Restraints: Bed Rail Safety Check

When using bed rails, close attention must be given to the design of the rails and the relationship between rails and other parts of the bed. The seven areas in the bed system that have a potential for entrapment are shown in the drawing. Entrapment may occur in flat or raised bed positions, with the rails fully or partially raised. (Drawings of entrapment are included on next page.)

Zones
1. Within Rail
2. Under Rail, Between Rail Supports or Next Single Rail Support
3. Between Rail and Mattress
4. Under Rail, at Ends of Rail
5. Between Split Bed Rails
6. Between End of Rail and Side Edge of Head or Foot Board
7. Between Head or Foot Board and Mattress End

Preventing Entrapment
Regularly inspect each of these seven areas on each bed with restraints. View the entrapment drawings and take into consideration the following:

• The bars within the bed rails should be closely spaced to prevent a resident’s head from passing through the openings and becoming entrapped.
• The mattress to bed rail interface should prevent an individual from falling between the mattress and bed rails and possibly smothering.
• Mattresses may shrink over time or after cleaning causing space between the rails and the mattress
• Check for compression of the mattress’s outside perimeter. Easily compressed perimeters can increase the gaps between the mattress and the bed rail.
• Ensure that the mattress is appropriately sized for the bed frame. Not all beds and mattresses are interchangeable.
• The space between the bed rails and the mattress and the headboard and the mattress should be filled by the mattress or by an added firm inlay. This creates an interface with the bed rail that prevents an individual from falling between the mattress and bed rails.
• Latches securing bed rails should be stable so that the bed rails will not fall when shaken.
• Older bed rails with tapered or winged ends should not be used for residents at risk of entrapment.
• Maintenance and monitoring of the bed, mattress, and accessories (such as resident/caregiver assist items) should be ongoing.
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Drawings of Potential Entrapment in Hospital Beds

Zone 1 - Entrapment within the rail

Zone 2 - Entrapment under the rail, between the rail supports or next to a single rail support

Zone 3 - Entrapment between the rail and the mattress

Zone 4 - Entrapment under the rail, at end of rail

Zone 5 - Entrapment between split bed rails

Zone 6 - Entrapment between the end of the rail and the side edge of the head or foot board

Zone 7 - Entrapment between head or foot board and the mattress end

Summary of FDA Measurement Recommendations

<table>
<thead>
<tr>
<th>Zone</th>
<th>Definition</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Within Rail</td>
<td>&lt; 4 3/4”</td>
</tr>
<tr>
<td>2</td>
<td>Under Rail, Between Rail Supports or Next Single Rail Support</td>
<td>&lt; 4 3/4”</td>
</tr>
<tr>
<td>3</td>
<td>Between Rail and Mattress</td>
<td>&lt; 4 3/4”</td>
</tr>
<tr>
<td>4</td>
<td>Under Rail, at Ends of Rail</td>
<td>&lt; 2 3/8” AND &gt; 60° angle</td>
</tr>
</tbody>
</table>

Although the FDA does not provide measurement recommendations for zones 5-7, safety issues may exist and should be attended to. Please consult www.fda.gov/cdrh/beds for more information.
Restraints: Bed Rail Safety Check

INSTRUCTIONS: Use this bed rail safety check to determine if a resident’s bed meets the safety measurement requirements suggested by the FDA. For each side, go through every zone and measure according to the FDA's instructions found online at www.fda.gov/cdrh/beds. Write each measurement on the space provided below and indicate with a circle whether the zone passed or failed.

Resident’s Name: __________________________ Date: __________________________


Zone 1:
Pass if <4 3/4”
Measurement: ____________

Zone 2:
Pass if <4 3/4”
Measurement: ____________

Zone 3:
Pass if <4 3/4”
Measurement: ____________

Zone 4:
Pass if >60° angle AND <2 3/8”
Measurement: ____________

If the bed only has 2 rails, use these boxes to record your results for the head rails. Leave them blank or cross them out if the bed does not have head rails.

If the bed has 4 rails, use these boxes to record your results for the foot rails. Leave them blank or cross them out if the bed does not have foot rails.

Source: U.S. Department of Health and Human Services, Food and Drug Administration, and Center for Devices and Radiologic Health.

For the unabridged and detailed version of the FDA “Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment” document as well as a tool with measurement instructions visit: www.fda.gov/cdrh/beds

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