AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Position statement on paediatric prescribing

The Australian Commission on Safety and Quality in Health Care (the Commission) recommends that authorised prescribers clearly specify the following information on **all** prescriptions for children:

- **Age and/or date of birth**
- **Current body weight**
- **Basis for the dose calculation** such as, mg/kg, if appropriate
- **Dose** in units of mass – for example, 150 mg per dose, given four times a day.

Clinicians should review this information when prescribing, dispensing and administering medicines to children, and also:

- **Check** the appropriateness of the prescribed dose
- **Verify** all dose calculations (using a calculator) and the specified dose
- **Discuss and clarify** with parents and carers the reason for the medicine's use, the correct dose and instructions for administration, and demonstrate how to measure and administer the dose, if required.

Notes

These recommendations are **not exhaustive**. Use appropriate paediatric reference texts and guidelines for more detailed information on optimising paediatric prescribing, especially when dealing with special patient cohorts such as those with renal or hepatic impairment.

Dosing in **obese or overweight children** – Dose calculations using 'total body weight' may result in overdosing for some medicines. Refer to paediatric reference texts and guidelines for advice on individual medicines.

For **older paediatric patients**, or those over 40 to 50 kg, ensure that the upper dose limits for adults are not exceeded.

It may not be applicable to specify the dose in units of mass in certain circumstances such as when prescribing eye drops, ear drops, topical products, inhalers, or insulin.

Ensure that all prescribers are equipped with knowledge and skills in the **core principles** of safe prescribing and medicines use in the paediatric population.

Rationale

Medication errors are one of the most common and preventable adverse events in healthcare settings.[1] Children are more prone to medication errors and are more vulnerable to harm from the effect of medication errors than adults.[1,2,3] A worldwide systematic review has estimated 100 to 400 prescribing errors occur per 1,000 paediatric patients.[4] Dose calculation errors are one of the most common types of medication error in children.[2,5,6]

It is important to document the child's weight and the basis for dose calculation in safe prescribing. These are included as required fields on the national inpatient medication chart (NIMC), and in electronic prescribing systems. There is currently no field to document weight on outpatient and community prescriptions, whether these are private or Pharmaceutical Benefits Scheme (PBS) prescriptions.

Most dosing recommendations in paediatric reference materials are standardised by weight (mg/kg).[5,7] The Institute for Safe Medication Practices, the American Academy of Pediatrics and other authoritative paediatric reference materials recommend recording weight on prescriptions for children.[5,7,8,9]

Patient age and accurate weight are essential to calculate the dose at the time of prescribing and to verify the dose during dispensing and/or administration. Documenting patient weight and age, and adopting good prescribing, dispensing and administration practices can prevent patient harm associated with dosing errors.

Consultation

This position statement is endorsed by the following organisations:

- Australian College of Nurse Practitioners
- Australian Nursing and Midwifery Federation
- NPS MedicineWise
- Pharmaceutical Society of Australia
- The Royal Australian College of Physicians
- The Society of Hospital Pharmacists of Australia
- Women's and Children's Healthcare Australasia

The Royal Australian College of General Practitioners and The Pharmacy Guild of Australia were represented on the working group and consulted in the statement development.

Reference texts and resources

- *Australian Medicines Handbook Children's Dosing Companion*
- *Australian Pharmaceutical Formulary and Handbook (APF24)*
- *Therapeutic Guidelines*
- Society of Hospital Pharmacists of Australia *Don't Rush to Crush*, 2nd edition
- *British National Formulary for Children*
- Australian Commission on Safety and Quality in Health Care. Recommendations for terminology, abbreviations and symbols used in medicines documentation
- Agency for Healthcare Research and Quality (US). Health literacy universal precautions toolkit, 2nd edition: use the teach-back method

References

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9. American Academy of Pediatrics. Prevention of medication errors in the pediatric inpatient setting. Pediatrics 2003;112(2):431–6.