Government of Newfoundland and Labrador

Department of Health and Community Services
Provincial Blood Coordinating Program

SATELLITE STORAGE, TEMPERATURE MONITORING AND ALARM CHECKS	NLBCP-045

Office of Administrative Responsibility	Issuing Authority
Medical Advisor to the Provincial Blood Coordinating Program	Dr. Christopher Sharpe
Provincial Blood Coordinating Program	Daphne Osborne
Author(s)	Denise Callahan Ryan
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Overview

Blood components and plasma protein and related products (PPRP) may be stored outside the Transfusion Medicine Laboratory (TML) in satellite refrigerators which meet standards and regulations. Staff in the areas where satellite refrigerators are located are required to follow policies and procedures that meet standards and regulations for storage of blood components and PPRP.

Policy

1. A policy shall be established for the safe storage of blood components and PPRP that complies with NL Provincial Blood Coordinating Program (NLPBCP) policy.
2. Blood components and PPRP shall be stored in a location that has appropriate temperature and environmental conditions that will maintain the safety of the blood and that is secured against the entry of unauthorized persons.
3. Procedures shall be established to define alternate storage arrangements when refrigerators for storing blood components and PPRP are malfunctioning or defective.
4. Satellite storage refrigerators shall be validated to maintain a temperature within the appropriate temperature range throughout the refrigerator cabinet (RBCs between 1–6°C). Temperature mapping should be performed.
5. To ensure that the required storage temperature is maintained, the temperature in component storage refrigerator and open storage areas shall be either:
   5.1. Continuously monitored and recorded using a validated continuous monitoring system; or
   5.2. Manually checked and recorded every four hours if an automated system is not available.

   NOTE: Continuously monitoring chart shall be checked daily to ensure it is recording properly and at proper temperature.
6. There shall be a daily review of the temperature monitoring systems to ensure they are operating correctly.
   6.1. When a daily visual check is not possible, the TML shall implement a process to ensure the storage device has maintained an appropriate temperature between visual checks. This shall be documented prior to the use of blood components and PPRP.

Quality Control

1. Written procedures shall be established and readily available which contain directions on how to maintain blood components and PPRP within permissible temperature ranges during a power failure or other disruption of refrigeration or environmental controls.
2. Refrigerators used for blood component and PPRP storage shall be connected to an emergency power supply. The power supply system shall be checked at defined intervals to ensure an immediate switch to emergency power.
3. Satellite storage refrigerators shall have alarm systems with audible signals with back-up power supply. Alarm activation points shall be set at temperatures that allow time for appropriate corrective action before the blood components and PPRP reach unacceptable temperatures. The alarm warning shall signal in a location that is continually monitored or staffed so corrective action can be taken immediately.
4. The alarm and the back-up power supply for the alarm and refrigerator shall be checked at a frequency defined by the facility and the check shall be documented.
5. All thermometers used in satellite refrigerators shall be checked against a certified calibrated thermometer at least annually, and the check shall be documented. Appropriate corrective action shall be taken if required and documented.
6. Blood components and PPRP shall be stored in clearly identified segregated areas within refrigerators to avoid possible contamination.
7. Removal of blood components and/or PPRP from satellite refrigerators shall be documented to ensure viability of the component and/or PPRP is maintained.
8. Blood components and PPRP shall not be accepted back into inventory unless there is evidence that the blood component and /or PPRP continued to be stored under appropriate environmental conditions. Any deviations must be documented and investigated as per the facility policy.

Key Words

Temperature, satellite storage, alarm, refrigerator

References

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