatment

Infection		Antibiotic therapy		Comments
GASTROINTE	STINAL			
Appendicitis (gangrenous / perforated) or Intra- abdominal sepsis or Suspected Necrotizing Enterocolitis (NEC)		IV ANTIBIOTICS: Amoxicillin < 7 days: 60mg/kg IV bd 7 - 28 days: 60mg/kg IV tds > 28 days: 60mg/kg IV tds (max 1gram/dose) plus Metronidazole <2 months 15mg/kg load (if continuing use 7.5mg/kg tds) ≥2months 7.5mg/kg tds (Max dose 500mg) plus Gentamicin* 5mg/kg IV daily (max 520mg/dose) Gentamicin quideline for children	ORAL SWITCH: Co-amoxiclav 125/31 suspension 1 month - 1 year: 0.5ml/kg po tds Co-amoxiclav 250/62 suspension 1 - 5 years: 2.5-5mls po tds 6 - 11 years: 5-10mls po tds Co-amoxiclav 12 - 18 years: 375-625mg po tds.	For appendicitis or intra- abdominal sepsis, start triple intravenous antibiotics & review at 3 days. If antibiotics are still required, consider a switch to oral to complete a 7 day course in total Treat NEC for 7 days and then review
	Penicillin allergy* (not type 1 allergy - see header)	IV ANTIBIOTICS: Cefuroxime < 7 days: 50mg/kg IV bd 7 - 20 days: 50mg/kg IV tds 21 - 28 days: 50mg/kg IV qds > 1 month: 50-60mg/kg IV tds (max 1.5grams/dose) plus Metronidazole <2 months 15mg/kg load (if continuing use 7.5mg/kg tds (Max dose 500mg) Consider Gentamicin* 5mg/kg IV daily if particularly unwell (max 520mg/dose) Gentamicin guideline for children	ORAL SWITCH: Cefalexin Neonate: ≤ 6 days:25mg/kg bd (max 125mg per dose) 7-20 days: 25mg/kg tds (max 125mg per dose) 21-28 days: 25mg/kg qds Child 1 month-1 year: 125mg bd 1 year – 5 years: 125mg tds 5-12 years: 250mg tds 12-18 years: 500mg -1g tds plus Metronidazole <2 months: 7.5mg/kg po bd ≥2 months - 12 years: 7.5mg/kg (max 400mg/dose) po tds 12-18 years: 400mg po tds	For appendicitis or intra- abdominal sepsis, start triple intravenous antibiotics & review at 3 days. If antibiotics are still required, consider a switch to oral to complete a 7 day course in total Treat NEC for 7 days and then review. Please note Cefalexin has narrower spectrum of activity than Cefuroxime

Infection		Antibiotic therapy		Comments
	Penicillin allergy* (type 1 allergy - see header) Or MRSA positive	Teicoplanin         ≤ 28 days: 16mg/kg IV loading dose then 24 hours later 8mg/kg IV daily         > 1 month: 10mg/kg IV bd (3 doses) then 10mg/kg daily (max 400mg/dose)         plus Metronidazole         <2 months 15mg/kg load (if continuing use 7.5mg/kg tds (Max dose 500mg)         plus Gentamicin*         5mg/kg IV daily (max 520mg/dose)         Gentamicin guideline for children	For oral option please discuss with microbiology	For appendicitis or intra- abdominal sepsis, start triple intravenous antibiotics & review at 3 days. If antibiotics are still required, consider a switch to oral to complete a 7 day course in total Treat for 7 days for NEC.
ORTHOPAED	ICS			
Pin Site Infection		Flucloxacillin < 7 days: 25mg/kg po bd 7 - 20 days: 25mg/kg po tds 21 - 28 days: 25mg/kg po qds 1 month - 2 years: 62.5 - 125mg po qds 2 - 9 years: 125 - 250mg po qds 10 - 18 years: 250 - 500mg po qds	Review at 7 days	

Infection		Antibiotic therapy		Comments
LINE INFECTION Line infection	Penicillin allergy	Clarithromycin < 1 month or < 8kg: 7.5mg/kg po bd 8 - 11kg: 62.5mg po bd 12 - 19kg: 125mg po bd 20 - 29kg: 187.5mg po bd 30 - 40kg: 250mg po bd 12 - 18 years: 250-500mg po bd	Review at 7 days.	Consider the need for line removal. Please see line lock guidelines <u>Paediatric line infection</u> guideline
	CTION			
Wound infection following clean surgery		IV ANTIBIOTICS: Flucloxacillin < 7 days: 25mg/kg IV bd 7 - 20 days: 25mg/kg IV tds 21 - 28 days: 25mg/kg IV qds 1 month - 18 years: 25mg/kg IV qds (max 1gram/dose)	Review at 3 days for oral switch: Flucloxacillin < 7 days: 25mg/kg po bd 7 - 20 days: 25mg/kg po tds 21 - 28 days: 25mg/kg po qds 1 month - 2 years: 62.5 - 125mg po qds 2 - 9 years: 125 - 250mg po qds 10 - 18 years: 250 - 500mg po	

Infection		Antibiotic therapy		Comments		
	Penicillin allergic Or MRSA positive	IV ANTIBIOTICS: Teicoplanin ≤ 28 days: 16mg/kg IV for one dose, followed 24 hours later by 8mg/kg daily 1 month - 18 years: 10mg/kg IV (max 400mg/dose) bd for 3 doses then 10mg/kg daily	Review at 3 days for oral switch: Clarithromycin < 1 month or < 8kg: 7.5mg/kg po bd 8 - 11kg: 62.5mg po bd 12 - 19kg: 125mg po bd 20 - 29kg: 187.5mg po bd 30 - 40kg: 250mg po bd 12 - 18 years: 250-500mg po bd			
Wound infection likely to contain bowel flora following contaminated surgery		IV ANTIBIOTICS: Co-amoxiclav <3 months 30mg/kg IV bd ≥3 months 30mg/kg IV tds (max 1.2grams/dose)	Review at 3 days for oral switch: Co-amoxiclav 125/31 suspension <1 month: 0.25ml/kg po tds 1 month - 1 year: 0.25 - 0.5ml/kg po tds Co-amoxiclav 250/62 suspension 1 - 5 years: 2.5-5mls po tds 6 - 11 years: 5 - 10mls po tds Co-amoxiclav 12 - 18 years: 375 - 625mg po tds			
	Penicillin allergy* (not type 1 allergy - see header)	IV ANTIBIOTICS: Cefuroxime* < 7 days: 30mg/kg IV bd 7 - 20 days: 30mg/kg IV tds 21 - 28 days: 30mg/kg IV qds 1 month - 18 years: 30mg/kg IV tds (max 1.5grams/dose) plus Metronidazole <2 months 15mg/kg load (if continuing use 7.5mg/kg tds) ≥2months 7.5mg/kg tds (max 500mg/dose)	Review at 3 days for oral switch: ORAL SWITCH: Cefalexin ≤ 6 days:25mg/kg bd (max 125mg per dose) 7-20 days: 25mg/kg tds (max 125mg per dose) 21-28 days: 25mg/kg qds (max dose 125mg) 1 month-1 year: 125mg bd 1 year – 4 years: 125mg tds 5-11 years: 250mg tds 12-18 years: 500mg -1g tds plus Metronidazole < 2 months: 7.5mg/kg po bd ≥ 2 months - 11 years: 7.5mg/kg (max 400mg/dose) po tds 12-18 years: 400mg po tds			
SPLENECTOMY						
Post- operative antibiotic prophylaxis		Penicillin V <1 year: 62.5mg po bd 1 - 4 years: 125mg po bd 5 - 18 years: 250mg po bd	Ongoing			

Infection		Antibiotic therapy		Comments		
	Penicillin allergic	<b>Erythromycin</b> 1 month - 1 year: 125mg po bd 2 - 7 years: 250mg po bd 8 - 18 years: 500mg po bd				
Discuss post-operative antibiotic prophylaxis with Microbiology for patients who have not completed the required childhood vaccine schedule or for those unable to take oral antibiotics. For information on vaccines for splenectomised patients please see Immunisation against infectious disease (DoH Green Book) also available on https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/309218/Green_Book_Chapter 7_v1_3.p_df (Chapter 7). If further advice on vaccinations is required discuss with Professor Finn.						

## RELATED All anti-infective documents

**QUERIES** Contact microbiology , paediatric infectious diseases or pharmacy.