

High-Risk Medicine Standard: Vinca alkaloids

PRINTABLE STANDARD

Last updated: 26 February 2024. **Printed copies are uncontrolled and should not be relied upon as up to date.**

Vinca alkaloids are a class of cytotoxic anticancer medicines with known neurotoxic effects. The medicines in this class include vinblastine, vincristine and vinorelbine.

Accidental administration of vinca alkaloids via the intrathecal route almost always results in central nervous system dysfunction and death.

This standard outlines the minimum actions required to mitigate risks associated with vinca alkaloids use. This standard does not contain clinical guidance on vinca alkaloid use. This standard is to be read in conjunction with Clinical Excellence Commission [High-Risk Medicine Standard: Anticancer medicines](#).

Minimum requirements for clinical protocols

The Drug and Therapeutics Committee must approve any clinical protocols relating to vinca alkaloids and ensure inclusion of the following, at a minimum:

- a statement that only staff specifically trained and who have been assessed as competent may prescribe, prepare, dispense or administer vinca alkaloids to patients
- a statement that all staff responsible for prescribing, dispensing, and administering vinca alkaloids are to be aware of the catastrophic outcomes associated with incorrect administration via the intrathecal route.

Governance requirements

Adherence to the requirements specified in this standard is to be monitored by governance committees (for example, Drug and Therapeutics Committee) and service managers (including, but not limited to, Directors of Pharmacy and Nurse Unit Managers). An implementation checklist is available and can be used by facilities and individual units to determine compliance with these requirements.

Storage and supply

- Doses of vinca alkaloids are to be prepared in and administered from a mini-bag, not a syringe.
- All vinca alkaloids preparations, including outer wraps, are to be labelled with a prominent warning label such as, **“FOR INTRAVENOUS USE ONLY – CAN BE FATAL IF GIVEN BY OTHER ROUTES”**. The outer wrap must also state, “Do not remove covering until moment of infusion”.

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Administration

- Vinca alkaloids must only ever be administered intravenously.
- The relevant chemotherapy protocol is to be available to the administering clinician at the time of administration.
- An independent second person check is to be employed when administering vinca alkaloids. The second person check processes are outlined in the NSW Health Policy Directive *Medication Handling* ([PD2022_032](#)) including circumstances where a second person check is not mandated (for example, when a medicine is administered by an authorised prescriber).
- A drug administration [time out](#) checklist is to be completed at the point of care prior to administering vinca alkaloids to ensure:
 - correct patient name, drug, dose, and route have been checked on the bag label and confirmed against the medication order
 - correct time of administration, volume and rate is confirmed against the medication order and protocol
 - correct infusion line and connection is confirmed
 - it is **being administered by the intravenous route**.

Other considerations

- Procedures are to be followed that ensure safe administration techniques and stringent patient monitoring. Despite dilution, vinca alkaloids remain a vesicant and gravity infusions are preferred to avoid extravasation.
- Follow work health and safety procedures for the handling of any cytotoxic drug and related waste. This is to be in accordance with Safe Work NSW [Cytotoxic Drugs and Related Waste – Risk Management](#).

References

- Cancer Council Australia Clinical Guidelines. COSA guidelines for the safe prescribing, dispensing and administration of systemic cancer therapy. [Internet]. Available from: https://wiki.cancer.org.au/australia/COSA:Cancer_chemotherapy_medication_safety_guidelines. Accessed November 27, 2023.
- Institute for Safe Medication Practices. Due to ISMP Advocacy, VinCRISTine Labeling and Packaging Changed to Prevent Wrong Route Administration. [Internet]. Available from: <https://www.ismp.org/news/due-ismp-advocacy-vincristine-labeling-and-packaging-changed-prevent-wrong-route>. Published June 18, 2020. Accessed November 27, 2023.

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- Therapeutic Goods Administration. Administer vinca alkaloids by intravenous infusion only. [Internet]. Available from: <https://www.tga.gov.au/news/safety-updates/administer-vinca-alkaloids-intravenous-infusion-only>. Published February 24, 2022. Accessed November 27, 2023.