Empiric Therapy For Patients Presenting With Community-Onset Sepsis

This guidance is for the emergency management of patients with sepsis and *none of the following:*

- Severely decreased renal function (eGFR <30 ml/min)

- A documented history of a severe penicillin allergy (anaphylaxis or severe cutaneous reaction)

If uncertain (ie patient reports possible penicillin rash in childhood) balance the risks of delaying antimicrobial therapy in sepsis against the risk of an adverse drug reaction.

Seek expert help. Use local guidelines where applicable.

Patient Group	Comments	Treatment
Children and Young People 15 and under (non-neutropenic)	*Likely organisms:* *Streptococcus pneumoniae* *Staphylococcus aureus* *Beta haemolytic streptocci* *Gram negatives*	≤3 months AMOXICILLIN 50mg/kg + CEFOTAXIME 100mg/kg >3months CEFOTAXIME 100mg/kg (MAX 2g)
Children and Young People 15 years and under (neutropenic)	Visit: https://www.starship.org.nz/for-health-professionals/starship-clinical-guidelines/f/febrile-neutropenia/	
Pregnancy and up to 6 weeks after delivery	*Beta hemolytic streptococci* *Gram negatives* *Staphylococcus aureus* *Anaerobes*	CEFTRIAXONE 2g q12 + CLINDAMYCIN 600mg q8 + GENTAMICIN 5mg/kg STAT
Febrile neutropenia in adult patients undergoing therapy for malignant disease	*High Risk:* *-Neutrophils <0.5 OR* *-Sepsis or respiratory distress OR* *-Prolonged neutropenia OR* *-Significant diarrhoea/abdo pain*	PIPERACILLIN/TAZOBACTAM 4.5g q6 + TOBRAMYCIN 5mg/kg STAT + VANCOMYCIN 30mg/kg/day in divided doses MAX 1.5g q12

	LOW/MEDIUM RISK: *-No evidence of sepsis* *AND* *-Diarrhoea >6x day on chemo OR* *-Neutrophil count 0.1 - 0.5*	PIPERACILLIN/TAZOBACTAM 4.5g q6
People 15 years and over (non-neutropenic)		
Site		
Unknown	Gram negatives, *Staphylococcus aureus,* *Neisseria meningitidis,* *Streptococcus pneumoniae*	CEFTRIAXONE 1g bd + GENTAMICIN 5mg/kg STAT
Pneumonia	*Streptococcus pneumoniae* *Legionella pneumophila* *Staphylococcus aureus*	AUGMENTIN 1.2g q8 + CLARITHROMYCIN 500mg q12
Urinary Tract	*Enterobacteriaceae* *Pseudomonas aeruginosa* *Enterococcus faecalis*	AMOXICILLIN 2g q6 + GENTAMICIN 5mg/kg STAT
Musculoskeletal System		
Cellulitis (non-necrotising)	*Staphylococcus aureus* *Group A streptococci (GAS)*	FLUCLOXACILLIN 2g q6
Necrotising soft tissue infection/necrotising fasciitis Consider if LRINEC Score 6 or higher	*Group A streptococci (GAS)* *Polymicrobial (synergistic gangrene ie Fournier's gangrene)* *INVOLVE SURGICAL TEAM* *REQUIRES DEBRIDEMENT*	BENZYL PENICILLIN 2.4g q4 + CEFTAZIDIME 2g q8 + CLINDAMYCIN 600mg q8
Osteomyelitis or Septic arthritis (native joint)	*Staphylococcus aureus* *Enterobacteriaceae*	CEFTRIAXONE 2g STAT + FLUCLOXACILLIN 2g q6
ABDOMINAL SYMTPOMS/SIGNS		

Hepatobiliary system	*Enterobacteriaceae* *Anaerobes* *Enterococci*	CEFTRIAXONE 1g q12 + METRONIDAZOLE 500mg q12
Peritonitis	*Enterobacteriaceae* *Anaerobes* *Enterococci*	CEFUROXIME 1.5g q8 + METRONIDAZOLE 500mg q12 + DOXYCYCLINE 100mg PO q12 (*if suspected pelvic inflammatory disease*)
EVIDENCE OF MENINGITIS		
Meningitis	*Neisseria meningitidis* *Listeria monocytogenes* *Haemophilus influenzae*	ALL PATIENTS: CEFTRIAXONE 2g q12 IF *Gram positive cocci resembling streptococci in CSF Gram stain* ADD VANCOMYCIN IF patient at risk for *Listeria* (pregnancy, CLL or lymphoma, high dose steroids, transplant, cirrhosis, age >60) ADD AMOXICILLIN 2g q4

ESBL-producing organisms

- In some situations it is reasonable to give a carbapenem (ie MEROPENEM 1g q8) if a patient is at risk factors for infection with resistant organism ie *recent exposure to broad spectrum antimicrobials, recent prolonged hospital admission, known colonisation or infection with an ESBL-producing organism*. Definitive antimicrobial therapy can be based on culture results once available - seek expert advice.

MRSA

- It may be reasonable to add VANCOMYCIN (30mg/kg in divided doses up to 1.5g bd) in patients known to be colonised or infected with MRSA or who are perceived to be at risk of MRSA infection by a senior clinician. Definitive antimicrobial therapy can be based on culture results once available - seek expert advice.