BAY OF PLENTY DISTRICT HEALTH BOARD HAUORA A TOI **ANTIBIOTICS & ANTIMICROBIALS PROTOCOL**	**ANTIBIOTICS AND ANTIMICROBIALS – FIRST-LINE THERAPY FOR ADULT MEDICAL PATIENTS**	**Policy 4.1.11 Protocol 2**

Bronchitis i.e. LRTI with no pneumonia on CXR (with purulent sputum, raised CRP/WCC – antibiotics warranted in mod to severe cases only)

Doxycycline 100mg 12 hourly PO– for 5/7;
OR
Co-amoxiclav 1.2g 8 hourly IV if unable to take orally

***Community acquired pneumonia* (chest x-ray changes) – score severity using CURB-65:**

score 1 for each of confusion, urea>7, RR>30, diastolic BP<60 or systolic BP<90, age>65yr
Mild - moderate (CURB-65 = 0-2):
Amoxicillin 500mg 8 hourly PO (If penicillin allergy roxithromycin 150mg 12 hourly PO)
Severe (CURB-65=3 or more):
Amoxicillin 1-2g 6-8 hourly IV PLUS azithromycin 500mg daily PO – send sputum for MC&S PLUS Legionella PCR
(use IV erythromycin 500mg 6 hourly if unable to take oral medication)
(non-anaphylactoid penicillin allergy –cefuroxime 1.5g 8 hourly IV, anaphylactoid penicillin allergy – moxifloxacin 400mg daily PO)
Review at 48 hourly intervals and switch to oral amoxicillin and azithromycin as soon as possible.
(Patient able to swallow/absorb, WCC and CRP reducing, temperature improving)
Duration of treatment: beta-lactam 5-10 days, macrolide 5 days (discuss proven legionella treatment with infection team)
During 'flu season (increased risk of *S.aureus* pneumonia) consider co-amoxiclav instead of amoxicillin
CAUTION - macrolide interactions e.g. amiodarone, digoxin, warfarin and statins

***Simple UTI (cystitis but no systemic symptoms)* – Always take MSU first and review treatment with MSU results**

Trimethoprim 300mg od orally for 3 days

***UTI with systemic symptoms* (fever, rigors, loin pain, hypotension, sepsis) – Always take MSU first and review treatment with MSU results**

Co-amoxiclav 1.2g 8 hourly IV +/- gentamicin 5-7mg/kg IV single dose (use ideal body weight, max dose 400mg)
Cefuroxime 1.5g 8 hourly IV +/- gent for non-anaphylactoid penicillin allergy, co-trimoxazole 960mg 12 hourly IV + gent for anaphylactoid allergy 7 days, extend to 10-14 days for pyelonephritis – oral choice should be guided by susceptibilities from urine or blood cultures

***Skin and soft tissue infection* See Cellulitis Bay Navigator pathway**

Mild - moderate flucloxacillin 500mg - 1g 6 hourly PO (cefaclor 500mg 8 hourly PO if penicillin allergic) +/- probenecid as per pathway – consider outpatient management
Severe - flucloxacillin 2g 6 hourly IV (cefazolin 2g 8 hourly IV if penicillin allergic)
Use clindamycin 450mg QDS orally where history of anaphylactoid penicillin allergy
If MRSA suspected or previously known use clindamycin or co-trimoxazole 960mg BD depending on susceptibilities
In diabetics consider co-amoxiclav 1.2g TDS IV to cover polymicrobial infection
For necrotising fasciitis or severe SSTI with shock: co-amoxiclav 1.2g 8 hourly IV PLUS clindamycin 900-1200mg 8 hourly IV

***Probable bacterial meningitis* (must be discussed with senior medical staff)**

Ceftriaxone 2g 12 hourly IV
If associated with pneumonia, sinus disease, otitis media or base of skull fracture, or
Gram positive cocci seen on Gram stain add vancomycin to cover *S. pneumoniae* with reduced penicillin susceptibility
If age>50 years, alcoholism, chronic debilitating disease or impaired immunity add amoxicillin 2g 6 hourly IV to cover *Listeria monocytogenes*)
If anaphylactoid penicillin allergy: vancomycin 500 mg 6 hourly IV + co-trimoxazole 960mg 8 hourly IV

If features of encephalitis (confusion, behavioural changes or fluctuant level of consciousness) add aciclovir 10mg/kg 8 hourly IV following LP IF CSF SHOWS <200 WBC and normal Glucose (and ensure HSV PCR is requested on CSF)

***Febrile neutropaenia* - REFER TO FEBRILE NEUTROPAENIA GUIDELINES CPM.N3.1**

***Sepsis without identified focus or intra-abdominal sepsis.* Utilise Sepsis 6 bundle including IV fluid resuscitation, Take 2 sets of blood cultures 20 mins apart and start antibiotics within 1st hour of presentation**

Co-amoxiclav 1.2g 8 hourly IV and gentamicin 5-7mg/kg IV (use ideal body weight, max dose 400mg)
For intra-abdominal sepsis use cefuroxime 1.5g TDS IV and metronidazole 500mg TDS IV as an alternative, especially in significant renal impairment (with dose adjustments)
Resuscitate with IV fluids and monitor for signs of end-organ damage and refractory hypotension – involve your consultant and the intensivists early in management
Consider cover for resistant organisms – check previous available microbiology.
Discuss cases with infection service, review with micro results and rationalise antibiotics

All the above doses assume a 70kg adult with normal renal and liver function.
Impaired renal and/or liver function may require dose reduction. Severe infections and/or non-obese, bigger adults (>80kg) and/or renal hyperfiltration (ICU setting on vasopressors or large amounts of IV fluids given with normal baseline renal function) may require dose increase.

As a general rule:

1) **Up to amoxicillin 2g/clavulanate 200mg q6h (this can be achieved by giving an extra gram of amoxicillin every time the Co-amoxiclav dose is given)**
2) **Up to amoxicillin 1g q6-8h orally or co- amoxiclav 1.25g (2 625mg tablets) q8h orally**
3) **Up to 5mg/kg of the trimethoprim component q8h for IV co-trimoxazole**

Always check for contra-indications, drug interactions, and dosage modification in renal and hepatic impairment.
Contact Infection Diseases service for advice or review via telephony:
Infectious Diseases Physicians: Kate Grimwade, Diane Hanfelt-Goade, Massimo Giola
Clinical Microbiologists: Michael Addidle, Vani Sathyendran

All Antimicrobial Guidelines are available on smartphones on the Microguide app (download from iTunes or Play store) or at www.microguide.horizonsp.co.uk/viewer (select BOPDHB from Change Trust tab dropdown menu)