Blanket Warming Cabinets

Issue
Joint Commission surveyors frequently issue requirements for improvement related to blanket warming cabinets. However, the citations lack consistency and are unsupported by specific regulatory expectations. This raises a number of questions:

- What is a safe maximum temperature for patient blankets?
- What is a safe maximum temperature for warming cabinets?
- Should intravenous fluids be warmed in blanket warming cabinets? If so:
  - What is the safe maximum temperature for intravenous fluids?
  - What effect does warming have on the expiration date of intravenous fluids?
- If a maximum temperature is adopted, should hospital personnel monitor blanket warmer temperatures? If so:
  - How frequently should temperatures be monitored?
  - Who should perform the monitoring?
  - What actions should be taken when the cabinet is above the maximum temperature?
  - How should the monitoring be documented?

Regulatory Analysis

Joint Commission
There are no Joint Commission standards that directly relate to this issue. Surveyors rely on general requirements covering safe practices. For example:

- EC.02.01.01 EP.1: The hospital identifies safety and security risks ... [including information from] credible external resources ... 
- EC.02.01.01 EP.2: The hospital takes steps to eliminate or reduce identified risks.

CMS Conditions of Participation
There are no CMS regulations that address the appropriate temperature for blanket warmers. General regulations pertain. For example:

- A-0724 § 482.41(c)(2) - Facilities, supplies, and equipment must be maintained to ensure an acceptable level of safety and quality.

State and Local Laws and Regulations
[State and local laws and regulations that pertain and what they say.]

Literature Review
Current literature is not conclusive. ECRI recommends that:

- The temperature setting on blanket warming cabinets be limited to 130°F;
- Intravenous solutions not be warmed in the same cabinets as blankets;
- Cabinets used for heating intravenous solutions be limited to 110°F;
- Warming cabinets be monitored “periodically” to assure proper functioning.

These ECRI recommendations are consensus based and suffer from a lack of data.

Moon, however, demonstrates that blankets taken from warmer operated at temperatures up to 200°F have “almost no effect on skin temperature so are safe for both the patient and hospital staff.”

Moon and Bujdoso demonstrate potential patient benefits from blankets warmed above 150°F.

Review of Quality and Risk Management Data
Patient satisfaction is tied to comfort which, in turn, is tied to warm blankets and intravenous fluids. Warm blankets also play a role in heating patients undergoing general anesthesia and at risk for hypothermia.

No adverse events or other data suggest a problem with warmed blankets or intravenous fluids.
Operational Considerations and Analysis
Blanket warmers are in use in all inpatient units, the operating room and the emergency department. The emergency department also uses blanket warming cabinets to warm intravenous fluids. The warmed fluids are not dated. The maximum temperature to which any current warming cabinet may be set is 200°F.
It is the general feeling among staff that there is virtually no risk that a care giver will apply a blanket that so hot as to burn the patient: 1) blankets cool very rapidly after removal from the warming cabinet; and 2) the care giver will feel discomfort from an overheated blanket before it ever reaches the patient.

Organizational Position
After due consideration, the hospital has adopted the following position:
- Blanket warmers will not be used for warming intravenous fluids.
- The maximum achievable temperature for blanket warmers through the hospital shall be 200°F.
- Signs shall be posted on blanket warmers warning that they may not be used for warming intravenous fluids and that the recommended temperature is 150°F. (No action is necessary for blanket warmers found to be 200°F or less.)
- Warming cabinets will be subject to preventive maintenance according to the hospital’s plan (consistent with manufacturer guidelines).
- Ongoing temperature monitoring of blanket warmers is not required.
- Cabinets used to warm intravenous fluids shall be subject to a separate risk assessment and organizational position.

Approval and Adoption
The following leadership bodies have reviewed this risk assessment and adopted the position indicated. During this review, each leadership body has concluded this position is in the best interest of the patient.

<table>
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<tr>
<th>Leadership Body</th>
<th>Date of Approval / Adoption</th>
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<tbody>
<tr>
<td>Performance Improvement Committee</td>
<td>June 3, 2009</td>
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<tr>
<td>Leadership Council</td>
<td>August 5, 2009</td>
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<tr>
<td>Operating Room Committee</td>
<td>May 5, 2008</td>
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Note: This document is a model intended to demonstrate how an institution may conduct and document a risk assessment related to blanket warming cabinets. It remains the obligation of the organization to perform its own literature review, review of quality and risk management data, and reach its own conclusion about safe practices.