Obstetrics Antibiotic Guidelines (GL787)

Approval and Authorisation

<table>
<thead>
<tr>
<th>Approval Group</th>
<th>Job Title, Chair of Committee</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Maternity &amp; Children’s Services Clinical Governance Committee</td>
<td>Chair Maternity Clinical Governance Committee</td>
<td>1st June 2018 &amp; 5th July 2019</td>
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</table>

Change History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author(s)</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 4.0</td>
<td>April 2018</td>
<td>Dr Shabnam Iyer Miss Jill Ablett Dr Lauren Williams Benny Tan Claire Burnett</td>
<td>Full review and updating of antibiotic recommendations and addition of treatment recommendations for management of infections in out-patient settings</td>
</tr>
<tr>
<td>Version 4.1</td>
<td>July 2018</td>
<td>Miss Jill Ablett Christine Harding</td>
<td>Pg 12, Table 3 inserted NICE recommendation for preterm labour with previous PROM who need antibiotics in labour as for GBS</td>
</tr>
<tr>
<td>Version 4.2</td>
<td>October 2018</td>
<td>Dr Shabnam Iyer</td>
<td>Clarification of statement regarding use of single dose azithromycin in emergency LSCS (pg 13) and addition of flowchart (pg 22). Amalgamation of all variants of maternal sepsis. Inclusion of new teicoplanin and vancomycin guidelines.</td>
</tr>
<tr>
<td>Version 4.3</td>
<td>February 2019</td>
<td>Dr Shabnam Iyer Christiana Ogunmodede</td>
<td>Pg 17/18 - Inclusion of new guidance on Gentamicin monitoring</td>
</tr>
<tr>
<td>Version 4.4</td>
<td>June 2019</td>
<td>Dr Shabnam Iyer Christiana Ogunmodede</td>
<td>Changes to pg 13 to as agreed by Christine Harding, Mr Patrick Bose, Dr Shabnam Iyer and Christiana Ogunmodede following the results of Anode Study</td>
</tr>
<tr>
<td>Version 4.5</td>
<td>October 2019</td>
<td>Dr Shabnam Iyer Christiana Ogunmodede C Harding Dr L Williams</td>
<td>Live change to pg 12/13 regarding use of IV teicoplanin for penicillin allergic patients being treated for GBS and regimen to follow if patient proceeds to LSCS</td>
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1. **Consultation undertaken on this guideline**
   This guideline has been the subject of consultation with the Consultant Medical Microbiologist, Consultant Radiologist and Lead Antimicrobial Pharmacist. The guideline has also been considered and approved by the Maternity Clinical Governance Committee.

2. **Implementation**
   This approved guideline will be placed on the intranet and will be cascaded though directors to line managers and staff.

3. **Purpose of the Guideline**
   Is to provide evidence-based recommendations for the antibiotic treatment and prophylaxis of infections in obstetrics, based on the local epidemiology and antimicrobial susceptibility profiles of pathogens.

4. **Scope of the Guideline**
   It covers recommendations for:
   1. Microbiological diagnosis and antibiotic treatment of common infections in pregnancy (during the antenatal, intrapartum and peripartum periods) and, postpartum period including the lactation period
   2. Antibiotic prophylaxis for prevention of Early-onset Neonatal Group B Streptococcal disease (EOGBSD)
   3. Antibiotic prophylaxis for common obstetric procedures

   **The guideline does not cover** the antimicrobial management of genital herpes, chickenpox, parvovirus, CMV, hepatitis B/C or HIV. Please refer to the relevant obstetrics guidelines.

   The guideline should be used in conjunction with other relevant guidelines on the intranet such as:
   - Management of penicillin allergy on MicroGuide (mobile/web version)
   - IV vancomycin guideline (GL1123) on MicroGuide (mobile/web version)
   - IV teicoplanin guideline (GL1122) on MicroGuide (mobile/web version)
   - IV-to-Oral switch protocol (CG334) on MicroGuide (mobile/web version)
   - Influenza protocol on MicroGuide (mobile/web version)
   - General Principles of Surgical Antimicrobial Prophylaxis on MicroGuide (mobile/web version)
   - MRSA Screening protocol (CG179) on Policy Hub
   - Maternal sepsis prevention, recognition and management guideline (GL872) on Policy Hub
   - Group B Streptococcal Infection (GBS) GL850 on Policy Hub
5. **Acronyms and abbreviations**

- **APN**: Acute pyelonephritis
- **ASB**: Asymptomatic bacteriuria
- **ARDS**: Acute Respiratory Distress Syndrome
- **BC**: Blood culture
- **CCU**: Clean catch urine
- **CFU**: Colony forming unit
- **CMM**: Consultant Medical Microbiologist
- **CT**: *Chlamydia trachomatis*
- **CT/NG PCR**: *Chlamydia trachomatis* and *Neisseria gonorrhoeae* PCR
- **Cx**: Cervical swab
- **EOGBSD**: Early-onset Group B Streptococcus disease
- **ESBL**: Extended-spectrum beta-lactamase
- **GAS**: Group A Streptococcus (*Streptococcus pyogenes*)
- **GBS**: Group B streptococcus (*Streptococcus agalactiae*)
- **GC**: Gonococcus (*Neisseria gonorrhoeae*)
- **GNB**: Gram-negative bacteria
- **GUM**: Genitourinary medicine
- **G-6PD**: Glucose-6-Phosphate Dehydrogenase
- **HIV**: Human immunodeficiency virus
- **HVS**: High vaginal swab
- **IAI**: Intra-amniotic infection (chorioamnionitis)
- **IAP**: Intrapartum antibiotic prophylaxis
- **I&D**: Incision and drainage
- **LBW**: Low birth weight
- **LE**: Leucocyte esterase
- **LN**: Lymph node
- **LSCS**: Lower Segment Caesarean section
- **BP**: Blood pressure
- **CDI**: *Clostridium difficile* infection
- **C&S**: Culture and sensitivity
- **CA-MRSA**: Community-associated MRSA
- **LVS**: Low vaginal swab
- **MRSA**: Meticillin-resistant *Staphylococcus aureus*
- **MSU**: Midstream urine
- **N**: Nitrites
- **NG**: *Neisseria gonorrhoeae*
- **PCR**: Polymerase chain reaction
- **PL**: Pre-labour
- **PLROM**: Pre-labour rupture of membranes
- **POM**: Premature rupture of membranes
- **P-PLROM**: Pre-term prelabour rupture of membranes
- **P-PROM**: Pre-term premature rupture of membranes
- **O/e**: On examination
- **RBCs**: Red blood cells
- **RR**: Respiratory rate
- **SOB**: Shortness of breath
- **SpO₂**: Oxygen saturations
- **STI**: Sexually Transmitted Infection
- **ST-LVS**: Self-taken low vaginal swab
- **TDM**: Therapeutic drug monitoring
- **TSS**: Toxic shock syndrome
- **UC&S**: Urine culture and sensitivity
- **UTI**: Urinary tract infection
- **VTM**: Viral transport medium
6. Terms and definitions:

a) **Bacteriuria** defined as presence of bacteria in urine, can be detected by:
   - Urine dipstick test for nitrites (N), resulting from conversion of dietary nitrates to nitrites by ‘coliform’ bacteria (*Enterobacteriaceae*).
     - At least 4 hour bladder incubation is required for N test to be reliable.
     - Nitrite reagent on the dipstick is sensitive to environmental air- improperly stored, or use of out-of-date dipsticks could result in false-positive N test.
     - Non-nitrate reducing organism and low nitrate diet could produce a false-negative N result.
   - Urine culture is the gold standard (reference) test for detection of bacteriuria
   - **Asymptomatic bacteriuria (ASB)** refers to presence of ≥10⁵ CFU/mL of bacteria in MSU in absence of symptoms of UTI

b) **CCU** refers to specimen of urine collected after local cleaning of urethral meatus and surrounding mucosa.

c) **Early-onset neonatal group B streptococcus disease (EOGBSD)** is defined as GBS infection with onset within 72 hours of birth

d) **ESBL-producing GNB** refers to a strain of GNBs that produces beta-lactamase enzymes capable of hydrolysing broad-spectrum cephalosporin’s such as Cefotaxime, ceftriaxone and Ceftazidime

e) **Haematuria** defined as presence of >2 RBCs/mm³, can be detected by urine dipstick test for haematuria (H)

f) ‘**High risk for GBS**’ refers to a woman with previous baby with early-or late-onset invasive Group B Streptococcus (GBS) infection

g) ‘**High risk for MRSA**’ refers to a patient with ≥ 1 of following risk factors
   1. Known ‘MRSA Positive’ (previously infected or colonised with MRSA)
   2. Hospitalisation in or outside the trust in the past year
   3. Frequent re-admissions to any healthcare facilities
   4. Diabetes and BMI ≥ 40 kg/m²
   5. **Health care worker** with any form of direct patient contact and veterinary staff
   6. Intravenous drug use
   7. Patients infected with HIV

h) ‘**High risk for STIs**’
   8. ≤25 years old
   9. New sexual partner or >1 sexual partner in the last 12 months, or sex partner with concurrent partners
   10. Sex contact of a case with STI
   11. Asymptomatic women requesting ‘STI Screen’

i) **Hospital-acquired infection (HAI)** refers to an infection that is neither present nor incubating at the time of hospital admission but, acquired ≥ 48 hours after admission
j) **Intra-amniotic infection (IAI) or chorioamnionitis** refers to infection of foetal membranes (chorion and amnion) amniotic fluid, foetus, umbilical cord and placenta.

k) **MSU** refers to second portion of the voided urine specimen collected after discarding the initial stream.

l) **Modified Early Obstetric Warning Score (MEOWS)** refers to screening tool used for maternal sepsis. Please refer to the *Maternal sepsis prevention, recognition and management (GL872)*

m) **Multidrug resistant (MDR) bacteria** refers to strains of bacteria that are resistant to ≥2 classes of antibiotics such as MRSA is resistant to all beta lactam class of antibiotics and may also be resistant to macrolide antibiotics such as erythromycin and quinolone class of antibiotics such as ciprofloxacin

n) **Preterm** refers to before 37 completed weeks of gestation

o) **Preterm labour** refers to onset of labour before 37 completed weeks of gestation

p) **Premature rupture of membranes (PROM)** refers to rupture of membranes before onset of labour or prelabour ROM (PLROM)

q) **Preterm PROM (PPROM) or PPLROM** refers to PROM before 37 completed weeks of gestation

r) **Pyuria** refers to presence of white cells (pus cells) in urine specimen, can be detected by:
   - Urine dipstick test for leucocyte esterase (LE)
     *Urine dipstick test for LE is more sensitive than, and as specific as urine microscopy for detection of pyuria.*

s) **Sepsis** is defined as the life-threatening organ dysfunction resulting from dysregulated host response to infection

t) **Surgical Antimicrobial Prophylaxis (SAMP)** is defined as the peri-procedural administration of a *single therapeutic IV* dose of an antimicrobial agent, administered usually **30-60 minutes before the start of a procedure** to prevent infectious complication
### Table 1: Empirical Antibiotic Treatment Recommendations

**BMI-based patient stratification:** Lean (BMI <30), Obese (BMI 30-39.9), morbidly obese (BMI≥40). Use patient’s antenatal booking weight to calculate BMI

All dosage recommendations are for patients with normal renal and hepatic functions unless stated otherwise. Dosages should be adjusted to suit person’s age, weight, hepatic and renal function. Please contact your ward pharmacist, if necessary.

<table>
<thead>
<tr>
<th>Clinical Indication</th>
<th>Clinical Assessment</th>
<th>Diagnostic Evaluation</th>
<th>Treatment Recommendations</th>
<th>Alternatives e.g. ‘True Penicillin allergy’</th>
<th>Comments</th>
</tr>
</thead>
</table>
| **Asymptomatic bacteriuria (ASB)** | • All pregnant women should be screened for ASB (with urine culture) at 12-16 weeks gestation or at the first antenatal visit  
• ASB is diagnosed by positive urine culture (with bacterial growth ≥10^5 CFU/mL) **WITHOUT** any symptoms of UTI | • Urine dipstick tests for LE and N should not be used  
• MSU should be sent for C&S  
• A follow-up urine culture as test of cure (TOC) should be done a week after completion of antimicrobial treatment:  
  - **Persistent ASB:** If the TOC urine culture is positive with the same organism  
  - **Recurrent ASB:** If the TOC urine culture is positive with a different organism or TOC urine culture is negative but a subsequent urine culture is positive with the same or different organism | **First Choice** Always treat based on the UC&S results  
  - PO amoxicillin 1g 8 hourly for 7 days  
  - PO cefradine 500 mg 6 hourly for 7 days | PO nitrofurantoin 50mg 6 hourly for 5 days (if eGFR ≥ 45mls/min)  
  (Avoid in the third trimester and at term and in G-6PD deficiency)  
  **OR**  
  PO trimethoprim 200 mg 12 hourly for 7 days  
  (Avoid in the first trimester  
  Avoid in those on a folate antagonist  
  And consider 5mg folic acid daily in those at risk of folic acid deficiency) | • ASB in pregnancy **MUST** be treated to reduce risk of progression to acute pyelonephritis, low birth weight, pre-term delivery and perinatal mortality |
| **Cystitis** | • Dysuria, frequency/urgency, supra-pubic discomfort  
  • Fever and chills are generally absent in isolated cystitis | • Urine dipstick for LE and N confirmed by positive urine culture with bacterial growth of ≥10^5-10^6 CFU/mL  
• A follow-up repeat urine culture one week after completion of treatment as TOC is recommended | **Please review previous UC&S results. Discuss with CMM, if necessary**  
• Treat as above for ASB  
• Antimicrobial prophylaxis is **NOT** recommended | • Dysuria without positive culture (bacteriuria) or persistent dysuria despite successful antimicrobial treatment of bacteriuria should warrant testing for STIs (CT & NG) |

**MDR infection:** Based on the UC&S results  
• PO fosfomycin 3g single dose, **OR**  
• PO nitrofurantoin 50mg 6 hourly for 7 days (if eGFR ≥ 45mls/min)  
  *Avoid use during the first trimester and at term and in G-6PD deficiency*  
• Please discuss with CMM, if required

**Persistent ASB:**  
• Repeat another course of antimicrobial treatment (as above) based on UC&S

**Recurrent ASB:**  
• Treat based on UC&S

**Recurrent UTI:**  
• PO cefradine 500 mg (post-coital or at bedtime)  
  **OR**  
  PO nitrofurantoin 50 mg if eGFR ≥ 45ml/min (post-coital or at bedtime)  
  (Avoid use during the third trimester and at term and in G-6PD deficiency)
| Acute Pyelonephritis (APN) | Fever and chills, nausea/vomiting, flank pain renal angle tenderness ± symptoms or signs (s/s) of cystitis | Urine dipstick for LE and N MSU/CCU for C &S BC (before antibiotics) | IV aztreonam 2 g 8 hourly Known ESBL Positive: IV temocillin 2 g 12 hourly for 24-48 hours followed by IV/PO treatment based on the UC&S Duration of treatment: 7 days | IV aztreonam 2 g 8 hourly | Once afebrile for 48 hours switch IV to PO antibiotics based on UC&S |
| Urosepsis | UTI + MEOWS ≥3 | BC (before antibiotics) MSU/CCU for C &S | IV Meropenem 1g 8 hourly Review and revise treatment in light of culture results | IV gentamicin* 5 mg/kg OD See Appendix 1 & 2 for information on gentamicin monitoring |
| Pharyngitis | Fever, tonsillar exudate, tender anterior cervical LNs | Throat swab for C&S | PO amoxicillin 1g 8 hourly or IV amoxicillin 1g 6 hourly | PO clarithromycin 500 mg 12 hourly (Avoid in 1st trimester unless benefit outweigh risk) |
| Community acquired pneumonia (CAP) | Fever, SOB, cough +/-sputum, chest pain Antecedent history of (h/o) influenza | BC (before antibiotics) Sputum for C&S Pneumococcal & Legionella urine antigen tests In Winter months: Nasopharyngeal swab in VTM for Flu PCR | PO/IV amoxicillin 1g 8 hourly + PO/IV azithromycin 500 mg 24 hourly | Non-anaphylactic type Pen-allergy IV ceftriaxone 2 g 24 hourly + PO/IV azithromycin 500 mg 24 hourly Anaphylactic type Pen-allergy IV vancomycin 10mg/kg 12 hourly + PO/IV azithromycin 500 mg 24 hourly | Non-anaphylactic type Pen-allergy IV ceftriaxone 2 g 24 hourly + PO/IV azithromycin 500 mg 24 hourly Anaphylactic type Pen-allergy IV vancomycin 10mg/kg 12 hourly + PO/IV azithromycin 500 mg 24 hourly | Pregnant women with pneumonia are at risk of preterm labour/delivery In-patient treatment until clinical stability is recommended Switch IV ceftriaxone 2g 24 hourly to PO cefradine 500 mg 6 hourly when clinical improvement |
| Severe CAP: | Rapidly progressive CAP evolving into ARDS Severe sepsis Haemoptysis | | | |
| Severe CAP | IV benzylpenicillin 1.2 g 6 hourly + IV clindamycin 1.2 g 6 hourly or PO clindamycin 600 mg 6 hourly | | |
| Clostridium difficile Infection | Diarroheal stool specimen for CDI testing | Please refer to the Adult Medicine Antibiotic Protocol 2018-19 on Micro Guide (mobile/web version) | | |
### Maternal Sepsis:
- Sepsis in pregnancy
- Chorioamnionitis or IAI
- Endometritis
- Peri-partum maternal pyrexia
- Sepsis following pregnancy (>6 weeks postnatal)
- Post-partum sepsis/post-abortion
- Sepsis/abortion
- Post-partum endometritis
- Sepsis of unknown origin

#### S/s relevant to the most likely focus of infection such as:
- Pharyngitis
- Pneumonia
- UTI
- IAI
- Breast abscess: Fever, rigors, spiking temperature
- Mastitis: Breast engorgement/redness
- TSS: Generalised maculopapular rash
- Endometritis: Abdominal pain/tenderness, offensive vaginal discharge
- Pneumonia: Cough, SOB, chest pain
- Wound infection: LSCS, episiotomy, perineal wound, epidual site
- Gastrointestinal (GI): Diarrhoea, vomiting
- Non-specific s/s: lethargy, reduced appetite

**PLUS**
- MEOWS ≥3:
  - Temperature, PR, RR, BP, level of consciousness, SpO2
- Risk stratify sepsis as:
  - **Red flag** or **Amber flag** sepsis
  - Or, **low risk of sepsis**

#### BC X 2 sets (prior to antibiotics)
- Other relevant cultures based on the suspected focus of infection e.g.:
  - IAI: Amniotic fluid, HVS
  - Endometritis: HVS
  - Post-partum endometritis: LV5 placental swab
  - Meningitis: Cerebrospinal fluid (CSF)
  - Epidural abscess
  - Mastitis: expressed breast milk
  - Caesarean section or perineal wound swab
  - Faeces, if diarrhoea
  - UC&S, if UTI

#### First Choice
- **IV amoxicillin 1g 8 hourly**
- **IV clindamycin 1.2 g 6 hourly for 48 – 72 hours**
- **IV gentamicin* 5 mg/kg STAT**

**Followed by:**
- Pathogen-targeted therapy based on the C&S results and clinical reassessment
- Discuss with CMM, if necessary

#### Known ESBL positive
- **IV temocillin 2 g 12 hourly**
- **IV clindamycin 1.2 g 6 hourly**

**For 48 – 72 hours, followed by:**
- Pathogen-targeted therapy based on the C&S results and clinical reassessment
- Discuss with CMM, if necessary

#### Known ESBL positive
- **IV teicoplanin 12 mg/kg 12 hourly for 3 doses, then 10 mg/kg 24 hourly**
- **IV clindamycin 1.2 g 6 hourly**
- **IV gentamicin* 5 mg/kg STAT**

**Followed by:**
- Pathogen-targeted therapy based on the C&S results and clinical reassessment
- Discuss with CMM, if necessary

#### MRSA Positive or Penicillin allergy:
- **IV teicoplanin 12 mg/kg 12 hourly for 3 doses, then 10 mg/kg 24 hourly**
- **IV clindamycin 1.2 g 6 hourly**
- **IV gentamicin* 5 mg/kg STAT**

**Followed by:**
- Pathogen-targeted therapy based on the C&S results and clinical reassessment
- Discuss with CMM, if necessary

#### Caesarean section (incisional) wound infection
- S/s of superficial incisional wound infection: redness, pain, swelling, wound dehiscence, discharge
- S/s of deep tissue infection: haematomas, seroma, abscess
- S/s of post-caesarean section endometritis

#### Wound swab or aspirate
- Antibiotic treatment is recommended for localised cellulitis or associated sepsis or associated sepsis in addition to drainage of collection or debridement
- Surgical review of wound to drain any localised or deep collection

#### IV co-amoxiclav 1.2 g 8 hourly or PO co-amoxiclav 625 mg 8 hourly
- **Penicillin-allergy or MRSA Positive**
- **IV teicoplanin 10 mg/kg 12 hourly for 3 doses, then 10 mg/kg 24 hourly**

#### Caesarean section wound infection is a surgical site infection.
<table>
<thead>
<tr>
<th>Lactational mastitis</th>
<th>Breast abscess</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red, swollen, painful breast ±</td>
<td>S/s of breast abscess: Localised painful fluctuant and tender mass associated with fever, rigors and malaise</td>
</tr>
<tr>
<td>Expressed milk for C&amp;S if severe sepsis, hospital-acquired infection (HAI) or unresponsive to initial treatment</td>
<td>BC X 2 sets if clinically ‘septic’</td>
</tr>
<tr>
<td>PO flucloxacillin 1 g 6 hourly</td>
<td>Pus/aspirate for C&amp;S</td>
</tr>
</tbody>
</table>

**Known MRSA positive**
- IV teicoplanin** 10 mg/kg 12 hourly for 3 doses, then 10 mg/kg 24 hourly **OR**
- PO linezolid 600mg 12 hourly for 5/7 days (*Use only if no other option and benefit outweighs risk*)

*Use booking weight for BMI < 30. Use corrected dosing weight if BMI ≥ 30. See appendix 1&2 below to calculate gentamicin dose*

**Use booking weight for actual weight**
### Table 2: Out-patient Management of Common Infections in Pregnancy

All dosage recommendations are for patients with normal renal and hepatic functions unless stated otherwise. Dosages should be adjusted to suit person’s age, weight, hepatic and renal function. Please contact your pharmacist, if necessary.

<table>
<thead>
<tr>
<th>Clinical condition/diagnosis</th>
<th>Microbiology Investigation</th>
<th>First-line treatment</th>
<th>Alternative(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary tract infection (UTI)</td>
<td>Always send MSU/CCU for C &amp; S</td>
<td>PO nitrofurantoin 50mg 6 hourly for 7 days (if eGFR ≥ 45mls/min) (Avoid in the third trimester and at term and in G-6PD deficiency) OR if eGFR &lt;45ml/min AND If sensitive to amoxicillin/cefradine: PO amoxicillin 1g 8 hourly for 7 days PO cefradine 500mg 6 hourly for 7 days</td>
<td>If sensitive to trimethoprim: PO trimethoprim 200mg 12 hourly for 7 days (Avoid in the first trimester Avoid in those on a folate antagonist And consider 5mg folinic acid daily in those at risk of folic acid deficiency)</td>
</tr>
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Community acquired pneumonia (CAP) ‘Low risk’ (CRB65= 0) | ● PO amoxicillin 1g 8 hourly for 5 days | Non-anaphylactic type Pen-allergy PO cefradine 500mg 6 hourly for 5 days Anaphylactic type Pen-allergy PO clindamycin 450 mg 6 hourly

Abnormal vaginal discharge: Common causes of abnormal vaginal discharge include: Bacterial vaginosis (BV), Vulvovaginal candidiasis (VVC), Trichomonas vaginalis (TV) and other sexually transmitted infection (STIs). Please refer to PHE Primary care guidance on management and laboratory diagnosis of Abnormal Vaginal Discharge

HVS culture is indicated in cases of:
- Recurrent symptoms/treatment failure
- Inconclusive assessment
- Pre-or post-termination of pregnancy
- Postnatal or post-miscarriage

<table>
<thead>
<tr>
<th>Clinical condition/diagnosis</th>
<th>Microbiology Investigation</th>
<th>First-line treatment</th>
<th>Alternative(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacterial vaginosis (BV)</td>
<td>Routine HVS culture is not recommended for laboratory diagnosis of BV</td>
<td>PO metronidazole 400mg 12 hourly for 5 days</td>
<td>Breast feeding: Intravaginal metronidazole gel (0.75%) once daily at night for 5 days OR Intravaginal clindamycin cream (2%) once daily at night for 5 days</td>
</tr>
<tr>
<td>Vulvovaginal candidiasis (VVC) (‘Thrush’)</td>
<td>● Culture not required unless recurrent</td>
<td>Intra-vaginal clotrimazole 500mg STAT + topical clotrimazole 1% cream 12 hourly for 10 days</td>
<td></td>
</tr>
<tr>
<td>Suspected (STIs): Gonorrhoea (NG)/Chlamydia (CT)/Trichomonas vaginalis (TV)</td>
<td>● Self-taken vaginal swab or low/high vaginal swab in Chlamydia transport medium for CT/NG/TV PCR</td>
<td>Please refer to GUM IM ceftriaxone 500mg STAT + PO azithromycin 1g STAT + PO metronidazole 400mg 12 hourly for 5 days</td>
<td></td>
</tr>
<tr>
<td>Mastitis (If breast abscess: Please refer patient to hospital for I&amp;D/aspiration of abscess)</td>
<td>● Pus/aspirate</td>
<td>PO fluclaxacillin 1g 6 hourly for 5 days</td>
<td>PO clindamycin 450mg 6 hourly for 5 days</td>
</tr>
</tbody>
</table>

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Table 3: Antimicrobial Prophylaxis Recommendations

**BMI-based patient stratification:** Lean (BMI <30), Obese (BMI 30-39.9), morbidly obese (BMI≥40). Use patient’s antenatal booking weight to calculate BMI. All dosage recommendations are for patients with normal renal and hepatic functions unless stated otherwise. Dosages should be adjusted to suit person’s age, weight, hepatic and renal function. Please contact your ward pharmacist, if necessary.

<table>
<thead>
<tr>
<th>Clinical Indication</th>
<th>Rationale</th>
<th>First Choice</th>
<th>Alternative: Penicillin allergy (Please refer to ‘management of penicillin allergy’ protocol)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amniocentesis</td>
<td>• Antibiotic prophylaxis is <strong>NOT</strong> recommended</td>
<td>IV co-amoxiclav 1.2g <strong>single dose</strong></td>
<td>IV metronidazole 500 mg single dose + PO doxycycline 200 g single dose</td>
</tr>
<tr>
<td>Evacuation of retained products of conception (ERPC) after medical termination of pregnancy or mid-trimester delivery</td>
<td>• To reduce risk of upper genital tract infection</td>
<td>IV co-amoxiclav 1.2g <strong>single dose</strong></td>
<td></td>
</tr>
</tbody>
</table>
| Pre-term premature rupture of membrane (P-PROM) or Preterm pre-labour rupture of membranes (P-PLROM) | • To prolong pregnancy  
• To reduce maternal and neonatal infection and,  
• Gestational age-related neonatal morbidity | PO amoxicillin 1 g 8 hourly for 7 days or until the women is in established labour (whichever is sooner)  
• In labour require antibiotics as for GBS (see below) | PO azithromycin 500mg 24 hourly for 7 days or until the women is in established labour (whichever is sooner) |
| Cervical cerclage                                         | • To reduce risk of endometritis                                         | IV co-amoxiclav 1.2g **single dose**        | IV clindamycin 1.2 g **single dose**                                                                                                                   |
| Premature/prelabour rupture of membranes (PROM/PLROM) at term | • To prevent Early-onset Neonatal Group B Streptococcal disease (EGGBSD) | • Routine antibiotic prophylaxis is **not** recommended for women with premature/prelabour rupture of amniotic membranes at term |                                                                                                                                                    |
|                                                          |                                                                          | • **Antibiotic prophylaxis** (as above for P-PROM or P-PLROM) **is indicated** if:  
• ‘GBS Positive’ i.e., GBS colonisation, bacteriuria or infection detected in the current pregnancy  
• Prolonged rupture of membranes ≥ 48 hours  
• Maternal pyrexia (Temperature >38°C) |                                                                                                                                                    |
| Preterm labour (with intact membranes)                   | • Routine antibiotic prophylaxis is **not** recommended for women with preterm labour with intact amniotic membranes |                                                                                             |                                                                                                                                                    |
|                                                          | • **Antibiotic prophylaxis** is recommended if ‘GBS Positive’ i.e., GBS colonisation, bacteriuria or infection detected in the current pregnancy (as above for P-PROM or P-PLROM) |                                                                                             |                                                                                                                                                    |
|                                                          | • **Antibiotic treatment is recommended** if evidence of infection e.g., maternal pyrexia (Temperature >38°C): As above for IAI or chorioamnionitis |                                                                                             |                                                                                                                                                    |
| Preterm labour with P-PROM                               | • Preterm labour with previous PROM needs antibiotics as for GBS          | IV benzylpenicillin 3 g stat dose then 1.5 g 4 hourly until delivered  
• For penicillin allergic patients give IV teicoplanin 10 mg/kg STAT dose and then 10 mg/kg every 12 hours until delivered. **If patient proceeds to have LSCS add** **gentamicin 5 mg/kg STAT** |                                                                                                                                                    |
| Examination under anaesthetic (EUA)                      | • To reduce risk of endometritis                                         | IV co-amoxiclav 1.2g **single dose**        | IV clindamycin 1.2 g single dose + IV gentamicin* 5 mg/kg STAT                                                                                         |
### IAP for GBS is indicated for women with:
- Previous baby with early- or late-onset invasive GBS infection.
- GBS colonisation detected incidentally or by intentional testing of vaginal or perineal swab (specimen), GBS bacteriuria or infection, **in the current pregnancy**:
  - Universal antenatal screening for GBS is not recommended
  - Women with GBS detected in a previous pregnancy should be offered the choice of IAP without testing or, a bacteriological screening for GBS at 35-37 weeks or 3-5 days before the anticipated delivery date, and IAP if GBS carriage is detected in the current pregnancy

### Additional IAP for GBS is not required for women:
- Undergoing Caesarean delivery (TREAT AS PER CAESAREAN SECTION GUIDANCE BELOW)
- Receiving treatment with broad spectrum antibiotics for pyrexia in labour or chorioamnionitis

### Antibiotic Treatment & Prophylaxis Guideline for Obstetrics (GL787)

<table>
<thead>
<tr>
<th>Location:</th>
<th>Policy hub/ Clinical/ Maternity/ Medical conditions &amp; complications (GL787)</th>
<th>Version:</th>
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<td></td>
<td>V4.0 ratified 4/5/18 Mat CG mtg</td>
<td>Page 13 of 24</td>
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</tbody>
</table>
***Known MRSA’ or ‘High risk for MRSA’***

<table>
<thead>
<tr>
<th>BMI &lt; 30</th>
<th>BMI ≥ 30</th>
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<tbody>
<tr>
<td>IV co-amoxiclav 1.2 g single dose</td>
<td>(IV co-amoxiclav 1.2g + IV amoxicillin 1g) single dose **</td>
</tr>
<tr>
<td>IV clindamycin 1.2 g single dose + IV gentamicin* 5 mg/kg STAT</td>
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</tr>
</tbody>
</table>

**Manual removal of placenta**

- To reduce risk of postpartum endometritis
- Routine antibiotic prophylaxis is recommended for women undergoing manual removal of the placenta
  - At Caesarean delivery: No additional antimicrobial prophylaxis is necessary
  - After vaginal delivery: As above for Caesarean section

- Antibiotic prophylaxis is NOT recommended

**All weights are based on patient’s booking weight.**

*If BMI ≥ 30: Corrected dosing weight = Ideal Body Weight + 40% of excess body weight (booking weight – ideal body weight)*

- [Click for link to adult IV gentamicin guide](#)
- [Click for link to adult IV teicoplanin guide](#)
- [Click for link to adult IV vancomycin guide](#)
Table 4: Specific condition/pathogen-directed treatment recommendations

BMI-based patient stratification: Lean (BMI <30), Obese (BMI 30-39.9), morbidly obese (BMI≥40). Use patient’s antenatal booking weight to calculate BMI.

All dosage recommendations are for patients with normal renal and hepatic functions unless stated otherwise. Dosages should be adjusted to suit person’s age, weight, hepatic and renal function. Please contact your ward pharmacist, if necessary.

<table>
<thead>
<tr>
<th>Clinical Indication</th>
<th>Clinical Assessment</th>
<th>Diagnostic Evaluation</th>
<th>Treatment Recommendations First Choice</th>
<th>Alternatives e.g. ‘True Penicillin allergy’</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Vaginal discharge in pregnancy/post-partum      | • Vaginitis associated with frothy, greenish-yellow discharge, vulval soreness/itching, dysuria  
• TV is almost exclusively an STI.  
• TV is associated with high prevalence of co-infection with other STIs. Please refer to GUM | HVS ± Endocervical swab & ‘High risk for STI’s or clinical suspicion of STI’s : CT/NG PCR  
• HVS ± Endocervical swab  
• CCU  
• Asymptomatic patient  
• CCU | GAS:  
• PO amoxicillin 1 g 8 hourly for 5 days  
OR  
• PO cefradine 500 mg 6 hourly for 5 days  
OR  
• IV benzylpenicillin 1.2 g 4 hourly + IV clindamycin 1.2 g 6 hourly | • PO clindamycin 450 mg 6 hourly for 5 days  
OR  
• IV clindamycin 1.2 g 6 hourly | • IAP (as above) is indicated if GBS is detected on a vaginal swab in the current pregnancy |
| Trichomonas vaginalis (TV)                       | • Vaginitis associated with frothy, greenish-yellow discharge, vulval soreness/itching, dysuria  
• TV is almost exclusively an STI.  
• TV is associated with high prevalence of co-infection with other STIs. Please refer to GUM | HVS/Cx/CCU for CT/NG/HSV & TV PCR       | PO metronidazole 400 mg 12 hourly for 5 days  
(Metronidazole is safe to use in pregnancy)  
**Breastfeeding**  
• Breastfeeding should be withheld during treatment and for 12-24 hours after the last dose to reduce infant exposure to metronidazole | • There is no suitable alternative to PO metronidazole to treat TV  
• Safety of tinidazole in pregnancy has not been evaluated | • Screening of sexual contacts for all STIs and treatment for TV irrespective of results is indicated  
• Routine screening or treatment of asymptomatic women for TV to reduce perinatal complications is not indicated  
• Asymptomatic women may be treated after 37 weeks to prevent perinatal transmission and reduce risk of HIV acquisition and transmission |
| Vaginal Candidiasis                             | Non-offensive white curdy discharge  
Vulval itch/soreness/Dysuria  
O/e: Vulval erythema, fissuring, oedema, excoriation | HVS, LVS | Clotrimazole 500 mg PV STAT + topical clotrimazole 1% cream 12 hourly for 10 days | Culture not required unless recurrent |
### Bacterial Vaginosis (BV)

- Thin, grey/white, homogenous discharge
- Fishy/offensive odour
- Not associated with soreness, itching or inflammation

**Microscopy:**
- Vaginal pH >4.5
- Wet mount microscopy for Clue cells performed in GUM clinic, or
- A smear of discharge sent to lab for gram-stain

**Microscopy indicated if:**
- Recurrent or,
- ‘High risk for STIs’

- PO metronidazole 400 mg 12 hourly for 5 days
- **Breast feeding**
  - Intravaginal metronidazole gel (0.75%) once daily at night for 5 days
  - **OR**
  - Intravaginal clindamycin cream (2%) once daily at night for 7 days

### Chlamydia trachomatis (CT)

**Gonorrhoea: Neisseria gonorrhoeae (NG)**

- Vaginal discharge
- Dysuria without significant bacteriuria or persistent dysuria despite successful treatment of bacteriuria

‘High risk for STI’
- CT/NG screening in the first trimester: ST-LVS, urine for CT/NG PCR
- ToC 3-4 weeks post-treatment
- Re-testing in 3 months

- IM ceftriaxone 500mg STAT + PO azithromycin 1 g single dose
- IM spectinomycin 2 g single dose + PO azithromycin 1 g single dose

### Influenza

Refer to management of influenza on Microguide Body system > Respiratory > **Influenza**

- Fever, cough, runny-nose, SOB, headache, myalgia
- Nasopharyngeal swab in VTM for Flu PCR

- PO oseltamivir 75mg twice daily for 5 days

Pregnant women with influenza virus infection are at greater risk of developing complicated influenza with a more severe course

PO oseltamivir and INH zanamivir are safe in pregnancy and with breast feeding

### Malaria

- Fever, headache, malaise
- GI disturbances: Nausea, abdominal pain, vomiting, diarrhoea

**PLUS**
- H/o travel to malaria-endemic area in previous 6 days-6 months, regardless of antimalarial prophylaxis

Thick and thin blood films

Rapid diagnostic test

3 negative diagnostic samples over 24 hours are required to exclude malaria

Blood film may be negative in complicated falciparum malaria due to high parasite load in placenta

Uncomplicated malaria in the first trimester:
- Quinine + Clindamycin

Uncomplicated malaria in the 2nd and 3rd trimester:
- Artemether-lumefantrine (Riamet®) PO

Severe malaria in any trimester:
- Artesunate IV

- Antibiotic treatment for BV is indicated for symptomatic women only
- Routine screening for, or treatment of, asymptomatic women for BV to reduce perinatal complications is not indicated

### Antibiotic Treatment & Prophylaxis Guideline for Obstetrics (GL787)

This document is valid only on date last printed.
Appendix 1: IV Gentamicin Prescribing and Monitoring Algorithm in Obstetrics Patients

Exclusions

The algorithm does not apply to:

1. Stat doses of gentamicin – no monitoring is required
2. Post-partum patients – please refer to the Adult IV Gentamicin guideline
3. Patients with the following contraindications
   - Myasthenia gravis
   - Acute Kidney Injury (AKI) stage 3
   - Chronic Kidney Disease (CKD) stage 5 not on dialysis.
   - Renal transplant
   - Child <16 years – refer to Paediatric Guidelines
   - Hypersensitivity to gentamicin/aminoglycosides
Appendix 2: IV Gentamicin Prescribing and Monitoring Algorithm in Obstetrics Patients

**RENAI IMPAIRMENT**

Assess patient for underlying renal impairment and risk of AKI. Review most recent GFR and clinical risk factors.

- **GFR ≤ 30mL/min OR High risk of AKI**
- **GFR > 30mL/min AND Low risk of AKI**

**CALCULATE ANTENATAL DOSE**

Low-dose extended interval (LDEI) IV gentamicin regimen:

<table>
<thead>
<tr>
<th>GFR (ml/min)</th>
<th>Regimen</th>
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<tbody>
<tr>
<td>20 – 30</td>
<td>2mg/kg 24hrly</td>
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<tr>
<td>15 – 20</td>
<td>2mg/kg 48hrly</td>
</tr>
<tr>
<td>Haemodialysis</td>
<td>2mg/kg 48hrly</td>
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<tr>
<td>&lt; 15</td>
<td>Seek alternative antibiotic</td>
</tr>
</tbody>
</table>

Prescribe dose: 5mg/kg (pregnancy booking weight)

Check level between 20-24 hours of starting treatment

Is the level <1mg/L?

- **NO**
  - Continue treatment

- **YES**
  - Continue treatment

**IS THE PATIENT POST-PARTUM?**

- **Yes** – refer to Adult Gentamicin Guideline

Continue treatment. Review by Senior Obstetric Staff daily with Microbiology advice. Monitor renal function/ototoxicity daily. If >7 days treatment required consider referral to audiology.

**MONITOR GENTAMICIN LEVELS MONITOR RENAL FUNCTION**

Advice:
- On Call Microbiologist: via Switchboard Antimicrobial Pharmacist bleep: 40318
- Clinical Pharmacist: bleep number on ward
### BMI Table for Height in Meter and Weight in Kilogram

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*This document is valid only on date last printed*
## BMI table for heights in inches and weight in pounds

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**Dosing weight table**

Plot booking weight and height in the table to determine the Dosing Weight (in kg). Then use this dosing weight to calculate gentamicin dose. If the value falls between two points on the table, take the mid-point (average) dosing weight. *Note: the table displays a corrected dosing weight when BMI ≥ 30kg/m².*

**Booking weight (stone & pounds)**

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**Booking weight (kg)**

<table>
<thead>
<tr>
<th>Patient height (feet &amp; inches)</th>
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<tr>
<td>5'8</td>
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This table is based on corrected dosing weight when BMI ≥ 30kg/m².
## Antibiotic cost for obstetric antibiotic guideline

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Cost per unit (£)</th>
<th>Average cost per day per patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amoxicillin IV 1g 8 hourly</td>
<td>0.40 / 500mg</td>
<td>£0.24</td>
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<tr>
<td>Amoxicillin PO 1g 8 hourly</td>
<td>0.02 / 500mg</td>
<td>£0.01</td>
</tr>
<tr>
<td>Azithromycin PO 1g STAT</td>
<td>0.53 / 250mg</td>
<td>£0.21</td>
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<tr>
<td>Benzylpenicillin IV 3g STAT</td>
<td>2.30 / 1.2g</td>
<td>£6.90</td>
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<tr>
<td>Benzylpenicillin IV 1.5g 4 hourly</td>
<td>2.30 / 1.2g</td>
<td>£27.60</td>
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<tr>
<td>Benzylpenicillin IV 1.2g 4 hourly</td>
<td>2.30 / 1.2g</td>
<td>£13.80</td>
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<tr>
<td>Cefadine PO 500mg 6 hourly</td>
<td>0.14 / 500mg</td>
<td>£0.05</td>
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<tr>
<td>Ceftriaxone IV 2g 24 hourly</td>
<td>1.20 / 2g</td>
<td>£1.20</td>
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<td>Ceftriaxone IM 500mg STAT</td>
<td>0.60 / 1g</td>
<td>£0.60</td>
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<tr>
<td>Clarithromycin IV 500mg 12 hourly</td>
<td>2.50 / 500mg</td>
<td>£5.00</td>
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<tr>
<td>Clarithromycin PO 500mg 12 hourly</td>
<td>0.14 / 500mg</td>
<td>£0.28</td>
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<td>Clindamycin IV 1.2g 6 hourly</td>
<td>0.93 / 600mg</td>
<td>£7.44</td>
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<td>Clindamycin PO 450mg 6 hourly</td>
<td>0.08 / 150mg</td>
<td>£0.96</td>
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<td>Clindamycin intravaginal cream (2%)</td>
<td>3.00 / 40g</td>
<td>£3.00</td>
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<td>Co-amoxiclav IV 1.2g 8 hourly</td>
<td>0.74 / 1.2g</td>
<td>£2.22</td>
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<tr>
<td>Co-amoxiclav PO 625mg 8 hourly</td>
<td>0.08 / 625mg</td>
<td>£0.24</td>
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<tr>
<td>Fosfomycin PO 3g STAT</td>
<td>18.40 / 3g</td>
<td>£18.40</td>
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<tr>
<td>Gentamicin IV 5mg/kg 24 hourly (based on average 70kg)</td>
<td>1.20 / 80mg</td>
<td>£6.00</td>
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<tr>
<td>Metronidazole IV 500mg 8 hourly</td>
<td>0.50 / 500mg</td>
<td>£1.50</td>
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<tr>
<td>Metronidazole PO 400mg 8 hourly</td>
<td>0.02 / 400mg</td>
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<tr>
<td>Metronidazole 500mg suppository STAT</td>
<td>1.75 / 500mg</td>
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<tr>
<td>Metronidazole intravaginal gel (0.75%)</td>
<td>4.60 / 40g</td>
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<tr>
<td>Nitrofurantoin PO 100mg 6 hourly</td>
<td>0.15 / 50mg</td>
<td>£1.20</td>
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<tr>
<td>Piperacillin/tazobactam IV 4.5g 8 hourly</td>
<td>2.08 / 4.5g</td>
<td>£6.24</td>
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<tr>
<td>Spectinomycin IM 2g STAT</td>
<td>36.00 / 2g</td>
<td>£36.00</td>
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<tr>
<td>Teicoplanin IV 10mg/kg (12 hourly for 3 doses then 24 hourly)</td>
<td>7.32 / 400mg</td>
<td>£8.78</td>
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<tr>
<td>Trimethoprim PO 100mg 12 hourly</td>
<td>0.01 / 100mg</td>
<td>£0.02</td>
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Protected antibiotics
Prophylactic antibiotic choice at Caesarean section

PROPHYLACTIC ANTIBIOTIC CHOICE AT CAESAREAN SECTION

LOW RISK FOR MRSA?

BMI < 30

YES

IV Co-Amoxiclav 1.2 g SINGLE DOSE*

NO

NO

IV Teicoplanin 10mg/ kg SINGLE DOSE
+ IV Gentamicin 5 mg/ kg SINGLE DOSE

YES

IS THIS AN EMERGENCY CAESAREAN SECTION?

YES

IS THERE PPROM/ PROM FOR >4 HOURS

OR

> / = 4 CM DILATATION

ALSO GIVE IV AZITHROMYCIN
500 mg IN 250 ml NORMAL SALINE OVER 1 HOUR

* If penicillin allergic IV Clindamycin 1.2 g SINGLE DOSE + IV Gentamicin 5 mg/ kg SINGLE DOSE
### References

1. NICE Guideline NG 51 (July 2016): Sepsis: recognition, diagnosis and early management
2. RCOG Green top guideline No.64a (2012): Bacterial Sepsis in Pregnancy
3. RCOG Green top guideline No.64b (2012): Bacterial Sepsis following Pregnancy
4. WHO (2016) recommendations for prevention and treatment of maternal peripartum infections
9. UK malaria treatment guidelines 2016
11. NICE Quality Standard-QS135 (October 2016): Preterm labour and birth
12. RCOG Green top guideline No.36 (2017): Group B Streptococcal Disease, Early-onset
17. BASHH UK National Guideline on the Management of Vulvovaginal Candidiasis 2007
18. BASHH UK National Guideline for the management of Bacterial Vaginosis 2012
19. BASHH UK National Guideline on the Management of Trichomonas vaginalis 2014
20. BASSH UK National Guideline for the management of Gonorrhoea in Adults 2011
21. BASHH UK national guideline for the management of infection with Chlamydia trachomatis 2015
22. CDC Sexually Transmitted Diseases Treatment Guidelines, 2015
23. Drugs in Pregnancy and Lactation (Briggs) – online (accessed on 06/03/18)
24. BNF online (accessed on 06/03/18)
25. John Hopkins Antibiotic Guide – online (accessed on 06/03/18)
26. Toxbase online (accessed on 06/03/18)
27. SPC online (accessed on 06/03/18)