Falls prevention among older adults at a Nursing home in a northern suburban of Perth in Western Australia

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Abstract

The objective was to identify factors leading to falls and determine the role of nurses and carers play in falls prevention. A retrospective audit of the performance of nurses and carers regarding falls prevention among older adults was used. Residents who had a fall during July 2015 (n=25) were identified using purposeful sampling. Data for this study were collected from the files of these residents. Data analysis was done by using the Fisher exact test which was appropriate for the collected data.

Residents aged 85-89 years had the most falls (32%); however, one resident who fell five times in the studied month was aged 90 years. Residents aged 70-74 years had the lowest number of falls (8%). Twenty-two (88%) of the residents who fell were incontinent, 20 (80%) were confused, 19 (76%) were using walking aids and four (16%) were blind. Only five (20%) residents who reported falls in the studied month were independent.

Most falls occurred among residents of advanced age, and among those who had incontinence, were confused and failed to use walking aids. Residential home staff should increase vigilance during specific times and monitors closely residents with a high risk of falls.

Introduction

The global population of people aged 60 years and above will reach two billion by 2050 resulting in more age-related diseases and conditions, such as trauma and injuries related to falls. In 2010, falls were responsible for 80% of disabilities resulting from injuries (excluding road traffic accidents). Older adults are prone to falls because of the changes in their bodies that occur with aging and diseases that occur in old age. Aging is a complex process that involves many variables (for example, lifestyle, diseases and illnesses, a person’s genetic makeup), which interact to influence the manner in which a person ages. Research suggests that there are more falls among those aged 80 years and over than in any other age group.

Falls in older adults can lead to serious complications, including bone fractures, cerebral haematoma, internal organ rupture, and death. These complications negatively affect the person’s wellbeing and their family and increase the financial burden on the government. However small a fall may be, it can leave a long-lasting mark on an older adult. Psychological and emotional complications are also associated with falls, which may include fear of falling again, loss of confidence, increased anxiety, fear of mobilising and fear of using toilet seats.

The cost of treating injuries due to falls among older adults is high, and most stakeholders in developed countries emphasise falls prevention. For example, in the United Kingdom, 450,000 people aged ≥65 years were admitted to the hospital as a result of a fall in 2010-2011. A colossal amount of money is spent yearly on treating and managing fall injuries among older people. From the United States statistics a total of $31.3 billion direct medical cost was recorded in 2015 and is projected to reach $100 billion in the year 2030 (Table 1). In Australia, around 7% of total healthcare expenditure is attributed to injuries that are partly associated with the aging population, with patient costs related to older adult trauma being 30% higher than those for non-older adult patients. Another Australian study showed that falls were the second largest contributor to the economic burden from injuries with respect to lifetime costs, after motor vehicle injuries.

Without adequate care, older adults are predisposed to multiple falls, especially when carrying out activities of daily living such as accessing the toilet or reaching in a cupboard for items they need. Other factors such as loss of balance and reduced dietary intake associated with older adults (aged over 65 years) also predispose this group to risk for falls. According to the Australian Institute of health and welfare (2019), a lot of studies were done on aged population and hospitalization which is more secondary prevention and limited researches on primary prevention. This study emphasize primary prevention in line with the sustainable development goal 3 (target 3.6) that aims to halve the number of preventable deaths and injuries globally by 2030.
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home. Identified data on the residents’ age, cause of the fall (for example, pushed by another resident, forgot to use walking aids, slippery floor), location of the fall (walking, sitting, sleeping), time of the fall (morning, lunch time, afternoon, night), fall witnessed (yes or no), falls prevention measures in place (yes or no) and falls caused by another resident (yes or no) were retrieved. Statistical analysis of retrieved data was carried out using inferential statistics (fisher exact test) which is recommended for smaller data as opposed to large data.

Permission to undertake the study was granted by the Department of Health Sciences and Engineering, Edith Cowan University and the Ethics Committee of the Nursing home. The sampled residents provided consent for the researchers to access their confidential files for data collection.

Results

The total number of falls reported in the month of July 2015 was thirty-five. Fourteen (56%) residents fell once, eight (32%) fell twice and one (4%) had five falls. Residents aged 85-89 years had the most falls (n=8, 32%) and those aged 70-74 years had the lowest number of falls (n=2, 8%). Eighteen residents (72%) fell while walking, six (24%) fell while sitting and one (4%) fell while sleeping (rolling from bed to the floor) this was related to the FRAT score of the residents with a P-value 0.102 possibly related to the small number of residents studied. Residents had high (n=22, 88%) and medium risk (n=3, 22%) in the falls risk assessment tool score. The majority of falls occurred in the residents’ rooms (n=22, 61.1%) and dining and activity rooms (n=4, 11.1%) (P=0.084) with a few occurring in other locations.

The falls were related to (more than one aspect applied to the residents being studied); incontinence (n=22, 88%), confusion (n=20, 80%), not using walking aids (n=19, 76%), impaired vision (n=4, 16%) or unidentifiable reasons (n=5, 20%). Most of the falls happened in the late afternoon (3.01-6.00 pm) (27.8%), early morning (6.00-9.00 am) (25%) or early afternoon (12.01-3.00 pm) (19.4%) (P=0.129).

Table 1. Characteristics of residents who experienced falls in July 2015.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>FRAT score</th>
<th>Total</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medium</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Age, years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70-79</td>
<td>1 (0.48) [0.56]</td>
<td>2 (2.52) [0.11]</td>
<td>3</td>
</tr>
<tr>
<td>80-89</td>
<td>2 (0.96) [1.13]</td>
<td>4 (5.04) [0.21]</td>
<td>6</td>
</tr>
<tr>
<td>90-99</td>
<td>1 (2.56) [0.35]</td>
<td>15 (13.44) [0.18]</td>
<td>16</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>0.2076</td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Location of the falls</td>
<td></td>
<td></td>
<td>0.25</td>
</tr>
<tr>
<td>Residents rooms</td>
<td>1 (2.40) [0.82]</td>
<td>19 (17.60) [0.11]</td>
<td>20</td>
</tr>
<tr>
<td>Activity/lounge</td>
<td>1 (0.36) [1.14]</td>
<td>2 (2.64) [0.16]</td>
<td>3</td>
</tr>
<tr>
<td>Outside</td>
<td>1 (0.24) [2.41]</td>
<td>1 (1.76) [0.33]</td>
<td>2</td>
</tr>
<tr>
<td>P-value</td>
<td>0.084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timing of the falls</td>
<td></td>
<td></td>
<td>0.129</td>
</tr>
<tr>
<td>Morning</td>
<td>1 (1.76) [0.33]</td>
<td>10 (9.24) [0.06]</td>
<td>11</td>
</tr>
<tr>
<td>Afternoon</td>
<td>1 (1.60) [0.23]</td>
<td>9 (8.40) [0.04]</td>
<td>10</td>
</tr>
<tr>
<td>Night time</td>
<td>2 (0.64) [2.89]</td>
<td>2 (3.36) [0.55]</td>
<td>4</td>
</tr>
<tr>
<td>Activity of residents at time of fall</td>
<td></td>
<td></td>
<td>0.102</td>
</tr>
<tr>
<td>Sleeping/sitting</td>
<td>2 (0.80) [1.80]</td>
<td>3 (4.20) [0.34]</td>
<td>5</td>
</tr>
<tr>
<td>Walking</td>
<td>2 (3.20) [0.45]</td>
<td>15 (16.80) [0.09]</td>
<td>20</td>
</tr>
</tbody>
</table>

Discussion

The studied Nursing home showed excellent compliance with planning and making residents’ nursing care plans available for staff, referring residents after a fall, informing relatives about the fall and updating the resident’s Falls Risk Assessment tool score. Most residents who falls had a high risk of falls score. This risk assessment tool has been shown to offer the best fall risk prediction up to 73% and 75% in both sensitivity and specificity respectively. 19 Assessment of the residents was adequately documented In this nursing home and care plan availed in their files.

Among all the recorded falls, six residents had documented skin tears, but there were no other documented injuries. Regarding caregiver’s roles there was 100% compliance with assessing residents for risk for falls; however, actual prevention was lacking as 80% of the falls were not witnessed to initiate preventive measures.
Conclusions

Falls among older adults continues to increase among those living in aged care homes. Despite residents being assessed for risks of falls, factors such memory impairment, incontinence, and visual impairment were among the causes of falls among older adults. Caregivers need to be sensitised to be more vigilant and alert to avert falls among residents; for example, by constantly reminding them to use walking aids, placing them within reach and assisting them with their daily routines. The results of this research are key in predicting the moments and time when aged residents are likely to fall and give a clear insight into primary prevention rather than secondary and tertiary prevention.

References

