**Clinical Guideline**

**Peripartum Prophylactic Antibiotics Clinical Guideline**

**Policy developed by:** SA Maternal & Neonatal Clinical Network

**Approved SA Health Safety & Quality Strategic Governance Committee on:**
07 September 2015

**Next review due:** 30 September 2018

**Summary**
Guideline for the management of the peripartum prophylactic antibiotics in pregnancy

**Keywords**
aerobic, anaerobic, cocci, bacilli, infection, timentin, ampicillin, gentamicin, metronidazole, lincomycin, gentamicin, prophylactic, cephazolin, augmentin, ciproflaxacin, clindamycin, mitral valve, valvular, peripartum prophylactic antibiotics, clinical guideline

**Policy history**
Is this a new policy? **N**
Does this policy amend or update an existing policy? **Y v6.0**
Does this policy replace an existing policy? **N**

**Applies to**
All SA Health Portfolio
All Department for Health and Ageing Divisions
All Health Networks
CALHN, SALHN, NALHN, CHSALHN, WCHN, SAAS

**Staff impact**
All Clinical, Medical, Nursing, Allied Health, Emergency, Dental, Mental Health, Pathology

**PDS reference**
CG127

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**Version control and change history**

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Note
This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.
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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

• The use of interpreter services where necessary,
• Advising consumers of their choice and ensuring informed consent is obtained,
• Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
• Documenting all care in accordance with mandatory and local requirements

Explanation of the aboriginal artwork:
The aboriginal artwork used symbolises the connection to country and the circle shape shows the strong relationships amongst families and the aboriginal culture. The horse shoe shape design shown in front of the generic statement symbolises a woman and those enclosing a smaller horse shoe shape depicts a pregnant women. The smaller horse shoe shape in this instance represents the unborn child. The artwork shown before the specific statements within the document symbolises a footprint and demonstrates the need to move forward together in union.

Australian Aboriginal Culture is the oldest living culture in the world yet Aboriginal people continue to experience the poorest health outcomes when compared to non-Aboriginal Australians. In South Australia, Aboriginal women are 2-5 times more likely to die in childbirth and their babies are 2-3 times more likely to be of low birth weight. The accumulative effects of stress, low socio economic status, exposure to violence, historical trauma, culturally unsafe and discriminatory health services and health systems are all major contributors to the disparities in Aboriginal maternal and birthing outcomes. Despite these unacceptable statistics the birth of an Aboriginal baby is a celebration of life and an important cultural event bringing family together in celebration, obligation and responsibility. The diversity between Aboriginal cultures, language and practices differ greatly and so it is imperative that perinatal services prepare to respectively manage Aboriginal protocol and provide a culturally positive health care experience for Aboriginal people to ensure the best maternal, neonatal and child health outcomes.
Introduction

> Infection during pregnancy and the postpartum period may be caused by a combination of organisms, including aerobic and anaerobic cocci and bacilli
> Procedures, such as caesarean section and manual removal of the placenta, increase the risk of infectious morbidity
> Prophylactic antibiotics and standard infection prevention practices can reduce the risk of postpartum infectious morbidity
> Women, who are suspected of or diagnosed as having an infection, should receive antibiotic treatment specific to their infection

Manual removal of placenta

> Manual removal of the placenta is associated with an increased rate of postpartum endometritis. Antibiotic prophylaxis is not of proven benefit but is currently recommended.
> Single dose prophylaxis is recommended
> If possible, prophylactic antibiotics should be given 30 minutes before starting the procedure

Recommended antibiotic treatment:

> Single IV dose of Cephazolin 1 g IV (2 g IV for women ≥ 80 kg)
> **Allergy to cephalosporins:**
> Single IV doses of clindamycin 600 mg, AND gentamicin 5 mg / kg (see gentamicin dosing information below)

Caesarean section

> Single dose prophylactic antibiotic cover should be administered to all women having a caesarean section
> The optimal timing for the administration of prophylactic antibiotics is before skin incision

Recommended antibiotic treatment

> Cephazolin 1 g IV (2 g IV for women ≥ 80 kg) before skin incision
> **Allergy to cephalosporins:**
> Single IV doses of clindamycin 450 mg, AND gentamicin 5 mg / kg (see gentamicin dosing information below)

3rd or 4th degree perineal tears

> There are no randomised controlled studies comparing antibiotics with placebo for prevention of infection in third or fourth degree perineal tears
> Infection carries a high risk of breakdown of the repair resulting in anal incontinence and fistula formation. Therefore, broad-spectrum antibiotics are recommended during and after the repair

Recommended antibiotic treatment

> Give single IV doses of both Cephazolin 2 g and Metronidazole 500 mg

Allergy to penicillin

Single IV doses of clindamycin 600 mg, AND gentamicin 5 mg / kg (see gentamicin dosing information below)
Postpartum cover

- Commence oral Augmentin Duo Forte® (amoxicillin 875 mg and clavulanic acid 125 mg) 12 hourly with meals for 5 days
- If allergic to penicillin, use both
  - oral ciprofloxacin 500 mg 12 hourly for 5 days
  - oral clindamycin 450 mg 8 hourly for 5 days

Breastfeeding: All these drugs are acceptable

Antibiotic prophylaxis for women with cardiac disease

- Antibiotic prophylaxis in labour is not recommended for:
  - Isolated secundum atrial septal defects
  - Mitral valve prolapse
  - Valvular heart disease
  - Hypertrophic cardiomyopathy
  - Cardiac pacemakers or implanted defibrillators
  - Previous coronary bypass grafts or coronary stents
  - Previous rheumatic fever without valvular dysfunction
  - Complete surgical or device closure of atrial septal defect, ventricular septal defect or patent ductus arteriosus more than 6 months after closure
  - Physiological, functional or innocent murmurs

- Antibiotic prophylaxis in labour is not recommended for uncomplicated vaginal births

- Intrapartum antibiotic prophylaxis is recommended for vaginal birth complicated by amnionitis (suspected or proven) or prelabour rupture of membranes, when one of the following cardiac conditions is present:
  - prosthetic cardiac valve or prosthetic material used for cardiac valve repair
  - previous infective endocarditis
  - congenital heart disease but only if it involves:
    - unrepaired cyanotic defects, including palliative shunts and conduits
    - completely repaired defects with prosthetic material or devices, whether placed by surgery or catheter intervention, during the first 6 months after the procedure (after which the prosthetic material is likely to have been endothelialised)
    - repaired defects with residual defects at or adjacent to the site of a prosthetic patch or device (which inhibit endothelialisation)
  - cardiac transplantation with the subsequent development of cardiac valvulopathy
  - rheumatic heart disease in Indigenous Australians only
Recommended antibiotic treatment

> Ampicillin [or amoxycillin] 2 g IV as a stat dose as close as practical to the time of birth. Repeat dose after 8 hours if birth has not occurred

Allergy to penicillin

> Vancomycin 25 mg / kg (up to 1.5 g) IV, administered slowly (over at least one hour) and repeated after 12 hours if birth has not occurred

Monitoring gentamicin levels

> In the absence of a history of renal disease, short term treatment (2-3 days) with Gentamicin does not require levels
> If levels are required, available evidence suggests the area under the curve (AUC) of plasma aminoglycoside concentration versus time may be a better predictor of toxicity and efficacy than the traditional peak and trough monitoring
> Two blood samples taken at one hour and six hours after the first dose are required to calculate the AUC from these 2 plasma concentrations and dosage modifications recommended as necessary
>  It is important to record the exact time the dose was given and the exact time of taking the blood samples on the request forms / collection tubes
>  Repeat levels are not usually required unless treatment is prolonged, in which case they should be done after 5-7 days. Potential efficacy or toxicity concerns may require earlier repeat levels

Gentamicin use and dosing

> Gentamicin has not been shown to be teratogenic and although theoretical concerns regarding the risk of fetal ototoxicity and nephrotoxicity have been raised there is insufficient evidence to support this association. Gentamicin is widely used in obstetric centres, however it should only be used in accordance with treatment guidelines and for the shortest duration possible
> Gentamicin is widely distributed into body fluid including ascitic, pericardial, pleural, synovial and abscess fluids and is almost entirely excreted by the kidneys.
> Gentamicin dosing frequency is generally once daily except for women with abnormal renal function, where the initial dose should be given once and advice obtained from Infectious Diseases regarding dosing frequency
> Pregnant women should be dosed according to actual body weight as there are a number of pharmacokinetic changes, such as increased volume of distribution and renal clearance that could result in sub-therapeutic dosing if Ideal Body Weight (IBW) is used. However, caution should be used in overweight/obese women (pre-pregnancy BMI > 25) where dosing should be based on IBW
> Female Ideal Body Weight = 45.5 kg + 0.9 kg (for each cm over 152 cm)
> Initial starting doses should be capped accordingly, unless otherwise advised by an Infectious Diseases specialist.
> Women aged 16-60 years:  5 mg / kg dose (maximum of 480 mg)
References


Abbreviations

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<th>Definition</th>
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<td>AUC</td>
<td>Area under the curve</td>
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<td>BMI</td>
<td>Body mass index</td>
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<tr>
<td>cm</td>
<td>Centimetre(s)</td>
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<td>CrCl</td>
<td>Creatinine clearance calculator</td>
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<td>et al</td>
<td>And others</td>
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<td>g</td>
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<td>IBW</td>
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<td>IV</td>
<td>Intravenous</td>
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<td>kg</td>
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<td>mg</td>
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<tr>
<td>RCOG</td>
<td>Royal College of Obstetrics and Gynaecology</td>
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<td>WHO</td>
<td>World Health Organisation</td>
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