Neonatal Medication Guideline

Clinical Guideline

Trimethoprim-sulfamethoxazole

Policy developed by: SA Maternal, Neonatal & Gynaecology Community of Practice
Approved SA Health Safety & Quality Strategic Governance Committee on: 9 November 2017
Next review due: 9 November 2020

Summary The purpose of this guideline is to guide nursing, medical and pharmacy staff in the dosing and administration of trimethoprim-sulfamethoxazole

Keywords Trimethoprim-sulfamethoxazole, neonatal medication guideline, trimethoprim, MRSA, PJP, PCP, antibiotic, sepsis, co-trimoxazole, trimethoprim compound, UTI, urinary tract infection, sulphonamide, G6PD, kernicterus

Policy history Is this a new policy? **N**
Does this policy amend or update an existing policy? **Y v1.0**
Does this policy replace an existing policy? **N**
If so, which policies?

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, Midwifery, Nursing, Students, Allied Health, Emergency, Mental Health, Pathology, Pharmacy

PDS reference CG273

Version control and change history

Version	Date from	Date to	Amendment
1.0	May 2013	November 2017	Original version
2.0	9 November 2017	Current	Complete review

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trimETHOPRIM-sulfamethoxazole

16mg-80mg/mL injection, 8mg-40mg oral mixture

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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

Synonyms

Co-trimoxazole, trimethoprim compound.

Dose and Indications

Dose according to trimethoprim content

Infection due to susceptible organisms

Intravenous, Oral

Postnatal Age (days)	Dose and Frequency (hours)
< 8 days	4mg/kg every 24 hours
≥ 8 days	4mg/kg every 12 hours

Prophylaxis for Pneumocystis jiroveci pneumonia (PJP) in immune deficiency

Dose according to trimethoprim content

Oral

20mg once a day on THREE days of the week (on Monday, Wednesday, Friday)

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Contact: South Australian Neonatal Medication Guidelines Workgroup at: Health.NeoMed@sa.gov.au

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16mg-80mg/mL injection, 8mg-40mg/mL oral mixture

Preparation and Administration

Intravenous

Dilute 1mL trimethoprim 16mg-sulfamethoxazole 80mg/mL injection with 24mL **Sodium Chloride 0.9%** (Total volume 25mL).

The resulting solution contains 0.64mg/mL trimethoprim

Doses refer to trimethoprim component

Dose	4mg	6mg	8mg	10mg	12mg	16mg
Volume	6.3mL	9.4mL	12.5mL	15.6mL	18.8mL	25mL

Start the infusion within 30 minutes of dilution. Infuse over 60 to 90 minutes.

Discard if visible turbidity or crystallisation appears in the intravenous solution during the preparation or infusion

Intravenous – fluid restricted

If neonate is fluid restricted dilute 1mL trimethoprim 16mg-sulfamethoxazole 80mg/mL injection with 9mL **Glucose 5%** (Total volume 10mL).

The resulting solution contains 1.6mg/mL trimethoprim

Doses refer to trimethoprim component

Dose	4mg	6mg	8mg	10mg	12mg	16mg
Volume	2.5mL	3.75mL	5mL	6.25mL	7.5mL	10mL

Infuse over 60 minutes.

This intravenous solution is only stable for one hour as precipitation may occur in 1-2 hours.

Discard if visible turbidity or crystallisation appears in the intravenous solution during the preparation or infusion

Oral

Oral mixture contains trimethoprim 8mg-sulfamethoxazole 40mg/mL. Doses refer to trimethoprim component

Dose	4mg	6mg	8mg	10mg	12mg	16mg
Volume	0.5mL	0.75mL	1mL	1.25mL	1.5mL	2mL

Give with feeds to minimise gastrointestinal irritation.

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Compatible Fluids

Glucose 5%, glucose 10%, sodium chloride 0.9%, glucose/sodium chloride solutions

Adverse Effects

Common

Fever, nausea, vomiting, diarrhoea, anorexia, rash, itch, hyperkalaemia, thrombocytopenia (rarely significant)

Infrequent

Photosensitivity, blood dyscrasias, eg neutropenia

Rare

Megaloblastic anaemia, methaemoglobinaemia, erythema, hypoglycaemia, hepatitis, crystalluria, urinary obstruction with anuria/oliguria, Clostridium difficile- associated disease, aseptic meningitis

Hypersensitivity may present with fever, cough, rash, eosinophilia; the most serious effects include anaphylaxis, Stevens-Johnson syndrome, toxic epidermal necrolysis, serum sickness-like syndrome, lupus-like syndrome, pneumonitis, hepatitis, interstitial nephritis, systemic vasculitis and pancytopenia.

Monitoring

- complete blood picture and folate status during prolonged or high-dose treatment
- renal function during prolonged treatment, particularly in pre-existing renal impairment
- serum potassium (hyperkalaemia can occur but risk increases with high dose and renal impairment. Average onset is 4-5 days)

Practice Points

- Trimethoprim prescribed on its own (e.g. For urinary tract infections) is usually preferred to combined therapy with sulfamethoxazole because of the side effects associated with the sulphonamide component
- Contraindicated in glucose-6-phosphate dehydrogenase deficiency and bone marrow suppression
- Use with CAUTION in premature and newborn infants with:
  - jaundice as there is a risk of kernicterus (sulphonamides displace bilirubin from plasma albumin)
  - hepatic or renal impairment. In these circumstances it is recommended that a reduced or less frequent dosage is used

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