HEALTH INNOVATION SERIES

Evidence based recommendations to improve care delivery and outcomes



Double dose trouble: systemic intranasal medication-Can you spot the problem?

The drop-down menu for midazolam (see Screenshot 1) contains numerous options including the route 'Intranasal-Both'. However using the route 'Intranasal-Both' potentially doubles the dose.

An intended dose of 0.5mg/kg given in one nostril (once), can easily become a dose given in both nostrils to total 1mg/kg.

Local protocols may vary however reviewing the use of 'Intranasal-Both' for specific medication is recommended.

Alternatively, to prevent potential confusion, consider using a route specifying a single nostril when appropriate (see Screenshot 2).

Screenshot 2. Desmopressin order sentences including intranasal route

desmopressin 10 microg/inh nasal spray desmopressin 10 microg/inh nasal spray 1 microg, Intranasal-Left, daily desmopressin 10 microg/inh nasal spray 2 microg, Intranasal-Left, daily

Screenshot 1. Midazolam order sentences

midazolam 0.3 mg/kg, Buccal, ONCE, Seizures/status epilepticus midazolam 0.2 mg/kg, Intramuscular, ONCE, PRN sedation

midazolam 0.1 mg/kg, IV Bolus, ONCE, Sedation/seizures midazolam 0.15 mg/kg, IV Bolus, ONCE, Status epilepticus

midazolam 0.5 mg/kg Intranasal-Both ONCE, Seizures/status epilepticus



SYSTEM OPTIMISATION TIP#1

Remove the route 'Intranasal-Both' for systemic medication administered via intranasal route (e.g. midazolam nasal inhalation, fentanyl nasal spray) from drop-down menus and order sentences.



SYSTEM OPTIMISATION TIP#2

To prevent potential confusion, use a route specifying a single nostril when appropriate (see Screenshot 2).



Do not use 'Intranasal-Both' for systemic intranasal medication.







2 HEALTH INNOVATION SERIES DOUBLE DOSE TROUBLE: SYSTEMIC INTRANASAL MEDICATION-CAN YOU SPOT THE PROBLEM? **REFERENCES** 1. AMH Children's dosing companion online [Internet]. Adelaide (AU): Australian Medicines Handbook Pty Ltd; 2022 [cited 2022 Mar 10]. Available from: https://amhonline-amh-net-au/

Suggested citation: Merchant A, Fitzpatrick E, Westbrook JI, Raban MZ. Double dose trouble: systemic intranasal medication. Can you spot the problem? Health Innovation Series e-Medication Safety Issue 3 2022. Sydney: Macquarie University; 2022. https://doi.org/10.25949/PRND-F975

Disclaimer: These recommendations are based on issues identified during various programs of research undertaken by Macquarie University. They are not intended to be an exhaustive list and should be considered by individual care settings for appropriateness prior to implementation. A more detailed review of the issue and impact may also be warranted. The content of this document is intended for information purposes only.





