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## Report Highlights Entrapment Gaps in Hospital Beds



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A recent report published in the online journal *Age and Ageing* outlines the findings from a survey of beds within a large teaching hospital in Ireland. The findings show that many beds in the hospital did not comply with the dimensional standards that have been put in place in order to minimise the risk of entrapment. The report highlights the need to carefully select patients who need bedrails and the need to closely monitor and maintain the hospital bed systems.

Bedrails are safety devices that are generally used to prevent people falling off their beds. While the risk to individuals is very low, there is always the possibility that the person becomes trapped or strangled in the space that exists between bedrails or between the head or foot boards or mattresses.

There are four zones within the bed system that account for 80% of entrapment incidents. Zone 1 includes the open space between the perimeters of the rail; Zone 2 includes the space under the rail and between the rail supports; Zone 3 includes the space between the inside surface of the bedrail and the mattress; and Zone 4 includes the gap between the mattress and rail at the end of the rail. The FDA provides specific dimensional guidelines for the four zones.

The study was conducted in six wards that accepted patients with acute conditions. The bed system was evaluated on the basis of bed type (either hydraulic adjustable {HA} or electric profiling {EP}), manufacturer and mattress type. Beds that met the zones standard received an overall pass.

Sixty beds were examined in these wards. Out of these beds, 22 were EP and 38 were HA. Only 5 beds (all of them EP) received an overall pass. 10 beds (all of them HA) failed all zones. There were also issues with Zones 2 and 3. Mattresses were also the wrong size. Most of them were too narrow and their perimeters were too compressible. Bedrails were loose and poorly maintained with worn out components.

One of the study authors, Shaun T. O'Keeffe highlighted the need for ongoing monitoring and maintenance of bedrails in all healthcare institutions. He also pointed out that it was inevitable that a multitude of bed types and mattresses will be found in large acute hospitals, replacing older bed stock should be done frequently.

In addition, compliance with dimensional guidelines should be an important factor in when purchasing beds.

According to O'Keeffe, "It is important that staff should be aware of the potential for entrapment, and ensuring that bedrails are only used when appropriate will at least limit the number of patients for whom one need have particular concern regarding entrapment. If bedrails are to be used, the appropriateness of the bed, rail and mattress combination for that particular patient should be considered."

Source: Science Newsline  
Image Credit: Guardian.com

Published on : Mon, 4 Aug 2014