MODEL STANDING DRUG ORDER

Secondary prophylaxis for the prevention of recurrent acute rheumatic fever - Benzathine benzylpenicillin G (Bicillin L-A®)

Introduction

A Model Standing Drug Order (SDO) for secondary prophylaxis for the prevention of recurrent acute rheumatic fever - Benzathine benzylpenicillin G b (Bicillin L-A®) has been developed by the South Australian Rheumatic Heart Disease Control Program as a sample for use by health services in the development of their own SDO to support nurse initiated benzathine benzylpenicillin G (Bicillin L-A®) administration.

Model Standing Drug Orders (SDOs) provide an organisation the mechanism to enable an authorised person to autonomously handle and administer specific Schedule 4 drugs, in this case benzathine benzylpenicillin G (Bicillin L-A®), without a prescribed medication order by a medical officer.

The information contained in the Model SDO is consistent with the recommendations contained in the *Australian guideline for the prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease* and the Australian Medicines Handbook.

Standing drug orders are intended for use by healthcare personnel working within their scope of practice as determined by their health practitioner registration and by the employing health service.

Registered Nurses/Midwives (RN/M) are unable to initiate and administer benzathine benzylpenicillin G (Bicillin L-A®) until the Model SDO has been authorised by the endorsement committee within the organisation.

This Model SDO should only be implemented if your health service has its own local procedure/guideline in place for managing anaphylaxis, including access to adrenaline.

Endorsement Committee

The Model SDO must be signed by the endorsement committee, including the name and title of each committee member.

The endorsement committee should consist of a medical officer, senior nurse and a manager (usually the CEO or Unit Manager). In some circumstances a pharmacist may also be included; however the pharmacist cannot replace the medical officer.

The endorsement committee is responsible for the:

- implementation of the SDO
- ongoing review and endorsement of the SDO as required
- development and monitoring of health service policies and procedures within the organisation.

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How to implement this model SDO in your organisation

To be valid the SDO must:

a) be printed on the individual organisation's letterhead or a covering letter on the organisation's letterhead must accompany the signed Model SDO;
b) have the relevant signatures completed for the SDO on the sign-off page; and
c) be read, understood and signed by each nurse administering benzathine benzylpenicillin G (Bicillin L-A®) within the organisation.

Please note: Any hand written amendments to the SDO after the signatures have been added will invalidate the SDO.

For further information that is not contained in the SDO, please call the Rheumatic Heart Disease Control Program on 08 7425 7146 or the medical officer who endorsed the SDO.

References

1. The 2020 guideline for prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (3rd edition). Available from www.rhdaustralia.org.au.
2. Australian Medicines Handbook Pty Ltd. Last modified January 2020
3. Australian Injectable Drugs Handbook (8th edition) 2020
4. Health Practitioner Regulation National Law (SA) Act 2010
5. Controlled Substances Act 1984 (and its Regulations)
6. Consent to Medical Treatment and Palliative Care Act 1995
7. Nursing and Midwifery Board of Australia (NMBA) Standards for Practice

Date Reviewed: October 2018.

Government of South Australia
SA Health

MODEL STANDING DRUG ORDER	
Title	**Secondary prophylaxis for the prevention of recurrent acute rheumatic fever** **Benzathine benzylpenicillin G (Bicillin L-A®)**
Location	www.sahealth.sa.gov.au/infectiousdiseasecontrol
Date Reviewed	07 July 2020
Next Due Date for Review	07 July 2022
Author	Specialist Services Section, Communicable Disease Control Branch
Person Responsible	Ann Koehler
Position	Manager/Medical Consultant
References	1. The 2020 guideline for prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (3rd edition). Available from www.rhdaustralia.org.au. 2. Australian Medicines Handbook Pty Ltd. Last modified January 2020 3. Australian Injectable Drugs Handbook (8th edition) 2020 4. Health Practitioner Regulation National Law (SA) Act 2010 5. Controlled Substances Act 1984 (and its Regulations) 6. Consent to Medical Treatment and Palliative Care Act 1995 7. Nursing and Midwifery Board of Australia (NMBA) Standards for Practice
APPLICATION OF MODEL STANDING DRUG ORDER	
1. Clinical practice areas where model SDO can be used	Any primary health care service conducted by a Local Government, Community Health Centre, Hospital, Aboriginal Health Service, Royal Flying Doctor Service or any other health service in SA.

ENDORSEMENT COMMITTEE – MEDICAL OFFICER, SENIOR NURSE AND MANAGEMENT

Name – Signature: _____ Title: _____ Date:_____

Name – Signature: _____ Title: _____ Date:_____

Name – Signature: _____ Title: _____ Date:_____

AUTHORISATION

This model Standing Drug Order authorises appropriately qualified staff that have read and understood the following information to administer benzathine benzylpenicillin G (Bicillin L-A®) for the prevention of acute rheumatic fever as below:

Benzathine benzylpenicillin G (Bicillin L-A®)
Single dose intramuscular injection:

- **1,200,000 units for persons who weigh ≥ 20 kg**
- **600,000 units for persons who weigh < 20 kg**

STAFF AUTHORISATION

2. Staff credentialing requirements

2.1 Registered Nurse or Midwife

2.1.1 Accountable and responsible for own actions within nursing practice in accordance with the Nursing and Midwifery Board of Australia (NMBA) Registered nurse standards for practice - effective 1 June 2016 and the Midwifery competency standards – effective January 2006

2.1.2 Practices in accordance with Division 8, Subdivision 1, section 94 (1) Health Practitioner Regulation National Law (SA) Act 2010

2.1.3 Current Certificate of Registration with the NMBA

2.1.4 Compliance with organisational standards, policies and procedures

2.1.5 Compliance with all relevant legislation and guidelines

2.1.6 Certificate in Cardio Pulmonary Resuscitation (CPR) within the last 12 months

2.2 Enrolled Nurse

Can administer intramuscular antibiotics if can demonstrate all of the following:

2.2.1 Have received delegation from a Registered Nurse/Midwife

2.2.2 Competence to practice and is responsible for own actions in accordance with the NMBA Enrolled nurse standards for practice - effective 1 January 2016

2.2.3 Compliance with organisational standards, policies and procedures

2.2.4 Compliance with all relevant legislation and guidelines

2.2.5 Practices in accordance with Division 8, Subdivision 1, section 94 (1) Health Practitioner Regulation National Law (SA) Act 2010

2.2.6 Assessment of the client by a Registered Nurse/Midwife or Medical Practitioner prior to administration

2.2.7 Direct or indirect supervision by a Registered Nurse or Midwife

	2.2.8 Current Certificate of Enrolment with the NMBA 2.2.9 Certificate in CPR within the last 12 months

Benzathine benzylpenicillin G ~ MODEL STANDING DRUG ORDER	
3. Background	**3.1** Acute rheumatic fever (ARF) is an illness caused by a reaction to a bacterial infection with group A streptococcus (GAS). ARF damages the valves of the heart. People who have had ARF once are more likely to get it again. The more often they have ARF the greater the chance of damage to their heart. Damage to heart valves caused by ARF is called rheumatic heart disease (RHD). All people with a diagnosis of ARF or RHD should be assessed by a medical practitioner and commenced on a management plan. For most people this includes a regular intramuscular injection of benzathine benzylpenicillin G (Bicillin L-A®) every 4 weeks for at least five years. The use of regular penicillin helps to prevent GAS infection that can lead to recurrent ARF and further damage to the heart; this is known as secondary prophylaxis. Missing doses increases the risk of another GAS infection and more heart damage. **3.2** This model Standing Drug Order (SDO) is **only to be used** for patients who have had a diagnosis of acute rheumatic fever or have rheumatic heart disease, who have been commenced by a medical practitioner on a management plan including secondary prophylaxis with regular intramuscular benzathine benzylpenicillin G. This information **must be confirmed from two** of the following three options: • The patient confirms they are having regular Bicillin L-A® injections. • It is confirmed through contact with a registered nurse from the patient's usual health service where the patient has a current management plan that includes regular Bicillin L-A® injections. • It is confirmed through information contained on the RHD Register (RHD Register contact number 08 7425 7146) that the patient has a current management plan that includes regular Bicillin L-A® injections. **3.3** This model SDO will not meet the need of all patients and **must always be used** in conjunction with the 2020 Australian guideline for the prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease[1]. **3.4** Clinical assessment and advice from a Medical Practitioner should be sought if the recommendations for a specific clinical situation cannot be determined using the model SDO together with the 2020 Australian guideline for the prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (3rd edition).
4. Purpose and scope of model SDO	**4.1** To ensure the correct and controlled administration of **Bicillin L-A®** for a patient who has had a diagnosis of ARF or has RHD and who is on secondary prophylaxis, by a person authorised according to the criteria in the model SDO.
5. Precautions	**5.1** Do NOT inject into an artery or vein. **5.2** Do NOT inject into or near a nerve. **5.3** Administer with caution to individuals with a history of significant allergies and/or asthma. **5.4** Administration of Bicillin L-A® is considered safe during pregnancy and lactation.

	Penicillin prophylaxis should continue for the duration of the pregnancy for prevention of recurrent ARF. **5.5** This model SDO is not applicable if the patient has had a previous injection with Bicillin L-A® within the last 14 days. **5.6** Adrenaline must always be readily available for treatment of an anaphylactic reaction. **5.7** **Do NOT** use short acting penicillin such as benzyl penicillin or procaine penicillin (Cilicaine®) injections for ARF patients. It does not provide long term protection.
6. Indications for use and dosage	Bicillin L-A® is indicated as prophylaxis for acute rheumatic fever. Prophylaxis with benzathine benzylpenicillin G (**Bicillin L-A®**) has proven effective in preventing recurrence of these conditions. It has also been used as follow up prophylactic therapy for rheumatic heart disease. **6.1 Bicillin L-A® is recommended for:** - Persons with a history of ARF and/or RHD (refer to the 2020 Australian guideline for acute rheumatic fever and rheumatic heart disease for detailed information). Refer to Section 8 for contraindications. **6.2 Recommended schedule for intramuscular (IM) injection:** - 1,200,000 units / 2.3 mL for persons ≥20 kg - 600,000 units / 1.2 mL for persons <20 kg (refer to section 10 for part doses) - One dose administered every three to four weeks. A dose every four weeks is recommended for most patients. Three weekly doses may be considered for: o patients with moderate or severe carditis or a history of valve surgery who demonstrate good adherence to less frequent injections, and o patients who have confirmed breakthrough ARF, despite full adherence to 4-weekly Bicillin L-A®. **6.3 Recommended duration of secondary prophylaxis:** - Minimum five years after most recent episode of ARF or until aged 21 years (whichever is longer), and depending on symptoms at ARF diagnosis. Refer to the 2020 Australian guideline for acute rheumatic fever and rheumatic heart disease for detailed information. - For patients with moderate or severe disease, secondary prophylaxis may continue until aged 35 years or more.
7. Limitations	**7.1** This model SDO must only be applied to persons where it can be confirmed that they have been commenced on secondary prophylaxis with Bicillin L-A® by a medical practitioner (refer to section 3.2). **7.2** This model SDO does not replace a RHD management plan by a medical practitioner.
8. Contra-indications	**8.1** Previous hypersensitivity reaction to any of the penicillins. **8.2** Previous severe hypersensitivity to carbapenems and cephalosporin antibiotics.
9. Presentation	**9.1** Bicillin L-A® is presented as an injection, 1,200,000 units / 2.3 mL (viscous, opaque aqueous solution), prefilled syringe.
10. Procedure	**10.1 Pre-administration**

	10.1.1 Confirm that the patient is required to have Bicillin L-A® as part of secondary prophylaxis for ARF and has received a previous dose of Bicillin L-A®. **This is to be done as per section 3.2.** 10.1.2 Obtain consent from the patient (using the standard form operating in your health service) 10.1.3 Ask the patient about any allergic reactions or hypersensitivity to penicillins, cephalosporins and carbapenem antibiotics. Ask the patient if there were any problems after previous Bicillin L-A® injections. If there are any concerns about a possible allergic reaction refer to a medical practitioner. **10.2 Preparation of Bicillin L-A®** 10.2.1 Check the batch number and expiry date. 10.2.2 Check that the syringe does not show any evidence of tampering. 10.2.2 Inspect for particles or discoloration; if present do not use. 10.2.3 Patients who weigh < 20 kg require a dose of 600,000 units. As the concentration of the Bicillin L-A® can vary from batch to batch, the recommended approach (per the Women's and Children's Hospital pharmacy department) is to administer a dose of 1.1 mL to patients requiring a 600,000 unit dose. This is achieved by transferring the entire contents of the pre-filled 2.3 mL Bicillin L-A® syringe into a separate sterile 3 ml syringe and then discarding 1.2 ml. Administer the remaining contents (1.1 mL) as prescribed to the patient. **10.3 Method of Administration** 10.3.1 Refer to Appendix A for information on options for pain minimisation for the delivery of Bicillin L-A®, as per the 2020 Australian guideline. 10.3.2 Warm syringe to body temperature immediately before using. 10.3.3 Clean the proposed injection site with an alcohol swab and allow to dry 10.3.4 Apply pressure at injection site with thumb for 10 seconds before inserting needle. 10.3.5 Administer by deep intramuscular injection. Deliver injection very slowly; preferably over 2-3 minutes. Because of the high concentration of suspended material in Bicillin L-A®, the needle may be blocked if the injection is not made at a slow steady rate. 10.3.6 Ensure appropriate disposal of the sharp.
11. Site considerations	**11.1** Administer by deep, intramuscular injection. It is recommended to use the ventrogluteal site. In small children, the anterolateral thigh may be preferable. As doses are repeated, use the opposite side used for the previous injection.
12. Documentation	**12.1 Record in your patient information management system:** 12.1.1 Document how it was confirmed that the patient is on secondary prophylaxis; 12.1.2 Valid consent obtained to administer injection; 12.1.3 Bicillin L-A®, batch number, expiry date, route and site of administration; 12.1.4 Dose given (1,200,000 units or 600,000 units);

	12.1.5 Date of administration; 12.1.6 Name and organisation of the person administering; and 12.1.7 Date the next injection is due (usually 28 days, or as per the patient's current management plan). Also give this date to the patient. **12.2 Notify the patient's usual health service as soon as practicable** **12.3 Report the injection to the RHD Register, where the information will be held securely.** This can be done by ensuring the dose is recorded on the RHD Master Chart, phoning 08 7425 7146, faxing 08 8226 6648 or emailing **rhd@sa.gov.au** If the patient is not on the RHD Register and their usual residence is in South Australia, please ask them for consent using the forms attached.
13. Monitoring requirements	**13.1 Observation post-injection** 14.1.1 Potential injection site reactions 14.1.2 Potential anaphylaxis. After giving the injection the patient must remain at the health service and be observed for at least 30 minutes. 14.1.13 Adrenaline must always be readily available for treatment of an anaphylactic reaction. **14.2 Post-injection advice** 14.2.1 Give verbal and written information about common adverse events. Resources available include MIMS full prescribing information and MIMS consumer medicine information. 14.2.2 Ensure patient knows when their next injection is due.
14. Adverse events	**Adverse events can include:** **14.1 Accidental intravascular administration** Injection into an artery or vein may result in cardiorespiratory arrest and death. Accidental intravascular administration may also result in severe neurovascular damage with resultant damage to the limb. Central nervous system (CNS) effects including anxiety, agitation, fear of death and hallucinations may occur (these usually resolve in 15–30 minutes, but rarely last for up to 24 hours). **14.2 Hypersensitivity reactions** Hypersensitivity reactions include: skin eruptions (maculopapular to exfoliative dermatitis), urticaria, laryngeal oedema, fever, eosinophilia, other serum sickness-like reactions (including chills, fever, oedema, arthralgia and prostration) and anaphylactic/ anaphylactoid reaction (including shock and death). Fever and eosinophilia may frequently be the only reaction observed. See MIMS Full Product Information for Bicillin L-A® for the full list of potential adverse effects. https://www.mimsonline.com.au
15. Management of Adverse Drug Events (AE)	**15.1** Monitor patient post injection for any adverse events. Manage an adverse event (such as anaphylaxis) or vasovagal episode (faint) as per your health service's current

	guidelines and contact a medical officer if required. **15.2** Prompt consultation with an appropriate specialist is indicated if any evidence of compromise of the blood supply occurs at, proximal to, or distal to the site of injection. **15.3** **You should report any suspected adverse drug event to the Therapeutic Goods Administration (TGA), even if you think the TGA might already know about such reactions.** Report online at the TGA website www.tga.gov.au by following the link to 'Report a problem'.
16. Storage	**16.1** Store between +2°C and +8°C. Do not freeze.

STAFF PROVIDING THE SERVICE

I have read and understand the recommendations of the Standing Drug Order. I accept that I will administer this injection under the described procedure in this Standing Drug Order.

Signature: _____ Printed name:_____ Date: _____

Signature: _____ Printed name:_____ Date: _____

Signature: _____ Printed name:_____ Date: _____

Signature: _____ Printed name:_____ Date: _____

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APPENDIX A

Reference: 2020 guideline for prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (3rd edition). More detail on the strategies below is provided in the guideline, available from www.rhdaustralia.org.au

Non-pharmacological pain minimisation strategies

- a patient-focussed, culturally safe environment;
- respect for the patient's preference for pharmacological pain management strategies and site for injection (within the guidelines for appropriate delivery site);
- relationship-based and relationship strengthening activities such as use of incentives and rewards;
- family or support person involvement during injection procedures;
- minimal waiting time for injection;
- best practice injection technique;
- allowing skin swabbed with alcohol to dry before injecting;
- distraction during injection with electronic games, videos etc;
- injecting slowly;
- firm pressure to the site for at least 10 seconds immediately before injecting;
- ice pack applied to the site before injecting;
- use of ice and vibration (e.g. Buzzy®, a vibrating ice pack) directly adjacent to the injection site during injection;
- use of other medical devices to provide distracting stimuli to the skin (e.g. Shot Blocker, a piece of plastic shaped to fit around an injection site and press the skin with multiple, small, blunt bumps to 'saturate sensory nerves');
- refrigerating the needle prior to injection delivery.

Pharmacological pain minimisation strategies: analgesia and sedation

- oral paracetamol before injection and at appropriate time intervals afterwards as required;
- anaesthetic spray before injection;
- lidocaine (lignocaine) injected with BPG, refer to page 177 and 178 of the guidelines for how to prepare the dose and considerations when administering lignocaine;
- nitrous oxide (Entonox) during the injection procedure;
- oral clonidine prior to injection (for children and adolescents who are highly distressed with the injections despite use of other strategies).