AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

FACT SHEET
for health service organisations
and clinicians

Strategies to support the safe use of CLONazepam oral liquid

What you need to know?

- CLONazepam oral liquid is to be prescribed and administered in drops as per the approved product information. Errors occur when the dose is described in millilitres
- Serious incidents continue to be reported across Australia due to inconsistent prescribing, dispensing and administration practices when using CLONazepam oral liquid
- Standardised prescribing, dispensing and administration practices are essential to support the safe use of CLONazepam oral liquid.

Purpose

This fact sheet provides practical strategies for the safe use of CLONazepam oral liquid in clinical practice and includes standardised recommendations for the safe prescribing, dispensing and administration of CLONazepam oral liquid for clinicians and health service organisations.

Background

CLONazepam oral liquid is a benzodiazepine used for the management of most types of epilepsy in infants and children, and for all varieties of generalised epilepsy and partial epilepsy in adults. CLONazepam is high-risk medicine. There is an increased risk of causing significant patient harm if it is misused or used in error.

In Australia, Rivotril® (CLONazepam oral drops 2.5 mg/mL) is supplied in a 10 mL amber glass bottle that includes a ‘controlled-release’ dropper device within the neck of the bottle to allow for dosing in drops (1 drop contains 0.1 mg CLONazepam). The product information states to measure the prescribed dose in drops only.

There is considerable variation in how CLONazepam oral liquid is prescribed, administered and documented in Australia, whether by milligrams, millilitres or number of drops, leading to confusion and dosing errors. Health service organisations have reported errors resulting in patient harm and near misses relating to CLONazepam oral liquid use.

This fact sheet is for use alongside local policies, procedures and guidelines. In hospitals, prescribers, pharmacists and nurses should liaise with their local Drug and Therapeutics Committee (DTC) or equivalent for additional advice and guidance. For residential aged care facilities, it may be appropriate for prescribers and staff who administer medicines to liaise with their Medicines Advisory Committee (MAC).

Safer prescribing, dispensing and administration checklist

When prescribing and before dispensing and administering CLONazepam oral liquid, always confirm the following are documented on all prescriptions and medication orders (in accordance with state or territory legislative requirements):

- Active ingredient name
- Strength or concentration of product (2.5 mg/mL, with dose equivalence of 1 drop = 0.1 mg)
- Formulation
- Dose in drops with the corresponding milligrams in the medication order
- Route
- Dosing frequency
- Quantity for supply.

CLONazepam is included in Appendix D of the Poisons Standard. Appendix D places additional controls on the possession or supply of selected Schedule 4 poisons.

Prescribing

- Prescribe doses of CLONazepam oral liquid in number of drops in line with the product information and in accordance with state or territory legislative requirements.
- Include the dose in milligrams in the medication order. For example, “Give 5 drops (0.5 mg) once in the evening”.
- Include the strength (2.5 mg/mL) of the medicine on the prescription or medication chart and document the dose equivalence as 1 drop = 0.1 mg.
- CLONazepam tablets can be crushed and dispersed in water and can be prescribed as an alternative if appropriate. Refer to Don't Rush to Crush - Advanced Pharmacy Australia for further information.
- Use standardised terminology, abbreviations and symbols when prescribing in line with Recommendations for safe use of medicines terminology.

Dispensing

- Dispense CLONazepam oral liquid with the original packaging and product-specific dropper.
- Label the dispensed product with explicit dosing instructions matching the prescribed dose in drops and milligrams. Refer to the National Standard for Labelling Dispensed Medicines for further guidance on labelling of dispensed medicines.
- Confirm dosing instructions with the prescriber, if necessary, prior to dispensing, labelling and supplying.
- Provide clear instructions to count the prescribed number of drops onto a spoon or a plastic medicine cup before administration. Refer to Consumer Medicine Information for further information.
- When storing and dispensing CLONazepam, apply the Principles for safe selection and storage of medicines as this medicine is associated with ‘look-alike, sound-alike’ (LASA) selection errors.

Administration

- Check the prescribed dose is correct in drops and milligrams.
- If the dose is unclear, always check with the prescriber or pharmacist before administering.

- Keep CLONazepam oral liquid in its original manufacturer's container and measure only using the dropper supplied.
- Before measuring every dose, ensure the product-specific dropper is secured within the neck of the bottle.
- Keep the dropper at a consistent vertical angle to ensure accuracy when measuring drops.
- Measure the prescribed dose in drops onto a plastic or metal spoon or plastic medicine cup using the dropper supplied with the product. If required, the measured dose may be mixed with a small amount of water, tea or fruit juice – refer to Don't Rush to Crush - Advanced Pharmacy Australia for further information, including recommendations for administration via enteral feeding tubes.
- Do not use paper cups or wooden spoons for administration, as they may absorb the dose or leave residue.
- Do not administer the dose directly from the dropper into the mouth as measuring onto a spoon or a plastic medicine cup allows for dose verification and reduces risk of accidental overdose. Direct administration into the mouth may also increase the risk of contamination of the remaining medicine.
- Do not decant or repackage into other containers.
- Do not measure the dose via alternative devices, such as syringes or other droppers.
- Record the dose administered in the drug register as the number of drops to ensure accuracy. Note each bottle of CLONazepam oral drops contains 10 mL of liquid, equivalent to 250 drops (25 mg).

Health service organisations

- Educate and alert medical, pharmacy and nursing staff on safety concerns with CLONazepam oral liquid and the prescribing, dispensing and administration requirements.
- Electronic medication management systems should support safe prescribing by including an order set that enables prescribing the dose in drops, with the corresponding milligrams also displayed in the medication order. The order set must also display the strength as 1 drop = 0.1 mg in each order. Where possible, the auto-calculation of volume in millilitres, and the display of this information on the administration screen, should be disabled to minimise confusion and risk of error.
- Apply a formulary restriction on the use of CLONazepam oral liquid, if appropriate.
- Consider the use of CLONazepam tablets as an alternative, if appropriate.
- Consider posting safety alerts, such as this fact sheet, in medicine preparation areas.
- Ensure incidents related to the use of CLONazepam oral drops are reported to the local incident reporting system and the Therapeutic Goods Administration.

Resources to support safer dosing

- Australian Medicines Handbook
- Australian Pharmaceutical Formulary
- RIVOTRIL clonazepam 2.5 mg/mL oral liquid bottle – Product Information
- RIVOTRIL clonazepam 2.5 mg/mL oral liquid bottle – Consumer Medicine Information
- Don't Rush to Crush - Advanced Pharmacy Australia
- Pharmacy Board Guidelines for dispensing of medicines
- National Standard for Labelling Dispensed Medicines
- Recommendations for safe use of medicines terminology.

State and territory guidance

SA Health. Clonazepam Oral Liquid – Dose Errors. Medication Safety Alert 01/2018. Government of South Australia; 2018

Clonazepam oral liquid. Victorian Therapeutics Advisory Group. Quality Use of Medicines; 2023

Find out more

For more information, contact the Commission at medsafety@safetyandquality.gov.au or call 1800 304 056.

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