

# Bed Entrapment

Reducing the Risk in Your Healthcare Facility



## What is Entrapment?

The U.S. Food and Drug Administration (FDA) received approximately 691 entrapment reports from January 1985 to January 2006. Of those reports, more than 60% resulted in death. Residents have become caught, trapped, or entangled in the space in or around the bed rail, mattress, or bed frame, often resulting in serious injury and sometimes even death. Entrapment can occur when a resident attempts to move in or exit their bed without assistance as a result of delirium, confusion, agitation or pain.

Residents most vulnerable to entrapment are those who are frail, confused, restless, or who have uncontrolled body movement.

## How to Reduce the Risk of Entrapment

The FDA has issued guidelines for reducing the risk of bed entrapment, "Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment". This guidance identifies potential entrapment areas and those body parts most at risk for entrapment; provides design criteria for manufacturers of new hospital beds; recommends test methods to assess the conformance of existing hospital bed systems; and answers frequently-asked questions about this subject. The guidance defines a hospital bed system — which could be used for patients in acute care, long term care, or homecare settings — as "the bed frame and its components, including the mattress, bed side rails, head and foot board, and any accessories added to the bed".

Basic American encourages all hospital bed owners to read the Hospital Bed Safety Workgroup Guidelines regarding entrapment, which can be found at [www.fda.gov](http://www.fda.gov).

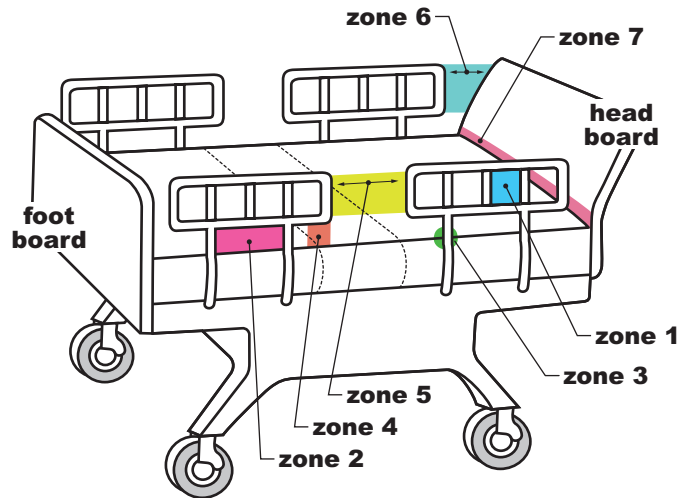


There you can also find ordering instructions for an Entrapment Testing Kit, which you can use to determine whether your beds are in conformance with the guidance. You may also wish to review a discussion of Clinical Guidance ([http://www.ute.kendal.org/learning/documents/clinical-guidance\\_SideRails.pdf](http://www.ute.kendal.org/learning/documents/clinical-guidance_SideRails.pdf)), which you can use to assess an individual patient's needs when using a side rail. These resources will supply you with the knowledge to evaluate the safety of the hospital beds you currently own.

All Basic American beds are designed in full compliance with the FDA's Hospital Bed System Guidance to Reduce Entrapment. For more details about Basic American beds, please contact us at 800.554.9215.



The diagram at right shows the seven bed system zones where there is potential for entrapment. The table below describes them.



## Bed Entrapment Zones

<b>Zone 1</b>	Within the rail	Any open space within the perimeter of the rail presents risk of head entrapment. * Recommended space: less than 4 3/4".
<b>Zone 2</b>	Under the rail, between the rail supports, or next to a single rail support	The gap under the rail and above the mattress presents risk of dangerous head entrapment. * Recommended space: less than 4 3/4".
<b>Zone 3</b>	Between the rail and the mattress	The space between the inside surface of the rail and the mattress, if too large, presents risk of head entrapment. * Recommended space: less than 4 3/4".
<b>Zone 4</b>	Under the rail at the ends of the rail	The gap between the mattress and the lowermost portion of the rail presents risk of neck entrapment. * Recommended space: less than 2 3/8".
<b>Zone 5</b>	Between split bed rails	When partial-length head and foot side rails (split rails) are used on the same side of the bed, the space between the split rails presents risk of neck or chest entrapment.
<b>Zone 6</b>	Between the end of the rail and the side edge of the head or foot board	The gap between the end of the bed rail and the side edge of the head or foot board presents risk of entrapment.
<b>Zone 7</b>	Between the head or foot board and the end of the mattress	The space between the inside surface of the head or foot board and the end of the mattress presents risk of head entrapment.

\* Note: Dimensional recommendations are provided for zones 1-4 because the majority of entrapment incidents have occurred in these areas.



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