(ChAMP)

GUIDELINE

Standard Indications for Monitored (orange) Antimicrobials

Scope (Staff):	Clinical Staff – Medical, Nursing, Pharmacy
Scope (Area):	Perth Children's Hospital (PCH)

Child Safe Organisation Statement of Commitment

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

This document should be read in conjunction with this disclaimer

The appropriate standard indication MUST be written in the indication box on the paediatric National Inpatient Medication Chart (pNIMC).

For any other indication, approval MUST be obtained from ChAMP before prescribing.

Aciclovir (IV)		
 Herpes Simplex Virus (HSV) – treatment Immunocompromised, ≥3 months old Encephalitis Severe mucocutaneous (including eczema herpeticum) Localised, <3 months old and/or immunocompromised Disseminated disease 	Varicella Zoster Virus (VZV) – treatment • pneumonitis • encephalitis • hepatitis • Immunocompromised, ≥3 months old	
Herpes Simplex Virus (HSV) – prophylaxis • immunocompromised Encephalitis – empiric treatment	Varicella Zoster Virus (VZV) – prophylaxis • immunocompromised Encephalitis/sepsis – empiric, <3 months old	

Compassion Excellence Collaboration Accountability Equity Respect

Amoxicillin / Clavulanic Acid (IV)	
Surgical prophylaxis	Community acquired pneumonia (CAP)
Appendicectomy	Severe aspiration pneumonia
 Intra-abdominal surgery with peritonitis or perforated viscous 	Retropharyngeal abscess
Craniofacial/maxillofacial surgery with or without insertion of prosthetic material	Bites • Severe infection or injury
Intra-abdominal sepsis	
Ascending cholangitis	
Biliary Sepsis	
Appendicitis	
Amphotericin B – liposomal (AmBisome® IV)	
Treatment:	Febrile neutropenia - persistent
Aspergillosis	
Mould infection	Mould prophylaxis – if other agents are unsuitable
Invasive Candidiasis	unsuitable
Artemether / lumefantrine (oral)	
Malaria treatment:	
Uncomplicated	
Follow-on therapy (post IV treatment)	
Atovaquone / proguanil (oral)	
Malaria treatment:	
Uncomplicated	
Follow-on therapy (post IV treatment)	
Azithromycin (IV)	
Severe pneumonia	

Azithromycin (PO)		
Pneumonia	Chronic lung disease:	
Confirmed mycoplasma pneumonia	Cystic fibrosis (anti-inflammatory)	
Severe	 Protracted bacterial bronchitis (frequent exacerbations) 	
 Aspiration pneumonia in high risk penicillin allergy 	 Chronic suppurative lung disease (frequent exacerbations) 	
Community acquired in high risk penicillin allergy	Bronchiectasis (frequent exacerbations)	
Pertussis	Invasive Group A Strep (iGAS)	
Treatment	 Prophylaxis 	
Prophylaxis	 Tonsillitis or pharyngitis in high risk penicillin allergy 	
Salmonella enteritis	Campylobacter enteritis	
• <12 months old	<12 months old	
Immunocompromised	Immunocompromised	
Epididymo-orchitis - sexually acquired	Typhoid or paratyphoid fever (enteric fever)	
Urethritis, Cervicitis or Pelvic inflammatory disease	Salmonella non typhoidal bacteraemia	
Prophylaxis/Empiric treatment - child protection	Neonatal chlamydia conjunctivitis	
Cefepime (IV)		
Meningitis	Pneumonia – low risk penicillin allergy	
Empiric	Ventilator associated Severe healthcare associated	
Nosocomial	healthcare associated	
Post-surgical		
Febrile neutropenia (suspected or confirmed)	Chronic mastoiditis in low risk penicillin allergy	
Hospital associated Sepsis		
Suspected		
Confirmed		

Cefepime (Intraperitoneal)	
CAPD peritonitis	
Cefotaxime (IV)	
Neonatal meningitis Suspected Confirmed	Neonatal sepsis, meningitis NOT excluded Surgical prophylaxis – VP shunt insertion in high risk patients (neonates and infants with recurrent shunt complications)
Ceftazidime (IV)	
Chronic lung disease Eradication of <i>Pseudomonas</i> aeruginosa in a patient with Cystic	Penetrating eye injury and/or endopthalmitis Pneumonia
FibrosisExacerbation of Cystic Fibrosis	Confirmed or suspected Pseudomonas aeruginosa
Ceftriaxone (IV)	
Pneumonia	Meningitis
 Severe infection Aspiration pneumonia – severe infection 	Empiric (community acquired)Confirmed
 Healthcare associated Mild to moderate community acquired in low risk penicillin allergy 	Post exposure prophylaxis Meningococcal Haemophilus influenza type B (HiB) Gonococcal disease
Non-CF bronchiectasis (moderate to severe exacerbation) Non-CF bronchiectasis (mild to moderate exacerbation, failure to respond to oral therapy) Chronic suppurative lung disease (moderate to severe exacerbation)	Bite – severe infection or injury in low risk penicillin allergy Urinary tract infection with low risk penicillin allergy • ≥1 month and <3 months old • ≥3 months old, systemically unwell
Thoracic empyema - empiric	Surgical prophylaxis with low risk penicillin

Periorbital cellulitis - treatment Orbital cellulitis - treatment Spontaneous bacterial peritonitis Osteomyelitis - suspected Haemophilus influenza type B (Hib)	Appendicectomy Intra-abdominal surgery with peritonitis or perforated viscous Intra-abdominal infections – with low risk penicillin allergy Biliary sepsis Ascending cholangitis
Salmonella non typhoidal bacteraemia Enteric fever – typhoid or paratyphoid	Presumed or proven peritonitis Appendicitis with low risk penicillin allergy
 Ear, nose and throat Bacterial tracheitis Acute epiglottitis Acute mastoiditis Acute bacterial sinusitis (moderate to severe) Retropharyngeal abscess/ deep neck space infection in child > 3 months old-low risk penicillin allergy Cefuroxime (oral)	 Sepsis (≥1 month) – empiric treatment Community acquired Fever in an asplenic patient Fever >38°C without source and no haemodynamic instability in 1 to ≤3 months old
Pneumonia – low risk penicillin allergy • Hospital acquired pneumonia • Community acquired • Aspiration pneumonia • Ventilator associated pneumonia Mild bronchiectasis and its precursors – patient NOT colonised with Pseudomonas aeruginosa Ciprofloxacin (oral)	Ear, nose and throat – low risk penicillin allergy Bacterial sinusitis Otitis Media Mild periorbital cellulitis >3 months old if HiB suspected (low risk penicillin allergy)
Enteritis	Enteric fever – typhoid or paratyphoid

Shigella enteritisSalmonella enteritis	Penetrating eye injury and/or endophthalmitis
Meningococcal post exposure prophylaxis	Urinary tract infection - resistant
Mild bronchiectasis and its precursors – patient colonised with <i>Pseudomonas</i> aeruginosa	Eradication of <i>Pseudomonas aeruginosa</i> in a patient with Cystic Fibrosis
Bone, joint or skin infection, empiric cover post water exposure	Perianal and fistulising disease in Crohn's disease
Clindamycin (IV)	
MRSA infection • Neonate • Skin, soft tissue, bone infection	Ear, nose and throat – high risk penicillin allergy • Peritonsillar abscess (quinsy)
Streptococcal sepsis or toxic shock	Pneumonia
	Severe aspiration pneumonia – high risk penicillin allergy
Surgical prophylaxis – high risk penicillin allergy	Ear, nose and throat – low risk penicillin allergy
Appendicectomy	Peritonsillar abscess (quinsy)
 Intra-abdominal surgery with peritonitis or perforated viscous 	Acute mastoiditis (<1 month duration)
Cochlear implant	Acute bacterial sinusitis (moderate) Acute bacterial sinusitis (failure of analyse)
Clean-contaminated surgery with or without insertion of prosthetic material	Acute bacterial sinusitis (failure of oral antibiotics)
Gastrointestinal surgery <1 month old	Skin and/or soft tissue infection – high risk penicillin allergy
 Upper gastrointestinal tract or biliary tract surgery ≥1 month old 	Mild to moderate cellulitis or erysipelas ≥1 month old
PEG placement, revision or conversion	 Cervical lymphadenitis (moderate to severe) ≥3 months old
Elective colorectal surgery	Heavily contaminated wound requiring IV
Open fracture (without severe tissue damage)	therapy
Spinal surgery	

Osteomyelitis or septic arthritis (known or suspected MRSA and/or penicillin allergy)	Intra-abdominal infections – high risk penicillin allergy
Multifocal	Appendicitis
With pneumonia or myositis	 Peritonitis ≥ 1 month old
Requiring ICU admission	
Endocarditis prophylaxis – high risk penicillin allergy	Staphylococcus aureus infection – low or high risk penicillin allergy
Severe skin and/or soft tissue infection with necrosis and/or shock	Dental infections requiring IV therapy – low or high risk penicillin allergy
Moderate periorbital cellulitis – low risk penicillin allergy	Compound fracture – high risk penicillin allergy
Colistimethate sodium (nebulised)	
Cystic Fibrosis – treatment:	
Pseudomonas aeruginosa resistant to tobramycin	
Pseudomonas aeruginosa in patients intolerant of or refractory to nebulised tobramycin	
Fluconazole (IV)	
Candida sepsis - presumed or confirmed	Oesophageal candidiasis - severe/immunocompromised
Fluconazole (oral)	
Antifungal prophylaxis	Urinary tract infection – uncomplicated
Haematology and oncology	candiduria
Neonates unable to tolerate nystatin	
Vulvovaginal candidiasis	
Ganciclovir (IV)	
Cytomegalovirus (CMV) infection - treatment	Maintenance/Prevention of CMV in immunocompromised patients
Gentamicin (IV)	

Surgical prophylaxis – high risk penicillin allergy	Surgical prophylaxis • Genitourinary
Gastrointestinal	Gerinodrinary
Head and neck, clean or contaminated (with or without prosthetic material)	Peritonitis
Lower limb amputation	
 Acute burn requiring surgical prophylaxis 	
VP shunt insertion in high risk patients	
Intra-abdominal infections – high risk penicillin allergy	Sepsis
Appendicitis	 Neonatal – early onset (meningitis excluded)
Intra-abdominal surgery with peritonitis	Neonatal – late onset
or perforated viscous • Biliary sepsis	 Neonatal – community acquired (meningitis excluded)
Ascending cholangitis	With haemodynamic instability
	Healthcare associated
Urinary tract infection	Febrile neutropenia with systemic
• < 3 months old	compromise
 ≥ 3 months old and systemically unwell 	Endocarditis or endovascular infection
Itraconazole (oral)	
Allergic Bronchopulmonary aspergillosis (ABPA) - steroid resistant/ dependent	Treatment of cutaneous and systemic fungal infections
Prevention of fungal infection in immunocompromised patient	
Ivermectin (oral)	
Strongyloidiasis	Scabies - severe or refractory to topical therapy
Onchoceriasis	
Mefloquine (oral)	

Malaria - prophylaxis	
Meropenem (IV)	
Colonised with a resistant Gram negative bacteria	Empiric colonised with a pan resistant organism Severe with heamodynamic instability requiring ICU and/or vasopressors
Urinary tract infection – colonised with a pan resistant organism	Cystic Fibrosis exacerbation – guided by sensitivities
Cellulitis, suspected or proven polymicrobial necrotising fasciitis or Fournier's gangrene Metronidazole (IV)	
Intra-abdominal infections • Appendicitis • Peritonitis (presumed or proven)	Surgical prophylaxis • Gastrointestinal surgery <1 month old • Elective colorectal surgery ≥1 month old • Lower limb amputation
Intra-abdominal infections – low risk penicillin allergy Biliary sepsis Ascending cholangitis	Skin and soft tissue infection – low risk penicillin allergy Heavily contaminated wound requiring IV antibiotics
Surgical prophylaxis – high risk penicillin allergy Bladder augmentation or Mitrofanoff appendicivesicostomy Bites – low or high risk penicillin allergy	Surgical prophylaxis – low risk penicillin allergy • Clean contaminated craniofacial / maxillofacial surgery with or without insertion of prosthetic material • Appendicectomy
Dental infection - severe Clostridium difficile - severe	 Intra-abdominal surgery with peritonitis or perforated viscus Bladder augmentation or Mitrofanoff appendicivesicostomy Open fractures with wound soiling, contamination or devitalised tissue

Ear, Nose and Throat – low risk penicillin allergy Retropharyngeal abscess/ deep neck space infection in child > 3 months old Acute bacterial sinusitis – severe CNS complication	Compound fracture with severe tissue damage and/or evidence of infection – low risk penicillin allergy
Micafungin (IV)	
Antifungal prophylaxis - high risk, oncology	Invasive candidiasis
Mupirocin (topical)	
MRSA/MSSA	Impetigo (mild or localised)
Decolonisation	
pre-operative decolonisation	
Norfloxacin	
Urinary tract infection	
Resistant to first line agents	
Oseltamivir (oral)	
Influenza	
 Confirmed - severe or ≥ 1 risk factors for severe disease Treatment of a Health care worker 	
Prophylaxis of a Health care worker	
 Prophylaxis in high risk patients within 48 hours of exposure 	
Empiric cover in severe CAP and encephalitis during Influenza season	
Paromomycin (oral)	
Amoebiasis - cyst eradication	
Paromomycin (topical)	
Cutaneous leishmaniasis	

Pentamidine (IV)	
Pneumocystis jirovecii pneumonia	
 Prophylaxis – intolerant to co- trimoxazole 	
treatment – intolerant to co- trimoxazole	
Piperacillin / Tazobactam (IV)	
Chronic lung disease – patient colonised with Pseudomonas aeruginosa Cystic Fibrosis exacerbation Cystic Fibrosis, mild to moderate exacerbation with failure to respond to oral therapy Chronic suppurative lung disease, moderate to severe Exacerbation of non – Cystic Fibrosis bronchiectasis	Open fractures or soft tissue injury with wound soiling, contamination or devitalised tissue Contaminated head and neck surgery – non elective Bladder augmentation Mitrofanoff appendicovesicostomy Skip and soft tissue infections
 Intra-abdominal infections Peritonitis (presumed or proven) < 1month old 	Heavily contaminated wounds requiring IV antibiotics Compound fracture with severe tissue damage and/or evidence of infection
Healthcare associated sepsis	Chronic mastoiditis
Pneumonia Healthcare associated - severe or Ventilator associated	
Posaconazole (oral)	
Antifungal Prophylaxis – high risk oncology	Antifungal Treatment – oral step down
Primaquine (oral)	
Malaria (>6 months old)	
Elimination of liver forms of P. ovale	
Elimination of liver forms of P. vivax	

Silver sulfadiazine cream (top)			
Severe Burn - prevention/treatment of infection			
Taurolidine/ Sodium citrate/ Heparin 100			
Prophylaxis - Central line associated blood stream infections			
Tobramycin (nebulised)			
Cystic Fibrosis – <i>Pseudomonas aeruginosa</i> (prophylaxis, proven or suspected infection)	Bronchiectasis - <i>Pseudomonas aeruginosa</i> (proven or suspected infection)		
Tobramycin (IV)			
Cystic Fibrosis exacerbation			
Trimethoprim/ /Sulphamethoxazole (IV)			
Pneumocystis jirovecii pneumonia - treatment			
Valaciclovir (oral)			
Herpes Simplex Virus (HSV) – treatment	Herpes Simplex Virus (HSV) – prophylaxis		
Cutaneous HSV	Genital HSV suppression		
Recurrent cutaneous HSV	Cutaneous HSV		
Recurrent genital HSV	Immunocompromised patient		
Primary genital HSV	Varicella Zoster Virus (VZV)		
HSV oesophagitis	Prophylaxis immunocompromised		
 Oral HSV in immunocompromised patient 	patient Treatment		
Herpetic whitlow	Herpes Zoster (shingles)		
Eczema herpeticum	Primary gingivostomatitis		
Valganciclovir (oral)			
Cytomegalovirus – prophylaxis	Cytomegalovirus – treatment		
Solid organ transplant	 Symptomatic congenital CMV in neonates and infants 		

	Immunocompromised host		
	CMV retinitis, maintenance		
Vancomycin (intraperitoneal)			
CAPD peritonitis			
Empiric			
Pathogen directed therapy			
Vancomycin (IV)			
Orthopaedic	Pneumonia		
Multifocal osteomyelitis	Severe community acquired		
Multifocal septic arthritis	Community accquired pneumonia -		
Osteomyelitis with pneumonia or myositis	empyema or parapneumonic effusion with known of suspected MRSA Healthcare associated – severe		
Septic arthritis with pneumonia or myositis	Ventilator associated – severe		
Osteomyelitis requiring ICU admission	Sepsis		
Septic arthritis requiring ICU admission	 Severe with heamodynamic instability requiring ICU and/or vasopressors Late onset neonatal sepsis 		
 Uncomplicated Osteomyelitis known or suspected MRSA ≥ 3 months old 	Healthcare associated >1 month old		
Uncomplicated Septic arthritis known or suspected MRSA ≥ 3 months old	Community acquired with haemodynamic instability		
Compound fracture without significant contamination, clinical evidence of infection OR tissue damage/ devitalisation, with known or suspected MRSA	 Fever >38°C without a source and with no hemodynamic instability (1 to ≤3 months), high risk penicillin allergy 		
Febrile neutropenia	Eye infections		
Systemic compromise	Penetrating eye injury		
High risk patient	Severe periorbital cellulitis ≥ 3 months		
Known or suspected MRSA	old		
Suspected CVAD infection	Orbital cellulitis ≥ 3 months old		
	 Periorbital cellulitis – known or suspected MRSA 		

Ear, nose and throat - known or suspected MRSA

- Acute mastoiditis (<1 month duration)
- Acute bacterial sinusitis (moderate)
- Acute bacterial sinusitis (treatment failure with oral antibiotics)
- Severe, acute bacterial sinusitis with CNS complications
- Bacterial tracheitis
- Retropharyngeal abscess in >3month old
- Deep neck space infection >3month old
- Chronic mastoiditis

Surgical prophylaxis

- High risk penicillin allergy
- Confirmed or suspected MRSA
- VP shunt insertion (high risk patient)

Skin and soft tissue

- Severe infection
- Moderate to severe cervical lymphadenitis – high risk penicillin allergy
- Moderate to severe cervical lymphadenitis, known or suspected MRSA
- Cellulitis suspected or proven polymicrobial necrotising fasciitis or Fournier's gangrene
- Cellulitis, erysipelas or soft tissue infection <1 month old - known or suspected MRSA
- Cellulitis, erysipelas or soft tissue infection <1 month old - high or low risk penicillin allergy

Endocarditis or other endovascular infection

- Prosthetic valve or graft
- Native valve or homograft known or suspected MRSA
- Native valve or homograft low or high pen allergy

Meningitis

- Suspected or proven nosocomial or post- neurosurgical meningitis (including shunt meningitis)
- Community acquired (≥ 1 month of age)

Vancomycin (oral)

Clostridium difficile

- Recurrent
- Severe
- Contraindication to metronidazole use

Vancomycin (nebulised)

Cystic Fibrosis – attempted MRSA or MSSA

eradication (second line)	
Voriconazole (IV)	
Aspergillosis - invasive, treatment, confirmed or presumed	
Voriconazole (oral)	
Antifungal Prophylaxis - high risk of mould infection	Treatment of presumed or proven invasive fungal infection

Related CAHS internal policies, procedures and guidelines (if required)			
Antimicrobial Stewardship Policy			
ChAMP Empiric Guidelines			
ChAMP Monographs			

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