

# Ultra-low bed in combination with alarm mat reduces the number of falls by 60%

In the spring of 2015 Christian Granberg, Head of Care Unit 5 at the Central Hospital in Växjö, Sweden, initiated a trial that would lead to more effective fall prevention. Today, two and a half years later the number of falls at Care Unit 5 has decreased by nearly 60%.

During 2014 Unit 5 had 52 reported falls, which was considered an unacceptable number. While researching fall reduction strategies, information on ultra-low beds was obtained. Shortly afterwards, Sojna Graversen, Leg. physiotherapist/ customer-responsible sales representative at Human Care HC AB, placed an ultra-low bed in the unit.

**Background:** Fall injuries, in addition to causing great suffering and increased care burdens for both patients and families, mean prolonged hospitalization and often persistent disability. This creates higher costs at all points of the continuum of care.

Nordic studies have shown that 7-8% of all hip fractures occur in hospitals, and that over 95% of all hip fractures are caused by falls [2-3]. This means that the risk of falling and fall injuries are more than ten times higher in hospitals than in the community.

*“Fall casualties and fall injuries are so common in hospitals, probably since those who live there are affected by acute disease symptoms and /or acute drug or acute drug adverse events which are likely to cause patient confusion. Other research also indicates that routine case reporting understates the accident rate by 30 to 50% compared with scientific studies. Research also has shown that many casualties which cause fractures, especially other than hip fractures, are under-reported.” [1]*

**“During the period of May 1st to Dec 31st of 2015, the number of falls was reduced from 46 to 21 compared to the same period in 2014. This represents a decrease of nearly 60%.”**

Care Unit 5 identifies individuals with high fall risk through the “Senior Alert” risk assessment. Systematic work is done to reduce and treat different risk factors. Most falls occur at night, where the cause can be traced to the use of sleeping pills, confusion, dementia, reduced staffing, and decreased alertness. Because the ultra-low bed is only 10cm from the floor, the patient rolls out of bed instead of falling. The alarm mat then alerts staff so they can respond quickly to help avoid any injury.

In the period between May 1st to Dec 31st of 2015, the number of falls at Care Unit 5 was reduced from 46 to 21, compared to the same period in 2014. Similar figures are also available for 2016. **These results have far exceeded expectations.**

At the Central Hospital, the ultra-low bed and alarm mat combination has now been in use for over two and a half years. They are very satisfied with the reduction in falls. Based on the statistics quoted above, the organization decided to purchase more ultra-low beds. The bed is now used in all care units of the hospital.

**“When we presented our statistics internally within the organization, the hospital decided to buy more beds. We now have an ultra-low bed in each care unit of the hospital.”**

Similar measures should be introduced in all Swedish hospitals and nursing homes, as this would result in greatly reduced social costs, reduced hospital length of stay, and, most importantly, a reduction in unnecessary suffering for patients and their families.



Christian Granberg, Head of Care unit 5 at the Centrallasarett in Växjö



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2. Stenvall M, et al. A multidisciplinary, multifactorial intervention program reduces postoperative falls and injuries after femoral neck fracture – a randomised controlled trial. Osteoporosis Int. 2007;18:167-75.
3. Nyberg L, et al. Falls leading to femoral neck fractures in lucid older people. J Am Geriatr Soc. 1996;44:156-60.