Dear Colleague

This letter authorises the extended use of the following guidance until 1st December 2018:

**NHS Grampian Acute Sector Empirical Therapy Prescribing Guidance For Some Common Infections In Adults (Summary)**

This guidance remains clinically accurate and relevant, and the review of this guidance will commence shortly.

If you have any queries regarding this please do not hesitate to contact the Pharmacy and Medicines Directorate.

Yours sincerely

Sandy Thomson
Interim Chair of Medicines Guidelines and Policies Group
### Infection Management Guidelines: Empirical Antibiotic Therapy

#### Pneumonia

<table>
<thead>
<tr>
<th>Lower Respiratory Tract Infection (LRTI)</th>
<th>- definition of acute exacerbation, acquisition, and causative organisms.</th>
<th>- Source control (e.g., acute exacerbation, aspiration)</th>
<th>- Antibiotic therapy</th>
<th>- Other therapy (e.g., oxygen therapy, mechanical ventilation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common community-acquired pneumonia (CAP)</td>
<td>- Risk factors</td>
<td>- Diagnosis (e.g., clinical presentation, radiographic findings)</td>
<td>- Treatment (e.g., antibiotics, supplemental oxygen)</td>
<td>- Prognosis and follow-up</td>
</tr>
<tr>
<td>Severe CAP</td>
<td>- Risk factors</td>
<td>- Diagnosis (e.g., clinical presentation, radiographic findings)</td>
<td>- Treatment (e.g., antibiotics, supplemental oxygen)</td>
<td>- Prognosis and follow-up</td>
</tr>
</tbody>
</table>

#### Bone/Joint Infection

| Diagnosis | - Clinical presentation (e.g., pain, swelling, redness) | - Imaging (e.g., X-ray, MRI) | - Laboratory tests (e.g., white blood cell count, erythrocyte sedimentation rate) |
| Treatment | - Antibiotics (e.g., ceftriaxone, vancomycin) | - Surgery (e.g., debridement, arthroscopy) | - Physical therapy |

#### Urinary Tract

| Diagnosis | - Clinical presentation (e.g., frequency, dysuria) | - Imaging (e.g., ultrasound, cystoscopy) | - Laboratory tests (e.g., urine culture, blood tests) |
| Treatment | - Antibiotics (e.g., trimethoprim, ciprofloxacin) | - Hydration | - Catheter drainage |

#### Gastro-Intestinal

| Diagnosis | - Clinical presentation (e.g., abdominal pain, nausea, vomiting) | - Imaging (e.g., abdominal X-ray, CT scan) | - Laboratory tests (e.g., blood tests, stool samples) |
| Treatment | - Antibiotics (e.g., metronidazole, ciprofloxacin) | - Fluid resuscitation | - Laparotomy |

#### CNS Infection

| Diagnosis | - Clinical presentation (e.g., headache, seizures, altered mental status) | - Imaging (e.g., CT scan, MRI) | - Laboratory tests (e.g., cerebrospinal fluid analysis) |
| Treatment | - Antibiotics (e.g., ceftazidime, vancomycin) | - Antiepileptic drugs | - ICU management |

#### Severe Systemic Infection? Source

| Source | - Pneumonia | - Septic shock | - Meningitis |
| Treatment | - Antibiotics + source control (e.g., drainage of abscess) | - Fluid resuscitation | - Antimicrobial therapy |

#### Endocarditis

| Diagnosis | - Clinical presentation (e.g., fever, murmur) | - Imaging (e.g., echocardiogram) | - Laboratory tests (e.g., blood tests, cultures) |
| Treatment | - Antibiotics (e.g., vancomycin, gentamicin) | - Heart valve replacement | - Anticoagulation |

### ORAL THERAPY USUALLY RECOMMENDED

<table>
<thead>
<tr>
<th>Condition</th>
<th>- Prophylaxis of UTI and bacteremia</th>
<th>- Prevention of endocarditis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumonia</td>
<td>- Patients with clinical evidence of a UTI should be treated with appropriate antibiotics</td>
<td>- Prophylaxis should be considered in high-risk patients</td>
</tr>
</tbody>
</table>

### GUIDELINES FOR INITIAL HOSPITAL THERAPY IN ADULTS

- Specialist units may have separate policies.
- Duration of treatment should be guided by clinical response and microbiology results.

### INFECTION MANAGEMENT GUIDELINES: EMPIRICAL ANTIBIOTIC THERAPY

- Co-amoxiclav 500mg/125mg IV or oral 8hrly for 5 days.
- Clindamycin 600mg 8hrly for 5 days.
- Gentamicin 120mg 8hrly IV (add if MRSA is a concern).
- Metronidazole 500mg 8hrly IV.
- Rifampicin 300mg 12hrly IV.
- Vancomycin 1g 8hrly IV (add if MRSA is suspected).

### SEVERE UTI OR BACTERAEMIA

- E. coli, P. mirabilis, and Proteus mirabilis: Ciprofloxacin 1g IV 8hrly.
- K. pneumoniae and S. maltophilia: Meropenem 1g 8hrly IV.
- P. aeruginosa: Meropenem 1g 8hrly IV.
- A. baumannii and Acinetobacter species: Imipenem 1-2g 6hrly IV.

### SEVERE INFECTIONS OR INFECTIONS WHERE IV THERAPY USUALLY RECOMMENDED

- Meningitis: Ceftriaxone 1g 8hrly IV.
- Severe systemic infections: Meropenem 1g 8hrly IV.
- Other severe infections: Vancomycin 1g 8hrly IV.

### THERAPY SWIFTLY RECOMMENDED

- Early IV therapy may be administered URGENTLY on arrival at hospital and after blood cultures.
- CT scan before LP or sepsis, reduced GCS, papilloedema, CNS signs of raised intracranial pressure.

### SEIZURES AND SEIZURE MANAGEMENT

- Benzodiazepines (e.g., lorazepam) 0.5-2mg IV 8hrly.
- Carbamazepine 200mg 8hrly.
- Valproate 500mg 8hrly.
- Levetiracetam 1000mg 8hrly.

### SEVERE SYSTEMIC INFECTION OR SEPTIC SHOCK

- Septic shock: High-dose corticosteroids (e.g., dexamethasone 10mg IV 8hrly for 2 days).
- Septic shock and sepsis: ICU management.
- Septic shock and sepsis in pregnancy: Maternal and fetal care.

### SEVERE NEUROINFECTION OR NEUROLOGICAL COMPLICATIONS

- Encephalitis: Aciclovir 1g 8hrly IV.
- Meningitis: Steroids + antimicrobial therapy.
- Intracranial hypertension: Mannitol 1g 8hrly.

### FURTHER ADVICE

- See full guideline for advice if IV therapy is required.
- www.nhsgrampian.org/gjf - policies can be found on the intranet.

### FURTHER READING

- NICE guideline on antibiotic prophylaxis at catheter insertion.