ONC-SOP-006: High-alert medicines on every ward

Standard operating procedure (SOP) · ONC-SOP-006 · Version 0.1 · Draft for local review

Supports: 51.7

At a glance

- Every ward uses the same defined list of high-alert medicines, which is kept up to date and displayed.
- Each high-alert medicine has a second independent check before it is given, and that check is recorded.
- Concentrated electrolytes and insulin are stored separately from general stock, with clear labels.
- Chemotherapy checks follow ONC-SOP-002 and ONC-FRM-002.
- Stop and check if: a high-alert medicine is found with no label, no second check, or stored with general stock.

1. Purpose

To make sure that medicines with a high risk of serious harm when used in error are given with extra safeguards on every ward, and that these safeguards are recorded (51.7).

2. Scope

Item	Coverage
Applies to	All prescribers, pharmacists, nurses and any staff who store, prepare or give medicines in the facility
Locations	Every ward, clinic and treatment area, including theatres, emergency and day units
Medicines	The high-alert list in Section 6 and any medicine added to it by the medicines committee

3. Definitions

Term	Meaning in this SOP
High-alert medicine	A medicine that has a high risk of causing significant harm when used in error, as defined by the facility's list, which is based on the ISMP list of high-alert medications
Independent double check	A second registered professional checks the prescription, the drug, the dose, the route and the rate from the source documents, without the first person's input, and signs the record
Concentrated electrolyte	A preparation of potassium, sodium or magnesium that must be diluted before use, and is not given undiluted

4. Background

High-alert medicines cause a disproportionate share of serious medication harm. The risk is greatest when a medicine is confused with another, when a concentrated form is given undiluted, when a dose is calculated wrongly, or when a medicine is taken from general stock by mistake.

5. Responsibilities

Role	Responsibility
Medicines committee	Maintains the list, approves additions and removals, and reviews incidents each quarter
Pharmacist	Advises on storage, labelling and checks, and verifies prescriptions where the SOP requires it
Ward manager	Makes sure the list is displayed, storage is separated, and checks are carried out and audited
Prescriber	Writes a complete prescription with the indication, dose, route and rate, and includes a weight-based calculation where needed
Nurse preparing or giving	Carries out the independent double check, and records it before giving the medicine

6. The high-alert list

The list below is the minimum set for every ward. The medicines committee may add to it, and must record the date of each change.

Group	Examples
Anticoagulants	Heparin infusions, low molecular weight heparin at treatment dose, warfarin when used with an infusion
Insulin	All insulins, including insulin infusions
Opioids	Morphine, diamorphine, fentanyl and other opioids given by infusion or by patient-controlled analgesia
Concentrated electrolytes	Concentrated potassium chloride, concentrated potassium phosphate, concentrated sodium chloride above 0.9 percent, magnesium sulphate for infusion
Chemotherapy and cytotoxic drugs	All cytotoxic drugs, following ONC-SOP-002 and ONC-FRM-002
Neuromuscular blocking agents	Suxamethonium, rocuronium, vecuronium and others
Antiseizure medicines given intravenously	Phenytoin, sodium valproate and others, when given by infusion
Sedatives given by infusion	Midazolam and propofol infusions

7. Storage

1. Store concentrated electrolytes and insulin in a separate, labelled area or cupboard, not in general stock.
2. Label each high-alert medicine with a red 'high-alert' sticker or equivalent, and display the ward's list in the medicines room.
3. Dilute concentrated electrolytes in pharmacy where possible. On the ward, keep only the diluted form in stock.
4. Check the storage area against the list at each stock check, and record the result.

8. Safety and checks

1. Prescribe the high-alert medicine with the indication, dose, route, rate and maximum dose written in full.
2. Prepare the medicine, then complete the independent double check with a second registered professional before it is given.
3. Check the label, dose, rate and concentration against the prescription, and sign the record for both checks.

4. Give the medicine only after both checks are recorded. If the checker disagrees, stop and contact the prescriber and pharmacist.

> An independent double check is not a signature on the first person's work. The second checker must recalculate the dose from the source and confirm it separately.

9. Decision points

Situation	Action
A high-alert medicine has no second check	Do not give. Carry out the check now, and report if it was given without one
A medicine not on the list is high-alert in practice	Raise it with the pharmacist, who refers it to the medicines committee
Concentrated electrolyte found on the ward undiluted	Remove from the ward, inform the pharmacist and ward manager, and record the event
Prescriber not available for an urgent high-alert medicine	Follow the facility's urgent prescribing route, and record the verbal order with the second check

10. Escalation

- Medicine given without a check, or a near miss: report under INC-SOP-001 within 24 hours.
- Repeated checks not done by a team: the ward manager and the pharmacy lead review the team's practice the same week.
- Medicines committee to review any incident involving a high-alert medicine within 30 days.

11. Monitoring

The pharmacy team audits 20 high-alert administrations each month across the wards, and checks storage monthly. Results go to the medicines committee each quarter.

Measure	Target
High-alert medicines with a recorded independent double check	100 percent
Concentrated electrolytes and insulin stored separately from general stock	100 percent
Lists displayed and current on each ward	100 percent

12. Records

- Prescription with the indication and calculation.
- Independent double check record, signed by both staff.
- Stock and storage check records.
- Incident reports.

13. Training

All staff who prescribe, prepare or give high-alert medicines complete training on the list, the double-check process and storage at induction and every year, with a practical assessment.

14. Related documents

Code	Document
ONC-SOP-002	Chemotherapy independent two-person check
ONC-FRM-002	Chemotherapy two-person check record
ONC-SOP-001	Cytotoxic drug safe handling
NEO-SOP-002	Weight-based medicine dosing for neonates and infants
INC-SOP-001	Root cause analysis of serious incidents

15. Evidence

This SOP is based on the reference sources listed below and on the requirement of criterion 51.7 of the ASF standards. The list must be checked against the current ISMP list and the facility's formulary at each review.

E-learning for this document

- No course linked yet. Request a high-alert medicines course from the academy (see the Standard 51 request list).

References

1. Institute for Safe Medication Practices (ISMP). List of High-Alert Medications in Acute Care Settings. Current edition.

2. The Joint Commission. National Patient Safety Goal NPSG.03.06.01 on medication safety. Current edition.
3. Facility medicines formulary and high-alert list (to be inserted by the unit at adoption).

Change history

Version	Date	Change
0.1	2026-10-26	First draft for review. Not yet approved by the ASF Expert Committee.

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