Adult Community Acquired Sepsis Prescribing Guidelines – First dose
High MRSA Non-Tropical

Queensland Government

For hospital acquired infection please refer to local guidelines or an Infectious Diseases Specialist (ID). For dosing adjustments in Chronic Kidney Disease / kidney failure, please refer to *Therapeutic Guidelines (eTG)* or local guidelines.

Discuss with ID if there are any concerns with antibiotic choice, *OR* if the patient:

- Is at risk of multidrug-resistant infection [Note 1], has suspected encephalitis or is pregnant.
- Has contraindications to specific antibiotic therapy recommended in this guideline or is at extremes of weight.
- Is immunocompromised (N.B. if **febrile neutropenia** is suspected refer to local guidelines, where available).

Sepsis WITH Shock: Commence all antibiotics within ONE hour, unless otherwise stated

Source of infection	Empirical antibiotic regimen	Penicillin hypersensitivity (all)
***Meningococcus* or meningitis**	**Before** or with the first dose of antibiotic: Dexamethasone 10mg IV, 6 hourly **PLUS** Ceftriaxone 2g IV, 12 hourly **If at risk of *Listeria*** [Note 3] **ADD** Benzylpenicillin 2.4g IV, 4 hourly **If recent penicillin use or sinusitis / chronic otitis media** **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	**Before** or with the first dose of antibiotic: Dexamethasone 10mg IV, 6 hourly **PLUS** Moxifloxacin [Note 4] 400mg IV, daily **If at risk of *Listeria*** [Note 3] **Non-pregnant:** **ADD** Trimethoprim-Sulfamethoxazole [Note 4] 5/25mg/kg (up to 480/2400mg) IV, 8 hourly **Pregnant:** **FIRST trimester –** seek ID or maternity specialist advice immediately **SECOND or THIRD trimester –** Trimethoprim-Sulfamethoxazole [Note 4] 5/25mg/kg (up to 480/2400mg) IV, ONCE, then seek ID or maternity specialist advice
Febrile neutropenia (refer to local guidelines where available)	Tobramycin [Note 7] [Note 1] 7mg/kg IBW / AdjBW IV, ONCE (max 700mg) **PLUS** Piperacillin-Tazobactam [Note 1] 4/0.5g IV, 6 hourly **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	Meropenem 2g IV, 8 hourly **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)
Necrotising fasciitis	**Arrange immediate surgical consultation regarding debridement** Piperacillin-Tazobactam 4/0.5g IV, 6 hourly **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg) **PLUS** Clindamycin [Note 6] 600mg IV, 8 hourly **If exposed to water** **ADD** Ciprofloxacin [Note 4] 400mg IV, 8 hourly	**Arrange immediate surgical consultation regarding debridement** Meropenem 2g IV, 8 hourly **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg) **PLUS** Clindamycin [Note 6] 600mg IV, 8 hourly **If exposed to water** **ADD** Ciprofloxacin [Note 4] 400mg IV, 8 hourly
Community acquired pneumonia	Ceftriaxone 2g IV, daily **PLUS** Azithromycin 500mg IV, daily **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	Moxifloxacin [Note 4] 400mg IV, daily **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)
At risk of tropical infection [Note 2]	Meropenem 2g IV, 8 hourly **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	Meropenem 2g IV, 8 hourly **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)
All other infection sources or SOURCE NOT APPARENT	Tobramycin [Note 7] [Note 1] 7mg/kg IBW / AdjBW IV, ONCE (max 700mg) **PLUS** Ceftriaxone 2g IV, 12 hourly **PLUS** Flucloxacillin 2g IV, 4 hourly **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg) **For suspected toxic shock** **ADD** Clindamycin [Note 6] 600mg IV, 8 hourly	Tobramycin [Note 7] [Note 1] 7mg/kg IBW / AdjBW IV, ONCE (max 700mg) **PLUS** Ciprofloxacin [Note 4] 400mg IV, 8 hourly **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg) **For suspected toxic shock** **ADD** Clindamycin [Note 6] 600mg IV, 8 hourly

Adult First Dose Sepsis and Septic Shock Antibiotic Administration Guidelines

Queensland Government

Sepsis is a medical emergency. This guideline has been developed to facilitate rapid administration of antibiotics for sepsis and septic shock. For subsequent doses, refer to the Australian Injectable Drugs Handbook (AIDH)[1].

Administration notes:

- Administer medications in an order that ensures the highest number of antibiotics are given as quickly as clinically appropriate (i.e. give antibiotics with short administration times first and long infusions last).
- Where possible use separate dedicated lines for resuscitation fluid and for medications. When injecting antibiotics directly into an IV injection port which has resuscitation fluid running:
  1. Clamp the infusion fluid line and flush with 10mL sterile sodium chloride 0.9% solution.
  2. Administer antibiotic over the required time.
  3. Flush the line with 10mL sterile sodium chloride 0.9% solution and recommence resuscitation fluid.
- Consider using a syringe driver if administration time for injection is greater than 5 minutes.

Antibiotic	Presentation	Reconstitution fluid / volume (for mixing powdered medications) *WFI = Water for injection*	Final volume	Minimum administration time	Notes
Amikacin	Vial 500mg/2mL	No reconstitution required	100mL (0.9% NaCl)	Infuse: 15min (max dose = 3000mg)	*Refer to NOTE 1*
Amoxicillin or Ampicillin	Vial 1g	20mL WFI	20mL	Inject or infuse doses 2g: 10–15min	Rapid IV administration may cause seizures
Azithromycin	Vial 500mg	4.8mL WFI Then add to infusion bag	250mL or 500mL (0.9% NaCl)	Infuse: 60min	Local infusion site reactions may occur
Benzylpenicillin	Vial 600mg	10mL WFI	10mL	Inject 1.2g or less: 5–10min Infuse doses over 1.2g: 30min	Rapid IV administration may cause seizures
	Vial 1.2g	20mL WFI	20mL (1.2g dose) Dilute doses over 1.2g in 100mL 0.9%NaCl		
Cefazolin	Vial 1g or 2g	20mL WFI	20mL	Inject 2g: 5min	
Cefepime	Vial 1g or 2g	10mL 0.9% NaCl	10mL	Inject 2g: 3–5min	
Ceftriaxone	Vial 1g	10mL WFI	10mL (1g dose)	Inject 1g: 2–4min	Incompatible with calcium containing solutions (e.g. Hartmann's), flush thoroughly
			20mL (2g dose)	Inject 2g: 5min	
Ciprofloxacin	Infusion bag or infusion vial 200mg/100mL	No reconstitution required	N/A	Infuse: 60min	Local infusion reactions may occur if given over less than 60min
Clindamycin	Ampoule 300mg/2mL, 600mg/4mL	No reconstitution required	50mL (0.9% NaCl) (600mg)	Infuse 600mg: 20min	Maximum rate is 30mg/min
Dexamethasone	Vial 4mg/mL or 8mg/2mL	No reconstitution required	10mL (0.9% NaCl)	Inject: 3–5min	For meningitis give prior to antibiotics
Flucloxacillin	Vial 1g	20mL WFI	100mL (0.9% NaCl): 2g dose	Infuse 2g: 30min	Infusion is preferred as phlebitis is common Rapid IV administration may cause seizures
Gentamicin	Ampoule 80mg/2mL	No reconstitution required	20mL (0.9% NaCl)	Inject: 3–5min (max dose = 700mg)	*Refer to NOTE 1*
Lincomycin	Vial 600mg/2mL	No reconstitution required	100mL (0.9% NaCl) (600mg)	Infuse 600mg: 40min	Severe cardiopulmonary reactions have occurred when given faster than 1g/hour or in concentrations of more than 1g/100mL
Meropenem	Vial 1g	20mL WFI	20mL	Inject 1g or 2g: 5min	
Metronidazole	Infusion bag 500mg/100mL	No reconstitution required	N/A	Infuse: 20min	
Moxifloxacin	Infusion bag 400mg/250mL	No reconstitution required	N/A	Infuse: 60min	
Piperacillin - Tazobactam	Vial 4/0.5g	20mL WFI	20mL (injection) 50mL 0.9% NaCl (infusion)	Inject: 5min *OR* Infuse: 20min	
Tobramycin	Ampoule 80mg/2mL	No reconstitution required	20mL (0.9% NaCl)	Inject: 3–5min (max dose = 700mg)	*Refer to NOTE 1*
Trimethoprim - Sulfamethoxazole	Vial 80/400mg in 5mL	No reconstitution required	Dilute each amp in 125mL of 0.9% NaCl (e.g. 2 amps in 250mL)	Infuse: 60min	For other doses see AIDH
Vancomycin	Vial 500mg	10mL WFI	1g in 250mL Concentration: 2.5–5mg/mL (fluid restriction: max 10mg/mL)	Sepsis infusion times 1g or less: 60min 2g dose: 120min 3g dose: 180min (max dose = 3000mg)	Infusion reactions common (red man syndrome); decrease infusion rate and monitor. May cause injection site pain and thrombophlebitis; dilute further and rotate infusion site
	Vial 1g	20mL WFI			

NOTE 1: Aminoglycoside antibiotics are inactivated by penicillins and cephalosporins. Do not mix in the same injection or infusion solution. Administer at separate sites if possible. Where it is not practical to administer separately, flush the line well before and after giving each drug. DO NOT delay administration of these antibiotics.

References:

1. The Society of Hospital Pharmacists of Australia (SHPA). Australian Injectable Drugs Handbook. 9th ed. SHPA; 2024. https://aidh.hcn.com.au. Accessed August 5th 2024
2. Medication Services Queensland. Aminoglycoside Dosing in Adults. Department of Health; 2018. Aminoglycoside Dosing in Adults - May 2018 (health.qld.gov.au) Accessed August 5th 2024
3. Antibiotic version 16, 2023. In: Therapeutic Guidelines. Melbourne: Therapeutic Guidelines Limited; accessed August 2024. https://www.tg.org.au

Queensland Government

Adult Sepsis Pathway

High MRSA Non-Tropical

Facility: .....

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Date of birth: Sex: ☐ M ☐ F ☐ I

Clinical pathways never replace clinical judgement.
Care outlined in this pathway **must** be altered if it is not clinically appropriate for the individual patient.
For use in maternity patients of any gestation up to six weeks postpartum.

Sepsis is a MEDICAL EMERGENCY. If you suspect post-operative bleeding, pulmonary embolism (PE), acute myocardial infarction (AMI), stroke, or peri-partum bleeding or amniotic fluid embolus for maternity patients, immediately escalate to senior medical staff.

Screen ALL adult patients who meet ANY of the following criteria *(tick all that apply)*

- ☐ Looks sick
- ☐ You suspect they may have sepsis
- ☐ Has a suspected infection
- ☐ Patient / family / carers concerned about patient condition
- ☐ Current or recent fever with or without chills or rigors
- ☐ Hypothermia <35.5°C
- ☐ Signs of clinical deterioration (e.g. change in behaviour or new onset confusion or total *Q*-ADDS / *Q*-MEWT score of ≥4)

If you suspect **neutropenic sepsis**, refer to local guidelines if available, otherwise continue screening on this pathway

SCREEN and RECOGNISE

Screening initiated: DD / MM / YY HH : MM (24hr)

Are ANY of the following risk factors present? *(tick all that apply)*
Absence of risk factors does not exclude sepsis as a cause of deterioration

- ☐ Re-presentation within 48 hours or requiring repeated reviews
- ☐ Malnourished or frail
- ☐ Impaired immunity (e.g. diabetes, steroids, chemotherapy, neutropenia, asplenia)
- ☐ Indwelling medical device (e.g. PIVC, catheter, drain)
- ☐ Alcohol or drug use disorder
- ☐ Recent trauma / surgery / invasive procedure
- ☐ Postpartum / miscarriage
- ☐ Aboriginal and / or Torres Strait Islander

AND / OR

Is there ANY potential source of infection? *(tick all possible sources that apply)*

- ☐ Genital tract / reproductive system
- ☐ Respiratory tract
- ☐ Urinary tract
- ☐ Abdomen / GIT
- ☐ Breach of skin integrity / soft tissue / joint
- ☐ Implantable device / prosthesis
- ☐ CNS / meningitis
- ☐ Surgical site / wound
- ☐ Source is unclear
- ☐ Other *(specify)*: .....

YES

Does the patient have ANY high risk criteria?
(tick all that apply)

- ☐ **Systolic BP <90mmHg (or drop >40 from normal)**
- ☐ **Lactate ≥2mmol/L**
- ☐ **Non-blanching rash / Mottled / Ashen / Cyanotic**
- ☐ Respiratory rate ≥25 breaths per min
- ☐ New oxygen requirement to keep oxygen saturation ≥92%
- ☐ Heart rate ≥130 beats per min
- ☐ Has not passed urine in past 18 hours *OR* urinary output (UO) <0.5mL/kg/hr (if known)
- ☐ Evidence of new or altered mental state
- ☐ Recent chemotherapy

NO

Does the patient have ANY moderate risk criteria?
(tick all that apply)

- ☐ **Systolic BP 90–99mmHg**
- ☐ Respiratory rate 21–24 breaths per min
- ☐ Heart rate 90–129 beats per min *OR* new arrythmia
- ☐ Has not passed urine in past 12–18 hours
- ☐ Temperature <35.5°C or ≥38.5°C (≥38.0°C for maternity patients)
- ☐ Family members / carers concerned about mental state
- ☐ Acute deterioration in functional ability

YES

NO

ESCALATE or DE-ESCALATE

Patient has SEPSIS or SEPTIC SHOCK until proven otherwise

- Obtain immediate senior medical review
- Commence resuscitation *AND* consider calling Retrieval Services Queensland (RSQ) 1300 799 127 if rural or remote
- Increase observation frequency
- Ensure lactate taken

Patient may have SEPSIS

- Obtain immediate senior medical review and/or consider calling RSQ if rural or remote
- Ensure lactate taken

Low risk for SEPSIS

- Look for other common causes of deterioration
- Consider hypovolaemia, AMI, stroke and PE
- In the event of deterioration reassess sepsis risk using a new copy of this form
- If to be discharged home, give patient sepsis discharge instructions

Senior medical review attended: DD / MM / YY HH : MM (24hr)

PRINT name of senior medical reviewer: PRINT NAME

Does the senior medical reviewer think sepsis or septic shock is likely?

☐ Sepsis / septic shock likely ☐ Sepsis / septic shock unlikely → NO

YES

⚠ **Commence resuscitation and treatment for sepsis NOW** *(see page 2)*
Consider calling RSQ (1300 799 127) or RFDS (if normal pathway)

Signature Log Every person documenting in this clinical pathway must supply a sample of their initials and signature below

Initials	Signature	Print name	Role	Initials	Signature	Print name	Role

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WINC Code: 1NY44189
SW1284

ADULT SEPSIS PATHWAY

HIGH MRSA NON-TROPICAL

Queensland Government

Adult Sepsis Pathway

High MRSA Non-Tropical

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Date of birth: Sex: ☐ M ☐ F ☐ I

Notify nursing team leader ☐ and senior medical staff ☐ the patient has potential sepsis or septic shock
(tick when notified). Confirm treatment aligns with **Acute Resuscitation Plan (ARP)** if relevant.

RESUSCITATE

① Commence Actions 1–4 within:

30 minutes	From recognition of neutropenic or meningococcal sepsis
1 hour	From recognition of septic shock
1 hour	From triage or recognition of sepsis where there is high likelihood that organ dysfunction is due to infection
3 hours	From triage or recognition of organ disfunction where there is less certainty this is due to infection, but concern for infection persists after rapid clinical assessment

*Document variance in **medical record** if key tasks not commenced within these time frames.*

1. Measure (or remeasure) lactate
(Arterial / Venous / Point of care)

☐ **Lactate collected**

Date: DD / MM / YY | Time: HH : MM | Initials:

2. Take 2 sets of blood cultures
- Collect prior to antibiotics unless this would delay treatment for >1 hour
- If patient has a central line collect an additional (third) set of blood cultures via the line
- Collect FBC, UEC and glucose (or Chem8 iStat), LFT and lipase
- For septic shock add coagulation studies
- Collect urine, sputum and other relevant cultures but do not delay antibiotics

☐ **2 sets blood cultures collected**

Date: DD / MM / YY | Time: HH : MM | Initials:

3. Commence or review antibiotics
- Identify likely source of infection (including relevant imaging findings)
- Prescribe antibiotics according to guidelines. Modify for allergies or prior microbiological sensitivities
- Notify nursing staff of urgent need to administer antibiotics and ensure completed
- Consider referral to consulting microbiologist or infectious diseases physician (particularly if: septic shock, recent overseas travel, risk factors for multi-resistant organisms, IV drug use, morbid obesity or dialysis patient)

☐ **Antibiotics commenced**

Date: DD / MM / YY | Time: HH : MM | Initials:

4. Commence IV fluids if clinically indicated
- Consider volume of fluid based on patient's weight, cardiac function, comorbidities, current volume status and haemodynamics
- If bolus indicated, rapidly infuse 250–500mL IV or intraosseous Hartmann's or sodium chloride 0.9%
- Consider albumin 5% solution for patients with septic shock
- Assess response to fluid and consider repeating bolus if clinically indicated – do NOT exceed 30mL/kg without senior medical input
- If IV access not possible, consider intraosseous route

☐ **IV fluids commenced**
☐ **Not indicated**

Date: DD / MM / YY | Time: HH : MM | Initials:

5. Consider vasopressors / inotropes for hypotension during or after fluid resuscitation (e.g. Noradrenaline: usual commencing dose 5mcg/min) or consider referral to ICU or higher level of care

☐ **Vasopressors / inotropes considered**
☐ **Not indicated**

6. Facilitate source control
ATTENTION: Source control is URGENT – Ongoing sepsis treatment is unlikely to be effective without timely and comprehensive source control
- If source control requires operative intervention, immediately notify appropriate surgical or interventional team
- Consider removing or changing **existing** indwelling medical devices (e.g. IV lines or urinary catheters)

☐ **Source control facilitated**
☐ **Not indicated**

REVIEW

7. Reassess and monitor response to resuscitation – aim for:
- Oxygen saturation ≥92% and titrate to range of 92–96% (88–92% if COPD)
- Systolic BP >100mmHg
- Urine output >0.5 to 1.0mL/kg/hr – consider IDC with hourly monitoring

If haemodynamic status is not improving seek urgent (further) senior medical advice and escalate to higher level of care

8. Document and communicate ongoing management:
- Document appropriate criteria to ensure escalation if signs of deterioration
- Notify treating team of change in clinical condition
- Document clear management plan
- Review antibiotics as soon as possible
- Refer to infectious diseases, microbiologist or AMS team for review, particularly for septic shock

Facilitate transfer and provide clinical handover if patient requires admission to higher level of care

☐ **Referral completed and documented**

Communicate the patient's risk of deterioration during handover to accepting clinician
An emergency call can be initiated at any time if clinically concerned

Date and time completed: DD / MM / YY | HH : MM (24hr) | INITIALS

Transferring staff name: Accepting staff name:

DO NOT WRITE IN THIS BINDING MARGIN

DO NOT WRITE IN THIS BINDING MARGIN

Sepsis WITHOUT Shock

Source of infection	Empirical antibiotic regimen	Penicillin allergy – non-severe hypersensitivity	Penicillin allergy – severe hypersensitivity (e.g. anaphylaxis)
SINGLE SOURCE			
Meningitis	**Before** or with the first dose of antibiotic: Dexamethasone 10mg IV, 6 hourly **PLUS** Ceftriaxone 2g IV, 12 hourly **If at risk of *Listeria*** [Note 3] **ADD** Benzylpenicillin 2.4g IV, 4 hourly **If recent penicillin use or sinusitis / chronic otitis media** **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	**Before** or with the first dose of antibiotic: Dexamethasone 10mg IV, 6 hourly **PLUS** Ceftriaxone 2g IV, 12 hourly **If at risk of *Listeria*** [Note 3] **Non-pregnant:** **ADD** Trimethoprim-Sulfamethoxazole [Note 4] 5/25mg/kg (up to 480/2400mg) IV, 8 hourly **Pregnant:** **FIRST trimester –** seek ID or maternity specialist advice immediately **SECOND or THIRD trimester –** Trimethoprim-Sulfamethoxazole [Note 4] 5/25mg/kg (up to 480/2400mg) IV, ONCE, then seek ID or maternity specialist advice **If recent penicillin use or sinusitis / chronic otitis media** **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	**Before** or with the first dose of antibiotic: Dexamethasone 10mg IV, 6 hourly **PLUS** Moxifloxacin [Note 4] 400mg IV, daily **If at risk of *Listeria*** [Note 3] **Non-pregnant:** **ADD** Trimethoprim-Sulfamethoxazole [Note 4] 5/25mg/kg (up to 480/2400mg) IV, 8 hourly **Pregnant:** **FIRST trimester –** seek ID or maternity specialist advice immediately **SECOND or THIRD trimester –** Trimethoprim-Sulfamethoxazole [Note 4] 5/25mg/kg (up to 480/2400mg) IV, ONCE, then seek ID or maternity specialist advice
Febrile neutropenia (refer to local guidelines where available)	Piperacillin-Tazobactam [Note 1] 4/0.5g IV, 6 hourly **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	Cefepime [Note 1] 2g IV, 8 hourly **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)
Skin and soft tissue — **Cellulitis**	Flucloxacillin 2g IV, 6 hourly **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg IV ABW loading dose (max 3000mg)	Cefazolin 2g IV, 8 hourly **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)
Water-related	Give cellulitis regimen, **PLUS** Ciprofloxacin [Note 4] 400mg IV, 8 hourly, **PLUS** seek ID advice		
Diabetic foot infections	Piperacillin-Tazobactam 4/0.5g IV, 6 hourly **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	Cefepime 2g IV, 8 hourly **PLUS** Metronidazole 500mg IV, 12 hourly **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	Ciprofloxacin [Note 4] 400mg IV, 8 hourly **PLUS** Clindamycin [Note 6] 600mg IV, 8 hourly **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)
Necrotising fasciitis	Treat necrotising fasciitis with the regimen specified in the 'Sepsis WITH Shock' table		
Community acquired pneumonia	Benzylpenicillin 1.2g IV, 6 hourly **PLUS** Azithromycin 500mg IV, daily **If IRVS§ required or SMART-COP ≥5, replace** Benzylpenicillin with Ceftriaxone 2g IV, daily	Ceftriaxone 2g IV, daily **PLUS** Azithromycin 500mg IV, daily	Moxifloxacin [Note 4] 400mg IV, daily
Urinary	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Ampicillin 2g IV, 6 hourly	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** seek ID advice	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** seek ID advice
Intra-abdominal	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Ampicillin 2g IV, 6 hourly **PLUS** Metronidazole 500mg IV, 12 hourly	Ceftriaxone [Note 1] 2g IV, daily **PLUS** Metronidazole 500mg IV, 12 hourly	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Clindamycin [Note 6] 600mg IV, 8 hourly
Intra-amniotic infection (chorioamnionitis) or endometritis	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Ampicillin 2g IV, 6 hourly **PLUS** Metronidazole 500mg IV, 12 hourly	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Cefazolin 2g IV, 8 hourly **PLUS** Metronidazole 500mg IV, 12 hourly	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Metronidazole 500mg IV, 12 hourly **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)
Intravascular device	**Discuss early removal of device with treating team** Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)		

Adult Community Acquired Sepsis Prescribing Guidelines – First dose
High MRSA Non-Tropical
Queensland Government

Sepsis WITHOUT Shock *(continued)*

Source of infection	Empirical antibiotic regimen	Penicillin allergy – non-severe hypersensitivity	Penicillin allergy – severe hypersensitivity (e.g. anaphylaxis)
MULTIPLE POSSIBLE SOURCES			
Community acquired pneumonia / urinary	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Ampicillin 2g IV, 6 hourly **PLUS** Azithromycin 500mg IV, daily	Ceftriaxone [Note 1] 2g IV, daily **PLUS** Azithromycin 500mg IV, daily	Meropenem 1g IV, 8 hourly **PLUS** Azithromycin 500mg IV, daily
Community acquired pneumonia / cellulitis	Ceftriaxone 2g IV, daily **PLUS** Azithromycin 500mg IV, daily **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	Ceftriaxone 2g IV, daily **PLUS** Azithromycin 500mg IV, daily **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)	Meropenem 1g IV, 8 hourly **PLUS** Azithromycin 500mg IV, daily **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg)
Urinary / abdominal	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Ampicillin 2g IV, 6 hourly **PLUS** Metronidazole 500mg IV, 12 hourly	Ceftriaxone [Note 1] 2g IV, daily **PLUS** Metronidazole 500mg IV, 12 hourly	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Clindamycin [Note 6] 600mg IV, 8 hourly
SOURCE NOT APPARENT			
All other infection sources or SOURCE NOT APPARENT	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Flucloxacillin 2g IV, 6 hourly **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg) **If concerned for invasive meningococcal disease** [Note 9] **ADD** Ceftriaxone 2g IV, 12 hourly	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Cefazolin 2g IV, 8 hourly **If at risk of MRSA** [Note 8] **ADD** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg) **If concerned for invasive meningococcal disease** [Note 9] **ADD** Ceftriaxone 2g IV, 12 hourly	Tobramycin [Note 7] [Note 1] 4–5mg/kg IBW / AdjBW IV, ONCE (max 500mg) **PLUS** Vancomycin [Note 5] 25–30mg/kg ABW IV loading dose (max 3000mg) **If concerned for invasive meningococcal disease** [Note 9] **ADD** Ciprofloxacin [Note 4] 400mg IV, 8 hourly

§ IRVS Intensive respiratory or vasopressor support.

Note 1 **Multidrug-resistant infection risks:** recent admission (within 12 months) to an overseas hospital with a high prevalence of multidrug-resistant organisms or previous colonisation or infection with a resistant Multidrug-Resistant Gram-Negative organism (MRGN). If MRGN suspected:
- **Replace** tobramycin or gentamicin with **amikacin** [Note 7] 16mg/kg (non-shock) or 30mg/kg (shock) IBW / AdjBW IV (max 3000mg) **or add** amikacin if other aminoglycoside not already given.
- If contraindications to aminoglycosides, **replace** beta-lactam and aminoglycoside drug with meropenem IV 1g (non-shock) or 2g (shock), 8 hourly.

Note 2 **Tropical infection *(Burkholderia pseudomallei* or *Acinetobacter baumannii)* risks:** travel to tropical countries or north of Mackay AND, at least one of: diabetes, hazardous alcohol consumption, chronic kidney or lung disease, or on immunosuppressants.

Note 3 ***Listeria* risks:** Immunosuppression, >50yrs, history of hazardous alcohol consumption, pregnancy or debilitation.

Note 4 **CAUTION:** Seek ID or maternity specialist opinion for ongoing therapy in pregnant patients. For trimethoprim-sulfamethoxazole use in the first trimester of pregnancy, seek ID or maternity specialist advice PRIOR to prescribing.

Note 5 **Vancomycin:** Dose according to Actual Body Weight (ABW). See *eTG* for subsequent dosing or dosing in obesity. Maximum loading dose: 3000mg.

Note 6 **Alternative to clindamycin: Lincomycin** – the recommended dose of IV lincomycin is 600mg IV, 8 hourly.

Note 7 **Aminoglycosides:** Dose according to Ideal Body Weight (IBW) or Actual Body Weight (ABW), whichever is less. Where ABW is >20% of IBW, use Adjusted Body Weight (AdjBW). For adjusted dosing calculations or patients with chronic kidney disease, please see *eTG* or *QH Aminoglycoside Dosing in Adults Guidelines, April 2018*. Repeat dosing with aminoglycosides, if required, should be at least 24 hours after the first dose, depending on renal function. **Gentamicin can be used instead of tobramycin**, at the same dose. Gentamicin is no longer recommended for the treatment of *Pseudomonas aeruginosa*.

Note 8 **Methicillin-resistant *Staphylococcus aureus* (MRSA) infection risks:** Chronic underlying disease (e.g. kidney disease, diabetes), immunosuppression, chronic wounds or dermatitis, injection drug use, living in close quarters or communities with high MRSA prevalence or known colonisation with MRSA.

Note 9 Patients with asplenia or hyposplenia are at high risk of invasive meningococcal disease.