

Prevention is critical in aged care



Implementing preventive measures to lower the incidence of falls, pressure areas, urinary incontinence, and malnutrition would go a long way to improving the quality of care in aged-care facilities.

By Jan Weststrate and Kathryn Adams

Aged care has been in the news frequently this year, often not in the most positive light. Reports of facilities failing to provide basic care have hit the media regularly. In September, the *Dominion Post* reported incidents of neglect, preventing the elderly receiving appropriate care.¹

Conflicting opinions on whether the number of complaints is increasing or not, only add to the confusion about the actual standard of care in the aged-care sector.² The Government, in an attempt to ensure appropriate care is provided, introduced regular audits of all aged-care facilities. Whether or not these audits result in improved care is again argued by the New Zealand Aged Care Association.³ In addition, the interRAI long-term care facilities assessment programme is being rolled out nationally. (See pp14-16 – Ed.) This will involve a twice-yearly assessment of all residents living in aged-care facilities. These measures are all intended to ensure our institutionalised elderly receive the care they need. The question remains – do the incidents reported in the media paint a true picture of how our society cares for those who live in aged-care facilities?

One aspect of providing quality aged care is that a facility can prevent harm to residents

and provide them with a safe place to live. Residents in aged care are often no longer physically and/or mentally able to do this for themselves. Preventing residents from having falls, from developing a pressure injury, from becoming malnourished or incontinent are internationally accepted indicators of quality care.⁴ Currently, there is no evidence of the prevalence and incidence of these conditions in New Zealand's aged-care facilities, as there is very little data available. To gather more information on how successfully aged-care facilities prevent their residents from falls, pressure injuries, malnourishment and incontinence, a survey was conducted, over one day, in 16 aged-care facilities in the lower North Island in 2011.

Method

The survey was designed by the Department of Health Services Research at the University of Maastricht in the Netherlands and is known as the LPZ (landelijk prevalentieonderzoek zorgproblemen).⁵ In English this means national prevalence survey of care problems. This survey investigates the prevalence and incidence of falls, pressure injuries, malnutrition and incontinence. The first survey was carried out in 1998 as a result of a national outcry about the extremely high prevalence of pressure injuries in patients and residents

of Dutch hospitals and aged-care facilities. It was concerned only with pressure injuries. In the following year, falls, malnutrition and incontinence were added to the survey and the number of countries wanting to participate in LPZ increased. The survey is now conducted in health-care facilities (hospitals, aged-care facilities and community care) in Germany, Austria, Switzerland, Brazil, Indonesia and New Zealand, as well as the Netherlands. Each year, more than 20,000 patients and residents participate in the survey.

The New Zealand survey was conducted for each care problem at three levels: organisation, department and resident. Survey questions at the organisational and departmental levels asked the extent to which the organisation/department facilitated recommendations from evidence-based guidelines or internationally accepted best practice. At resident level, the survey assessed the risk of residents developing one of the care problems and what kind of preventive measures were taken to prevent the problem developing, and it measured the prevalence/incidence of the care problems in those residents who participated.

Several weeks before the survey was carried out, residents and/or their family received a letter with information about the upcoming survey. Residents/family were asked to participate. Verbal consent was needed to collect the relevant data. In the two weeks before the survey began, data collection teams received training from the survey coordinator on what and how to collect data. The teams consisted of two, one of whom was a registered nurse (RN) who collected the data.

Results

The survey evaluated the residents of 15 aged-care facilities and the elderly in one community care facility. In total, 366 residents participated, ranging from nine to 56 residents per facility. Of the participants, 251 were women, 115 were men. The average age of those that took part in the survey was 83.8 (± 10.2), with ages ranging from 35 to 100. The average weight was 66kg (± 17), with weights ranging from 29kg to 140kg. The level of residents' care dependency was measured with the care dependency scale.⁶ The percentage of residents who were partially to completely dependent on care was 57.4 per cent. The ethnicity of the majority of residents was New Zealand European (83.6 per cent), with 3.3 per cent Māori, 0.3 per cent Samoan and 12.8 per cent of other ethnicities.

The three foremost medical conditions identified were cardiovascular disease (59.5 per cent), dementia (34.4 per cent) and ear and eye disorders (29.5 per cent). With regard to the activities of daily living (ADL), 46.9 per cent of respondents were ADL dependent and 38.8 per cent were dependent with regard to household activities of daily living.

Pressure injuries: The risk of developing a pressure injury (PI) was measured with the Braden PI risk assessment scale. Of the 366 participants, 15 per cent had a high risk of developing a PI, 53.2 per cent a low risk and 31.6

per cent had no risk, according to the Braden scale.

The percentage of residents who had a PI (PI category 1-4) was 7.4 per cent. The percentage who actually had a pressure wound (PI category 2-4) was 4.9 per cent (N=18). A PI category of 3-4 was observed in 10 of the residents. Not all PIs had developed during the time the participants were in the facility. Of the 27 participants with a PI, 19 developed it in the aged-care facility they were currently living in. Most PIs (36 per cent) were located in the pelvic region (sacrum and ischial tuberosity). The heel/ankle region was the location of 30.5 per cent of all PIs.

The survey reveals there is room for improvement in preventing all four care problems.

Prevention of PIs was evaluated in three ways: the use of pressure-relieving mattresses; the use of pressure-relieving cushions in (wheel)chairs; and other preventive interventions, such as positioning a resident on alternate sides and placing a pillow under the lower leg to ensure the heel was "floating". Figure 1 displays the percentage of residents receiving PI prevention in all three ways.

Of those who had a PI and were still at risk of developing another, nearly all received some sort of PI prevention – although three of the 24 participants in this category had no pressure-relieving mattress or cushion in place. Of the residents who were at risk but who had no PI, preventive measures dropped compared with the first group. A significant number of

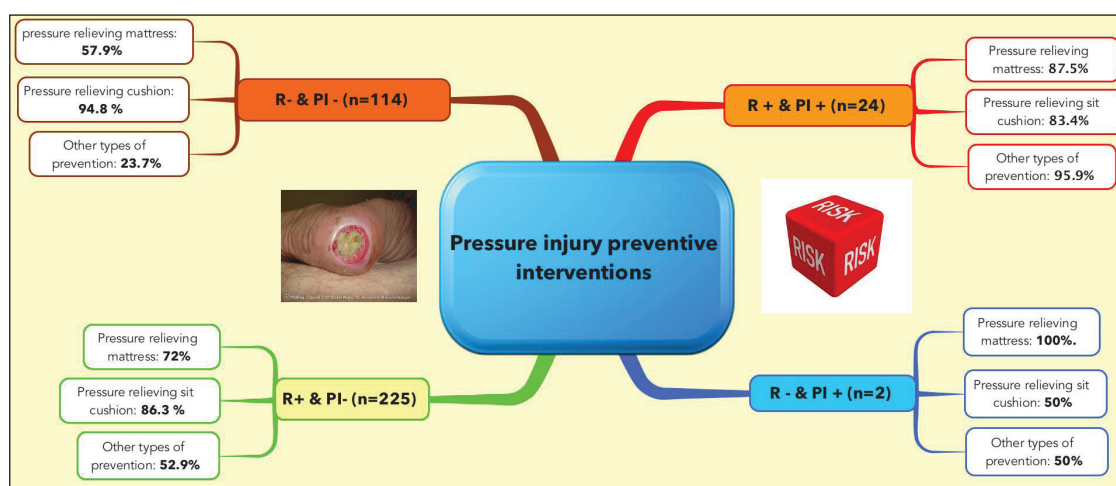


Figure 1: The percentage of residents receiving preventive interventions in relation to the presence of pressure injuries (PIs) and the risk of developing a PI. The number of residents for each group is in brackets. (R means risk of developing a PI, + means a PI is present, - means there is no PI.)

participants in the group who had no risk and no PI had a pressure relieving mattress in place (see Figure 1).

Incontinence: Sixty per cent (n=220) of the participants suffered from urinary incontinence. Of those, 23 used a urinary catheter, 42 had irregular episodes of incontinence and 155 were continuously incontinent. Twenty-four per cent of the participants suffered from double incontinence. Most participants who suffered from urinary incontinence were female (70.1 per cent). For 3.5 per cent (n=13) of residents, their incontinence began less than three months previously. Overall, 25.8 per cent of the participants became incontinent after admission to the aged-care facility. As incontinence has different causes, receiving a proper diagnosis is important. Of those surveyed, 46 per cent had a diagnosis for incontinence written in their notes. Functional, stress and total incontinence were the most frequently stated diagnoses.

Interventions to manage incontinence consisted mostly of using disposable absorbent inlays (63.6 per cent), and individual schedules for toileting (32.2 per cent). There was no incontinence management for 11.8 per cent of the residents who suffered incontinence.

Falls: Forty-six residents (12.8 per cent) had one or more falls recorded in the previous 30 days, nearly all of them in the facility in which they were currently living. In total, during the 30 days before the survey began, at least 80 falls had been recorded among the participating residents. At least four residents had had more than three falls in the previous 30 days. In six instances, those conducting the survey could not find any record of the fall in the residents' notes.

Most falls occurred between 2pm and 10pm in the (bed)room of the resident (65 per cent) while s/he was standing or walking without aid (40 per cent). In the majority of cases (57.5 per cent), the falls did not result in any health-related problems for the resident. Forty per cent of the falls caused minor or moderate health problems and one fall caused a hip fracture. Interestingly, 10.8 per cent of those who had a fall had no preventive measures in place. The most frequently used secondary preventive measures in residents who had had a fall were supervision and increased observation. In regard to preventive measures aimed at minimising injury after a fall, 24 per cent of the residents received some fall injury protection, with 19.5 per cent taking bone strengthening medication.

Malnutrition: When using the malnutrition universal screening tool,⁸ 14.9 per cent of the residents had a high risk of becoming malnourished. Using the LPZ criteria, 24 per cent were actually malnourished, ie their body mass index (BMI) was less than 20, or their BMI was between 21-23, combined with the fact they had not eaten or had hardly eaten for three days, or they were experiencing unintentional weight loss of more than 6kg in the last six months or 3kg in the last month.⁹

Screening the nutritional status of residents was predominantly done by weighing residents and/or through the assessment of the caregivers and/or RN. The intake of 50.8 per cent of residents was monitored daily. Unintentional or undesired weight loss was noted in 17.1 per cent of the residents.

Of those residents who were actually malnourished (n=81), 7.4 per cent had been referred to a dietitian. Other interventions to

combat their malnourishment were energy-enriched diets, supplementary oral nutrition and adjusting the consistency of their food. **Quality indicators:** This aspect of the survey investigated the extent to which management had implemented recommendations from evidence-based guidelines and internationally accepted best practice.¹⁰ Pressure injuries had nine such recommendations, incontinence

seven, malnutrition 14 and falls six. No facility had implemented all recommendations. The recommendation which was most frequently not implemented was providing an information brochure to the residents and/or their family on how to prevent PI, malnutrition or incontinence. The recommendation implemented most frequently was a standard handover policy on admission and discharge for falls and malnutrition.

Discussion

It is important to acknowledge that because of the vulnerability of many residents in aged care, it is impossible to prevent all potential problems. But the survey reveals there is room for improvement in preventing all four care problems. These four problems influence each other and it is important to view them in an integrated way (see Figure 2).

The results show urinary incontinence is the most common problem. Approximately 70 per cent of the patients with malnourishment, PIs and falls were also incontinent. Though not a directly life-threatening issue, incontinence, when seen in relationship to the other care problems, could be an indicator of further impending problems. There is evidence incontinence is related to falls¹¹ and to the development of PIs,¹² as skin resistance to pressure is weakened by the effect of exposure to urine. A recent study showed the increased severity of incontinence in rest-home residents had a strong correlation with their worsened nutritional status.¹³ There is also evidence that incontinence can be prevented in the elderly by routinely taking them to the toilet and other specific interventions.¹⁴

The second most important issue identified was malnourishment. Between 27 per cent and 39 per cent of the malnourished residents had had a fall, were incontinent and/or had a PI. This highlights the importance of keeping our elderly healthy through providing nutritious food. However, simply supplying nutritious

food is not enough. Ensuring residents eat their food is just as important, thus monitoring food intake is important in the aged-care environment. Although, in the majority of cases, residents' weight was monitored monthly, it did not prevent 16 per cent of residents suffering from unintentional weight loss in the previous three to six months. This raises the question of how effectively monitoring of food intake is connected to the prevention of malnutrition.

Ensuring monitoring and risk assessment actually leads to some preventive measures being put in place is "closing the loop" to prevent undesirable outcomes. To reduce residents' risk of malnutrition, staff and managers need to know what evidence-based interventions and best practice guidelines are available that, if implemented, will reduce this risk. One such intervention could be to consult a dietitian.

The third important issue is falls. Eleven to 21 per cent of the residents who experienced a fall in the previous 30 days also had one or more of the other care issues. In preventing falls, attention also needs to be paid to preventing the other three problems. For example, an elderly person who is malnourished is more susceptible to having a fall,¹⁵ and urinary incontinence correlates strongly with falls.¹⁶

The Health Quality and Safety Commission is currently running a programme, Reducing harm from falls (see pg 29 – Ed). Its website has useful material that can support aged-care facilities to reduce the number of falls.^{17,18}

PIs are present among residents with the other three care problems. The prevalence of PIs in this group is around 11 per cent, 3.5 per cent higher than the PI prevalence in all 366 respondents. Although this figure may not seem high, it is internationally accepted that 95 per cent of PIs can be prevented.¹⁹ Prevention requires early, regular risk assessment, combined with an evidence-based PI prevention strategy. While the prevalence of PIs might be low, the consequences can be fatal.²⁰

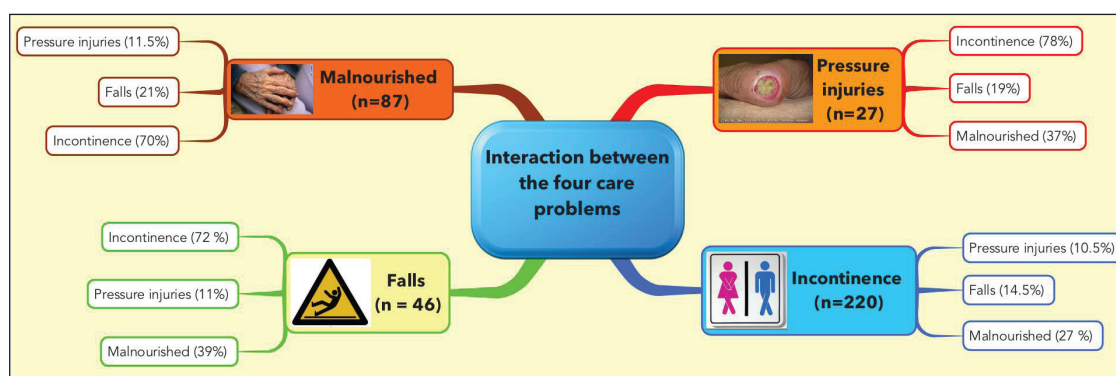


Figure 2: The interaction between pressure injuries, falls, malnutrition and incontinence.

Conclusion

This survey has provided a snapshot on the prevalence and incidence of PIs, falls, malnutrition and incontinence in 16 New Zealand aged-care facilities. It also reveals to what extent evidence-based interventions and processes are used to protect residents from developing one or more of these care problems. Taking part in annual surveys like this can help aged-care facilities gauge how well they are doing in preventing these problems arising. Implementing improvements will ensure better health outcomes for residents.

It is important the knowledge gained from these results – notably the interconnection between the four issues and the importance of prevention – is applied. Improved outcomes reduce the costs of care, ensure all aged-care facilities are committed to prevention and, most importantly, enhance the quality of care for those living in aged-care facilities. •

* The authors would like to thank the residents involved and those who collected the data for their participation in the survey.

* References for this article are available at www.nzno.org.nz/resources/kai_tiaki/reference.

• This article has been reviewed by NZNO principal researcher Léonie Walker, NZNO nursing policy adviser/researcher Jill Clendon, Waikato District Health Board clinical nurse specialist in gerontology Julie Daltrey, and the co-editors of Kai Tiaki Nursing New Zealand.

Jan Weststrate, RN, PhD, is the head of Care-Metric, a consultancy that advises and works with health care management to reduce harm by improving the quality of care provided to patients/residents of aged-care facilities.

Kathryn Adams, RN, PhD, is a Care-Metric associate, educator and researcher, committed to improving the quality of residential care for the elderly.