## Surgical antimicrobial prophylaxis

### All IV single doses unless stated

### Questions

1. How clean is the surgery?
2. What surgical antimicrobial prophylaxis do I need to give?
3. When will I need to redose?

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### Do not adjust dose for renal/hepatic impairment

Continue current antimicrobial treatment regimens as scheduled peri-operatively

Standard surgical prophylaxis should be administered in addition to any current therapy

MRSA infected

Add vancomycin 15mg/kg (ABW) (Max 2g) to regimen

ESBL colonised/infected

Seek advice from Paediatric Infectious Diseases

Severe penicillin allergy - anaphylaxis

Intra-abdominal replace cefazolin with gentamicin 5mg/kg (LBW) (Max 360mg)

All others replace cefazolin with vancomycin 15mg/kg (ABW) (Max 2g) or clindamycin 10mg/kg (Max 600mg)

When to give

0-60 mins before knife to skin for all antibiotics except vancomycin which should be completed within 30 minutes of incision

When to redose (the same dose) with extensive blood loss or surgery >4 hours:

- Cefazolin every 4 hours
- Cefuroxime every 4 hours
- Clindamycin every 6 hours
- Metronidazole every 7 hours
- Vancomycin every 8 hours
- Gentamicin not required

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### Neurosurgery

- Craniotomy and CSF shunt insertion
- Myelomeningocele

**Antibiotic and dose**

- Cefazolin 30mg/kg (2g max)

### Head and neck surgery

- Thyroglossal cysts
- Thyroid surgery
- Hearing Implants

**Antibiotic and dose**

- Cefazolin 30mg/kg (2g max)

### Cardiac surgery

1. Congenital repair
2. Valve replacement
3. Thoracotomy
4. Implantable cardiac device

**Antibiotic and dose**

- Cefazolin 30mg/kg (2g max)

### Orthopaedics

1. Osteotomy/ Dysplasia/lengthening
2. Spinal surgery – congenital/idiopathic
3. Open reduction int fixation
4. Revision surgery
5. Biopsy
6. Spinal surgery - complex

**Antibiotic and dose**

- Cefazolin 30mg/kg (2g max)

### General surgery

1. . High-risk abdominal laparoscopic surgery
2. . High risk central lines
3. . Thoracoscopy

**Antibiotic and dose**

- Cefazolin 30mg/kg (2g max)

### Colorectal

1. Appendicectomy
2. Colectomy
3. Trauma

**Antibiotic and dose**

- Cefazolin 30mg/kg (2g max) ± metronidazole 7.5mg/kg (500mg max)

### Upper GI

1. Congenital surgery
2. Jejunostomy tube Placement
3. Small bowel surgery
4. Biliary surgery

**Antibiotic and dose**

- Cefazolin 30mg/kg (2g max)

### Lower GI

1. Congenital surgery
2. Jejunostomy tube Placement
3. Small bowel surgery
4. Biliary surgery

**Antibiotic and dose**

- Cefazolin 30mg/kg (2g max) ± metronidazole 7.5mg/kg (500mg max)

### General surgery

1. Herniotomy
2. Orchidopexy/hydroceles
3. Elective skin procedures

**Antibiotic and dose**

- None required

### Urology

1. Nephrectomy
2. Cystoscopy
3. Renal stent placement
4. Any procedure that results in entry into the urinary tract (e.g. hypospadia)

**Antibiotic and dose**

- Cefazolin 30mg/kg (2g max)
# Surgical antimicrobial prophylaxis

## All IV single doses unless stated

### QUESTIONS

- Do not adjust dose for renal/hepatic impairment
- Continue current antimicrobial treatment regimens as scheduled peri-operatively
- Standard surgical prophylaxis should be administered in addition to any current therapy
- MRSA infected: Add vancomycin 15mg/kg (ABW) (Max 2g) to regimen
- ESBL colonised/infected: Seek advice from Paediatric Infectious Diseases
- Complex medical or surgical issues: Seek advice from Paediatric Infectious Diseases
- Severe penicillin allergy - anaphylaxis: Replace cefazolin with vancomycin 15mg/kg (ABW) (Max 2g) or clindamycin 10mg/kg (Max 600mg)
- When to give: 0-60 mins before knife to skin for all antibiotics except vancomycin which should be completed within 30 minutes of incision
- When to redose (the same dose) with Blood loss >1500mL or surgery >4 hours:
  - Cefazolin: every 4 hours
  - Clindamycin: every 6 hours
  - Vancomycin: every 8 hours

### CLEAN SURGERY

#### Primary cardiac surgery
1. Prior to skin incision
2. Going onto bypass
3. Every four hours during the procedure AND at the completion of surgery

#### Non-bypass cardiac surgery

#### Implantable cardiac devices

### CHEST REOPENING/RETURN TO THEATRE

#### Return to theatre or chest opening in PICU within 24 hours of primary operation

#### Delayed chest closure >24 hours after primary procedure

### CONTAMINATED/DIRTY/COMPLEX SURGERY

#### Valve replacement in a patient with active endocarditis

#### Re-exploration of wound because of suspected infection

#### Washout and debridement for proven infection

### Primary cardiac surgery

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### Return to theatre or chest opening in PICU within 24 hours of primary operation

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### Valve replacement in a patient with active endocarditis

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### Antimicrobial Stewardship Committee

- August 2016

### References