Case Study

Assessing the incidence of bed falls and harms following the introduction of a 'floor bed' in a high-risk, long-term care facility: a prospective cross-over evaluation.

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Falls, in particular bed falls, represent a major safety issue in rehabilitation and long-term care settings. Evaluating a new intervention systematically, can illustrate the potential benefit and guide implementation.

A two-phase evaluation was carried out in a nursing home chain to compare fall outcomes in high-risk individuals when using a low bed (Phase One) and Accora's Empresa FloorBed (Phase Two).

Methods

Participants were drawn from dependent residents in three skilled nursing facilities, which form part a chain of nursing homes based in Pennsylvania. Metrics included; risk profile; recent fall history; the number and severity of falls; use of safety features (low height and safety mats). Fall data for Phases One and Two were compared using the Student's t-test. Informal feedback was sought from staff as to the clinical utility and ease of use of the beds.

Results

Twenty participants completed both Phase One (12 weeks) and Phase Two (between 9 and 12 weeks).

Phase One: Fifteen of the 20 residents reported falls. One individual fell just once, while 14 fell repeatedly (2-6 times), giving a total of 58 (mean 2.9) separate falls. Of these, almost half (n=26, 45%) were from the bed. This included injurious falls with one resident hospitalized with bruising and a second resident admitted for investigations into leg pain. Three additional residents incurred injuries after bed falls on four occasions: bruising (n=1), abrasions (n=3). In all bed-related injuries, except one, the bed was in the higher position without a safety mat.

Phase Two: Thirteen residents 'fell' at least once (n=7), while 6 fell multiple times. A total of 26 falls were reported of which six (23%) were classified as 'falls from the bed'. In 5 of these 6 incidents the bed was lowered to the floor with a safety mat. Three residents made a lateral transfer (roll/crawl) onto the padded mat and one resident exited the bed on two occasions using the non-mat side. In all cases, no injuries were reported.

In comparison, the mean fall rate (all falls and bed falls) was significantly lower in Phase Two compared to Phase One ($p=<0.05$). Staff evaluation was positive, with the Empresa Floor Bed considered to lessen the risk of fall injury and offering a preferred mode of action i.e. vertical lift compared to the standard bed with 'travelling' scissor lift.

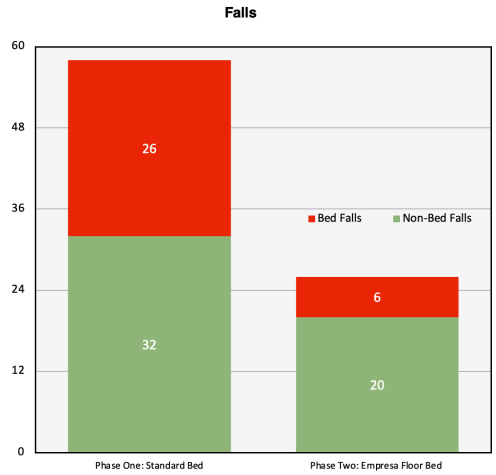

Figure 6

Discussion

Phase Two bed falls reduced by more than three quarters to just 6 (77%) incidents and no injuries. The clinical utility of the Empresa Floor Bed within this resident population was established. The floor bed and safety mat can translate unintentional bed exit into a lower-risk lateral transfer or roll, rather than an injurious fall from height. This has implications for statutory reporting, quality metrics and client satisfaction. As with any intervention, clinical assessment is needed to assess a resident's suitability for a floor bed.

Conclusion

The Empresa Floor Bed, when used within a comprehensive fall prevention protocol, may help to reduce falls and injuries in a high-risk population.