

Supplementary Materials

Table S1. Clinical Practice Guidelines, Sakaeo Crown Prince Hospital.

Targeted Infection	Types of infection and MDR risk	Recommended empirical ATB	Notes
Bacteraemia	CAI, without MDR risk	Ceftriaxone	-If rickettsial infection is suspected: add doxycycline or azithromycin -If <i>B. pseudomallei</i> is suspected: replace ceftriaxone with ceftazidime
	CAI, with MDR risk	Amoxicillin/clavulanate or Piperacillin/tazobactam	-If rickettsial infection is suspected: add doxycycline or azithromycin -If <i>B. pseudomallei</i> is suspected: replace ceftriaxone with ceftazidime
	HAI	Piperacillin/tazobactam or Meropenem	-If MRSA is suspected: add vancomycin
	HAI while receiving carbapenem	Colistin	-If MRSA is suspected: add vancomycin
Targeted Infection	Types of infection and MDR risk	Recommended empirical ATB	Notes
Pneumonia	CAI, without MDR risk	Ceftriaxone and azithromycin	-If aspiration pneumonia is suspected: replace ceftriaxone with Amoxicillin/clavulanate -If influenza is suspected: add oseltamivir -If <i>B. pseudomallei</i> is suspected: replace ceftriaxone with ceftazidime
	CAI, with MDR risk	Ceftriaxone and azithromycin or Levofloxacin monotherapy	-If influenza is suspected: add oseltamivir -If <i>B. pseudomallei</i> is suspected: replace ceftriaxone with ceftazidime
	HAI	Piperacillin/tazobactam or Meropenem	-If MRSA is suspected: add vancomycin
	HAI with suspected carbapenem-resistant gram-negative organisms	Colistin	-If MRSA is suspected: add vancomycin
Targeted Infection	Types of infection and MDR risk	Recommended empirical ATB	Notes
UTI	CAI, without MDR risk	Ceftriaxone	-If mild clinical syndrome, no shock or hypotension: oral cephalosporin could be used

	CAI, with MDR risk	-Amikacin or -IV Amoxicillin/clavulanate -Piperacillin/tazobactam or Ertapenem	-Normal renal function -Impaired renal function -If 3rd generation cephalosporin resistant is suspected
	HAI	Piperacillin/tazobactam or Ertapenem or Meropenem	-If MRSA or <i>Enterococcus faecium</i> is suspected: add vancomycin
	HAI with suspected carbapenem-resistant gram-negative organisms	Colistin	-If MRSA or <i>Enterococcus faecium</i> is suspected: add vancomycin

Table S2. Clinical Practice Guidelines, Surin Hospital.

Targeted Infection	Types of infection and MDR risk	Recommended empirical ATB	Notes
Bacteraemia	CAI, without MDR risk	Ceftriaxone	-If rickettsial infection is suspected: add doxycycline or azithromycin -If <i>B. pseudomallei</i> is suspected: replace ceftriaxone with ceftazidime
	CAI, with MDR risk	Amoxicillin/clavulanate or Piperacillin/tazobactam	-If rickettsial infection is suspected: add doxycycline or azithromycin -If <i>B. pseudomallei</i> is suspected: replace ceftriaxone with ceftazidime
	HAI	Piperacillin/tazobactam or Meropenem	-If MRSA is suspected: add vancomycin
	HAI while receiving carbapenem	Colistin	-If MRSA is suspected: add vancomycin
Targeted Infection	Types of infection and MDR risk	Recommended empirical ATB	Notes
Pneumonia	CAI, without MDR risk	Ceftriaxone and azithromycin	-If aspiration pneumonia is suspected: replace ceftriaxone with Amoxicillin/clavulanate -If influenza is suspected: add oseltamivir -If <i>B. pseudomallei</i> is suspected: replace ceftriaxone with ceftazidime
	CAI, with MDR risk	Ceftriaxone and azithromycin or Levofloxacin monotherapy	-If influenza is suspected: add oseltamivir -If <i>B. pseudomallei</i> is suspected: replace ceftriaxone with ceftazidime
	HAI	Piperacillin/tazobactam or Meropenem	-If MRSA is suspected: add vancomycin
	HAI with suspected carbapenem-resistant gram-negative organisms	Colistin	-If MRSA is suspected: add vancomycin
Targeted Infection	Types of infection and MDR risk	Recommended empirical ATB	Notes
UTI	CAI, without MDR risk	Ceftriaxone	-If mild clinical, no shock or hypotension: oral cephalosporin could be used
	CAI, with MDR risk	-Amikacin -IV Amoxicillin/clavulanate -Piperacillin/tazobactam	-Normal renal function -Abnormal renal function -If 3rd generation

		or Ertapenem	cephalosporin resistant is suspected and normal renal function
	HAI	Piperacillin/tazobactam or Ertapenem or Meropenem	-If MRSA or <i>Enterococcus faecium</i> is suspected: add vancomycin
	HAI with suspected carbapenem-resistant gram-negative organisms	Colistin	-If MRSA or <i>Enterococcus faecium</i> is suspected: add vancomycin

Table S3. Clinical Practice Guidelines, Surat Thani Hospital.

Targeted Infection	Types of infection and MDR risk	Recommended empirical ATB	Notes
Bacteraemia	CAI, without MDR risk	Ceftriaxone	-If rickettsial infection is suspected: add doxycycline or azithromycin
	CAI, with MDR risk	Amoxicillin/clavulanate or Piperacillin/tazobactam	-If rickettsial infection is suspected: add doxycycline or azithromycin
	HAI	Piperacillin/tazobactam or Meropenem	-If MRSA is suspected: add vancomycin
	HAI while receiving carbapenem	Colistin	-If MRSA is suspected: add vancomycin
Targeted Infection	Types of infection and MDR risk	Recommended empirical ATB	Notes
Pneumonia	CAI, without MDR risk	Ceftriaxone and azithromycin	-If aspiration pneumonia is suspected: replace ceftriaxone with Amoxicillin/clavulanate -If influenza is suspected: add oseltamivir
	CAI, with MDR risk	Ceftriaxone and azithromycin or Levofloxacin monotherapy	-If influenza is suspected: add oseltamivir
	HAI	Piperacillin/tazobactam or Meropenem	-If MRSA is suspected: add vancomycin
	HAI with suspected carbapenem-resistant gram-negative organisms	Colistin	-If MRSA is suspected: add vancomycin
Targeted Infection	Types of infection and MDR risk	Recommended empirical ATB	Notes
UTI	CAI, without MDR risk	Ceftriaxone	-If mild clinical, no shock or hypotension: oral cephalosporin could be used
	CAI, with MDR risk	-Amikacin -IV Amoxicillin/clavulanate -Piperacillin/tazobactam or Ertapenem	-Normal renal function -Abnormal renal function -If 3rd generation cephalosporin resistant is suspected and normal renal function
	HAI	Piperacillin/tazobactam or Ertapenem or Meropenem	-If MRSA or Enterococcus faecium is suspected: add vancomycin
	HAI with suspected carbapenem-resistant gram-negative organisms	Colistin	-If MRSA or Enterococcus faecium is suspected: add vancomycin

Abbreviations and definitions for CPGs.

- CAIs, community-acquired infections: onset of symptoms occurs before hospitalisation/within 48 hours after hospitalisation and there are no healthcare associated conditions potentially related to infection (i.e., chronic haemodialysis, in-dwelling urinary catheter).
- HAIs, hospital-acquired infections: onset of symptoms occurs >48 hours after hospitalisation or there are healthcare associated conditions potentially related to infection (i.e., chronic haemodialysis, in-dwelling urinary catheter).
- MDR, multidrug resistant.
- MRSA, methicillin-resistant *Staphylococcus aureus*.

Risk factors for infection by MDR pathogens.

- Hospitalisation within 90 days
- Antimicrobials use within 90 days
- Previous infection with antimicrobial resistant organisms
- Treatment in intensive care unit settings for longer than 48 hours
- Renal replacement therapy
- Medical device insertion or ventilator use longer than 48 hours