This is the second fact sheet in a series produced by Health Promotion England (HPE). It provides facts and figures on accidental injuries, particularly falls, and looks at how falls can affect older people. It is intended to be a quick reference guide and resource for policymakers, providers of health and social services and those in other sectors whose work involves older people.
Introduction

The prevention of accidents was identified as one of four key priority areas in the Government’s public health strategy, *Saving lives: our healthier nation*. This was superseded in July 2000 by *The NHS Plan: A plan for investment, a plan for reform* (July 2000). The plan sets out a commitment to providing better and new services for older people and acknowledges the importance older people attach to ‘promoting independence in old age’.

Accidents and in particular falls are a major cause of death and disability in older people – the accidental death rate among older people is higher than for other age groups. Many accidental injuries and falls go unreported and statistics usually only cover older people living in private households, therefore excluding those living in residential, nursing and care homes.

The UK population aged 75 and over has almost five times the rate of accidental deaths as the total population. Those aged 75 and over have a death rate of 114 per 100,000 caused by accidents compared with a death rate of 21 per 100,000 in all age groups.¹

The main cause of fatal accidents for those aged 65–74 are falls, traffic-related accidents, and fires. Falls are a more important cause of death for those aged 75–84 and are the main cause of accidental death among those aged 85 and over.² Forty per cent of all fatal injuries in the UK happen in the home, which is the most common accident location for older people.

Home accidents

Each year in the UK there are some 3,163,000 home accidents involving males and 2,548,000 accidents involving females of all ages. The 65 and over age group have a lower rate of accidents than younger people, but their injuries sustained tend to be more serious. More older women are involved in home accidents than older men, partly due to the larger proportion of women in the older population.

- Men aged 65–74 are involved in 89,000 home accidents a year
- Women aged 65–74 are involved in 157,000 home accidents a year.

This trend increases among older age groups.

- Men aged 75 and over are involved in 102,000 home accidents a year.
- Women aged 75 and over are involved in 303,000 home accidents a year.³
Accident trends

Based on past trends an increase in home accident rates in all age bands is forecast.

<table>
<thead>
<tr>
<th>Age band</th>
<th>Annual rate per 10 million population</th>
<th>Estimated change</th>
</tr>
</thead>
<tbody>
<tr>
<td>65–74</td>
<td>259</td>
<td>308</td>
</tr>
<tr>
<td>75 and over</td>
<td>515</td>
<td>668</td>
</tr>
<tr>
<td>All ages 0–75 and over</td>
<td>446</td>
<td>522</td>
</tr>
</tbody>
</table>

Source: Research on the patterns and trends in home accidents. DTI, 1999

The proportion of serious accidents is increasing slightly for 65–74 year olds, increasing substantially for over 75-year-olds while decreasing among other age groups. The average age of the 75 and over group is increasing, and this may result in greater vulnerability to the consequences of an accident.

<table>
<thead>
<tr>
<th>Age band</th>
<th>Annual rate per 10 million population</th>
<th>Estimated change</th>
</tr>
</thead>
<tbody>
<tr>
<td>65–74</td>
<td>31</td>
<td>39</td>
</tr>
<tr>
<td>75 and over</td>
<td>149</td>
<td>231</td>
</tr>
</tbody>
</table>

Source: Research on the patterns and trends in home accidents. DTI, 1999

Injuries and disabilities caused by accidents

Injuries

The main types of injury experienced by older people are open wounds, other soft tissue injuries, bone injuries, bruises and contusions. Arms, legs and shoulders are the parts of the body most frequently injured. Major accidents to women over the age of 55 are more likely to result in broken bones. Twenty per cent of accidents in this age group lead to broken bones.

Disabilities

It is difficult to establish the causal relationships between accidental injury, health conditions and disabilities. Figures quoted for disabilities caused by accidents need to be interpreted with caution.
In a 1995 survey in England:

- 10% of women and 15% of men aged 55–65
- 9% of women and 13% of men aged 65–74
- 9% of women and 9% of men aged 75–84
- 16% of women and 10% of men aged 85 and over

reported that they had at least one disability caused by an accident.6

**Falls**

Falls represent the most frequent and serious type of accident in the over 65’s age group. They are a major cause of morbidity and death in older adults.

Community studies have estimated that about a third of people aged 65 and over will fall at least once a year. This rises to approximately half of those aged 85 and over.7

Falls experienced by older people are more common among those with a longstanding illness or disability and the injuries sustained are generally more serious than those experienced by younger persons.

There are over a million non-fatal accidents each year resulting from falls, almost a quarter of which are serious. People aged 65 and over account for almost half of the serious cases and a fifth of the minor cases.

<table>
<thead>
<tr>
<th>Non-fatal home falls among older people, UK 1995–7*</th>
<th>65-74</th>
<th>75+</th>
<th>All ages 0-75+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor</td>
<td>45,000</td>
<td>75,000</td>
<td>1,083,000</td>
</tr>
<tr>
<td>Serious</td>
<td>18,000</td>
<td>51,000</td>
<td>237,000</td>
</tr>
<tr>
<td></td>
<td>63,000</td>
<td>126,000</td>
<td>1,320,000</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor</td>
<td>93,000</td>
<td>246,000</td>
<td>1,371,000</td>
</tr>
<tr>
<td>Serious</td>
<td>54,000</td>
<td>216,000</td>
<td>462,000</td>
</tr>
<tr>
<td></td>
<td>147,000</td>
<td>462,000</td>
<td>1,833,000</td>
</tr>
</tbody>
</table>

Source: Accidental falls in the home. DTI, 1999

Men and women are equally at risk of fatal falls though older women, after allowing for the difference in their numbers, are twice as likely as men to have a serious but non-fatal fall.

Up to the age of 64 nearly twice as many men as women die in falls. Between the ages of 65 and 74 the numbers are similar for both sexes, but over 74 twice as many women die as men.8
Fatal home falls among older people, UK 1995–7

<table>
<thead>
<tr>
<th>Age</th>
<th>40–64</th>
<th>65–74</th>
<th>75+</th>
<th>All ages 0–75+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>595</td>
<td>474</td>
<td>1,231</td>
<td>2,468</td>
</tr>
<tr>
<td>% of total males</td>
<td>24</td>
<td>19</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Women</td>
<td>324</td>
<td>408</td>
<td>2,496</td>
<td>3,306</td>
</tr>
<tr>
<td>% of total females</td>
<td>10</td>
<td>12</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>Total all</td>
<td>919</td>
<td>882</td>
<td>3,727</td>
<td>5,774</td>
</tr>
<tr>
<td>% of total</td>
<td>16</td>
<td>15</td>
<td>65</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Accidental falls in the home. DTI, 1999

Types and locations of falls

The home (whether private or residential) is the most common place for falls. Over 75% deaths due to falls occur in the home environment. The street is the next most likely place for people aged 65 and over to suffer from a fatal fall.

Falls from stairs or steps

The largest proportion are due to falls from stairs or steps with over 60% of deaths resulting from accidents on stairs. Nearly 1,000 people fall to their deaths on their own stairs each year. Fifteen per cent result from falls off a chair or out of bed etc (between two levels). A similar number is caused by a slip or a trip on the same level, although sometimes an object such as a mat or a rug may cause the trip.
### Falls on stairs or steps by older people in the home, UK, 1996–8

<table>
<thead>
<tr>
<th>Age</th>
<th>65–74</th>
<th>75–84</th>
<th>85+</th>
<th>All ages 0–85+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deaths</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>399</td>
<td>568</td>
<td>293</td>
<td>2,234</td>
</tr>
<tr>
<td>Women</td>
<td>372</td>
<td>578</td>
<td>445</td>
<td>1,877</td>
</tr>
<tr>
<td>Total</td>
<td>771</td>
<td>1,146</td>
<td>738</td>
<td>4,111</td>
</tr>
<tr>
<td>Deaths = 65% of all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Very serious injuries</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>2,700</td>
<td>3,800</td>
<td>1,800</td>
<td>14,600</td>
</tr>
<tr>
<td>Women</td>
<td>7,200</td>
<td>11,800</td>
<td>6,900</td>
<td>37,500</td>
</tr>
<tr>
<td>Total</td>
<td>9,900</td>
<td>15,600</td>
<td>8,700</td>
<td>52,100</td>
</tr>
<tr>
<td>Very serious injuries = 66% of all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Serious (inc very serious) injuries</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>6,000</td>
<td>6,800</td>
<td>2,600</td>
<td>76,100</td>
</tr>
<tr>
<td>Women</td>
<td>17,400</td>
<td>19,600</td>
<td>9,400</td>
<td>131,400</td>
</tr>
<tr>
<td>Total</td>
<td>23,400</td>
<td>26,400</td>
<td>12,000</td>
<td>207,500</td>
</tr>
<tr>
<td>Serious injuries = 29% of all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: *Falls on stairs in the home involving older people.* DTL, 2000

Accident rates for falls from stairs or steps increase as people get older but, because the number of people in each age band decreases, the actual number of falls decline.

Although the numbers of falls decline with increasing age, the proportion that are very serious increases substantially, and for the over 85s nearly half involve admission to hospital or a significant fracture.

Location of non-fatal falls from stairs or steps:
- over 60% occur on a staircase – these tend to get more serious as the person gets older
- 18% occur over interior steps, usually a flight of two or three steps between adjacent rooms
- 13% occur on outside steps, either in the garden or leading to the front door
- 7% occur over the doorstep, entering or leaving the house
- 1% occur from a stepladder while cleaning windows etc.

### Predicted trends for falls

While there has been a steady decline in the number of fatal falls for older people, the number of non-fatal falls is predicted to rise.
Trends in falls by older people, United Kingdom, 1996–2010

<table>
<thead>
<tr>
<th>Age band</th>
<th>Cases in 1996</th>
<th>Estimated cases in 2010</th>
<th>Estimated % change</th>
<th>Cases per million in 1996</th>
<th>Estimated in 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fatal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65–74</td>
<td>73,129</td>
<td>85,557</td>
<td>+17.0</td>
<td>14,478</td>
<td>16,153</td>
</tr>
<tr>
<td>75+</td>
<td>170,032</td>
<td>235,371</td>
<td>+34.8</td>
<td>40,651</td>
<td>52,256</td>
</tr>
<tr>
<td>All ages</td>
<td>1,033,254</td>
<td>1,210,254</td>
<td>+17.1</td>
<td>17,577</td>
<td>20,042</td>
</tr>
<tr>
<td>Fatal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65–74</td>
<td>253</td>
<td>152</td>
<td>–39.7</td>
<td>50</td>
<td>29</td>
</tr>
<tr>
<td>75+</td>
<td>1,308</td>
<td>674</td>
<td>–48.5</td>
<td>312</td>
<td>150</td>
</tr>
<tr>
<td>All ages</td>
<td>1,872</td>
<td>1,106</td>
<td>–40.9</td>
<td>32</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: Research on the patterns and trends in home accidents. DTI, 1999

Effects of falls

Injuries

Almost three-quarters of falls among the 65 and over age group result in arm, leg and shoulder injuries. Older people are also more likely to injure more than one part of their body, with 25% of falls causing injury to more than one part of the body, compared to an average of 16% among all age groups. One in every five falls among women aged 55 and over results in a fracture or fractures requiring hospital treatment.

In a 1996 survey:

- 31% of those aged 65–74; 17% of those aged 75–84; and 20% of those aged 85 and over suffered from broken bones as a result of a fall.

Other main injuries suffered were bruising or crushing, cuts, wounds resulting from piercing and straining or twisting a part of the body.

Although most falls do not result in serious injury, being unable to get up exposes the faller to the risk of hypothermia and pressure sores.

Mental health

The psychological effects of falls can be more damaging than the physical injury. The fear of future falls, combined with a reduced level of personal confidence may be sufficient to inhibit future mobility levels. The consequences are a reduced level of independence, isolation, lower levels of social contact and depression. Falls are frequently cited as a major contributing factor in admissions to long-stay institutions.
Routine daily activities

The severity of a fall can be indicated by the length of time that normal activities are affected.

### Percentage of falls that affected the normal activities of older people for more than one week, England 1995-6

<table>
<thead>
<tr>
<th>Age</th>
<th>50–59</th>
<th>60–69</th>
<th>70–79</th>
<th>80 and over</th>
<th>All aged 50 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 week to 1 month</td>
<td>39</td>
<td>29</td>
<td>27</td>
<td>9</td>
<td>29</td>
</tr>
<tr>
<td>1–2 months</td>
<td>13</td>
<td>14</td>
<td>10</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>3 or more months</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 week to 1 month</td>
<td>33</td>
<td>28</td>
<td>24</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>1–2 months</td>
<td>20</td>
<td>17</td>
<td>21</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>3 or more months</td>
<td>12</td>
<td>15</td>
<td>11</td>
<td>19</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: Social focus on older people. ONS, 1999

- In almost a quarter of major accidents involving falls experienced by men aged 50 and over, normal activities were disrupted for at least a month – this rose to almost two-fifths of those aged 80 and over.
- Almost a third of falls by women aged 50 and over affected their normal activities for a month or more.¹⁰

### Risk factors for falls

Research has indicated a wide range of multiple risk factors for falls.

These include:

- physical disability and lack of mobility, balance and gait disorders
- mental functioning including cognitive impairment and depression
- nutritional status – vitamin D and calcium deficiency
- medication – analgesics, sedatives, antidepressants, multiple drug regimes (prescribed and over the counter medicines) etc
- weak muscles, poor balance and gait associated with lack of exercise
- acute and chronic diseases and disorders including stroke and heart disease
- impaired vision
- female gender
- lifestyle factors such as alcohol use
- environmental hazards
- a history of previous falls.
Mobility and functionality

Lack of mobility is a significant risk factor for falls and the likelihood of having difficulties with mobility increases with age. Older women are more likely to report mobility problems than men, partly because they are more likely to have musculoskeletal problems such as rheumatoid arthritis, osteoarthritis or osteoporosis. People living alone are also more likely to report problems with mobility.

Effect of lack of mobility on daily activities

The ability to perform activities of daily living can be used to calculate mobility and indicate susceptibility to falls.

A General Household Survey measured the ability of people aged 65 and over to perform the following functions:

- get out of doors and walk down the road
- get up and down stairs and steps
- get around the house (on the level)
- get to the toilet
- get in and out of bed

- one in ten men and one in five women could not manage at least one activity
- 6% of men and 7% of women aged 65–69 were unable to do at least one of the activities without help
- 24% of men and 52% of women aged 85 and over were unable to do at least one of the activities without help.

The activities most likely to cause difficulties were walking down the road and getting up stairs and steps.

Among all people aged 65 and over:

- 12% were unable to manage going out and walking down the road on their own
- 9% were unable to get up and down stairs unaided.

Problems with getting about increased with age.

- 5% of those aged 65-69 rising to 37% of those aged 85 and over were unable to walk down the road on their own
- 3% of those aged 65-69 rising to 22% of those aged 85 and over could not manage to walk down the road even with help
- 5% of those aged 65-69 rising to 25% of those aged 85 and over were unable to get up and down stairs and steps unaided
- 12% of those aged 85 and over were unable to manage steps or stairs even with help.
Functional capacity declines with age. Strength, endurance capacity, bone density and flexibility deteriorates at about 10% a decade. Muscle power is lost even more quickly at around 30% a decade. One major impact of reduced functional capacity is the inability to prevent a trip becoming a fall.

Leg strength
- 25% of women and 7% of men aged 70–74 do not have sufficient strength in their legs to get out of a chair without using their arms.\(^\text{13}\)

Stair climbing
- 7% of men and 28% of women aged 50–74 lack the leg strength and power to climb stairs easily. Age-related decline is particularly evident for women, as almost 50% of those aged 70–74 find it difficult to climb stairs.\(^\text{13}\)

Walking
- 9% of men and 38% of women aged 50–74 cannot walk comfortably at a 20 minute per mile pace (3 miles per hour). Effects of age are similarly pronounced, with 35% of men and 80% of women unable to keep to this pace of walking.\(^\text{13}\)

Men are typically 20–30% stronger than women of the same age. This may help to explain the increased disability of very old older women.

Vision
- Besides being important for monitoring the walking surface and detecting obstacles, vision also contributes to balance. Both depth perception and judgement of distance have been implicated as involved in fall accidents.\(^\text{14}\)

(For more details on accidents and eyesight problems see HPE fact sheet 3 Older people, visual impairment and accidents).

Environmental risks
Environmental hazards are also significant and it has been suggested that they are implicated in between about a third and a half of falls among older adults.

Environmental risks cover a wide range of issues such as loose carpets, poor lighting, badly fitting shoes, stairs, steps etc.

Environmental problems connected with stairs may include poorly designed or absent handrails, stairs that are too steep, step surface or covering in poor condition, objects left on steps and poor lighting. Older people may also be less able to maintain their stairs in good repair.

Often, houses in which older people live were designed for fit, active persons, and do not cater well for changing needs and abilities as people age.\(^\text{14}\)
Fractures and osteoporosis
Fractures, particularly hip fractures are one of the most debilitating results of an accidental fall. Three million people\(^{15}\) in the UK suffer from osteoporosis, a condition that causes a reduction in bone mass and density, leading to increased risk of fracture.

- One in three women and at least one in 12 men over the age of 50 will develop osteoporosis during their lifetime.
- One in three women and one in four men will have an osteoporotic fracture.\(^{16}\)

Each year in the UK:
- 70,000 hip fractures
- 50,000 wrist fractures
- 40,000 spinal fractures
occur as a result of osteoporosis.\(^{15}\)

Hip fractures
Ninety per cent of hip fractures occur among those aged 50 and over. 80% of the total are among women.\(^{17}\)

The incidence of hip fracture is rising, and this increase is more than would be expected after allowing for the rise in numbers in the older population.\(^{18}\) The problem is likely to increase with the growth in the population aged over 65 and the decline in levels of exercise.\(^{19}\)

Hip fracture is a major cause of morbidity and mortality. It can result in medical complications, infections, blood clot in the leg and failure to regain mobility.

- 50% of hip fracture patients lose the ability to live independently.
- Up to 33% of hip fracture patients die within one year of their accident.\(^{16}\)

Risk factors for osteoporosis
There are many risk factors for osteoporosis which include:
- genetic predisposition
- poor nutrition in childhood and adolescence
- onset of menopause at an early age
- decreased exposure to sunshine and low vitamin D intake
- low dietary calcium
- alcohol and cigarette use
- caffeine consumption
- low weight
- lack of regular exercise.\(^{19}\)
Traffic-related accidents

Older people’s involvement in traffic-related accidents is relatively low compared with other age groups.

In 1998, among all road users aged 60 and over in Great Britain:

- 860 were killed
- 5,350 were seriously injured
- 25,542 were slightly injured.\(^{20}\)

While those aged 60 and over account for 21% of the population, they account for 10% of all road casualties and 26% of all road fatalities.

- 62% of older people killed were car users and 27% were pedestrians.

While overall casualties are dominated by car occupants, the death rate is higher for pedestrians than other road user types and other age groups.

The rate of older pedestrians being killed in road accidents rises with age.

<table>
<thead>
<tr>
<th>Age of pedestrians</th>
<th>Killed %</th>
<th>Injured %</th>
</tr>
</thead>
<tbody>
<tr>
<td>60–69</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>70–79</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>80 and over</td>
<td>19</td>
<td>4</td>
</tr>
<tr>
<td>All aged 60 and over</td>
<td>46</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: Road accidents in Great Britain: the casualty report 1998. DETR, 1999

Other accidents

The other main causes of accidental death among older people are:

- uncontrolled fire and flames, burns and scalds
- environmental factors, particularly excessive cold leading to hypothermia
- choking or suffocating when ingesting food.\(^{2}\)

Although there is no comprehensive data available on minor accidents which do not require a GP or hospital visit, factors such as impaired mobility, slower reactions and frailty means that older people are susceptible to injuries such as burns, scalds, cuts and bruises from using fires, electricity, gas and household appliances.

For older people the rate of risk for severe accidents involving burns and scalds (57.9 per million) is lower than other age groups.
However, older people are at the highest risk for fatal injuries from burns and scalds – four to five times greater than the population as a whole. Pre-existing conditions often contribute to their deaths.22

Over 50% of older people experience bruising or crushing a part of the body as a result of a minor home accident, while around 30% suffer from cuts and grazes as a result of a minor accident.6

**Use of health services**

**GP consultations**

In 1999, out of a total of 6,925,000 people of all ages estimated to have consulted a GP as a result of accidental injury or poisoning:

- 604,000 were aged 65–74
- 506,000 were aged 75–84
- 273,000 were aged 85 and over23

**Hospital treatment for accidents**

- 56% of women and 57% of men aged 75 and over seek hospital advice after experiencing an accident.3
- Each year 57,000 older people attend hospital accident and emergency departments due to accidental fall on steps or stairs.
- Each year 22,000 experience serious injury, suffering a fracture, concussion or otherwise requiring hospital admission for more than a day.14
- Hip fractures account for 20% of the orthopaedic bed occupancy in the UK.15
- Predictions indicate an increase of 30% in non-fatal falls requiring hospital attendance for those aged 75 and over for the period up to 2010.14

Older people are more likely to require further treatment after attending a hospital accident and emergency department.

In a 1998 survey covering patients of all ages:

- of those requiring no further treatment
  - 4.6% were aged 65–74 and 7.5% were aged 75 and over
- of those admitted as in-patients, with no follow-up treatment
  - 7.4% were aged 65–74 and 44% were aged 75 and over
- of those admitted as in-patients, followed by out-patient referral
  - 13% were aged 65–74 and 38% were aged 75 and over
of those admitted as in-patients, followed by transfer to a special hospital
- 12% were aged 65–74 and 69% were aged 75 and over

of those admitted as in-patients, followed by transfer to a long-stay hospital
- 7% were aged 65–74 and 90% were aged 75 and over.

Finished consultant episodes

In 1996–7 the rate of finished consultant episodes (completed courses of treatments) per 1,000 population for injury and poisoning was:
- 16 among women and 13 among men aged 65–74
- 36 among women and 24 among men aged 75–84
- 77 among women and 67 among men aged 85 and over.

This compared with an average rate of 8 for women and 11 for men aged 45–64.

In-patient stays

Older people are more likely to be detained in hospital for a longer period following an accident. The length of in-patient stays increases with age.

Source: Home Accident Surveillance System. DTI, 2000

Percentages of older people detained in hospital following a home accident, 1998
Mean in-patient stays are
- 12.7 days for those aged 65–74
- 16 days for those aged 75 and over
This compares with 5.8 days for those aged 15–64.

Costs of accidents

As accidental injuries among older people often result in long in-patient stays in hospital, their treatment takes up a large portion of the health budget. Injury or disability as a result of an accident may also necessitate the provision of temporary or permanent care, social care, domiciliary help or residential care.

- People aged 75 and over make up 20% of finished consultant episodes involving injury and poisoning.
- Based on 1998 cost data it is estimated that a primary care group’s annual expenditure on fracture management is £673,840 for acute care plus £1,446,760 for follow up care. (assuming a population of 100,000).
- Each individual hip fracture costs £5,000 for hospital care plus £12,000 for long stay hospital, social care, follow up and drug costs.
- In 1997, the cost of treating hip fractures in the UK was estimated at £940 million per year. New research indicates that this has almost doubled to £1.7 billion per year – almost £5 million per day. A single hip fracture now costs £13,000 in the first year plus £7,000 for nursing home care typically in the second year.

Prevention strategies for falls

A review of the evidence of fall prevention strategies for adults aged 65 and over has found that:

- there is strong evidence that exercise interventions can improve strength, balance and flexibility in older adults, and some evidence that exercise can reduce fall risk
- there is strong evidence that multifactoral approaches have produced positive results. These include individual and home assessments with the modification of personal risk factors such as medical referral, medication review and exercise programmes. There is less evidence of the effectiveness of interventions to modify the home environment, although the evidence that injurious fall are reduced by such interventions is increasing
- overall quality of evidence in the area of individual assessment, nursing strategies and prevention of falls in institutions is weak. There is little evidence that surveillance equipment reduces fall injury in institutional settings
• there is growing evidence that vitamin D and/or calcium supplements help to improve bone density and help to reduce fall injury
• there is some evidence that hip protectors reduce injury from falls
• there is need for more research to identify types and designs of footwear which offer good frictional resistance and will improve balance.

Physical exercise can reverse age and activity related decline relatively quickly and help improve strength and mobility.

(For further details on older people and physical activity see HPE fact sheet 5: Older people and physical activity)

A number of fracture prevention studies have found vitamin D and calcium supplements to be effective in preventing fractures in both home and residential settings. In addition, treatment with bisphosphonates have been shown to prevent fractures among women with low bone density.26

As part of its work on fracture prevention, the National Osteoporosis Society has developed a strategy from the perspective of a primary care group serving a population of 100,000. The programme includes:

• population-wide bone health promotion
• referral for bone density (DXI) scans for those at high risk
• prescribing costs
• input from specialist clinician, GPs and other health professionals, including a part-time osteoporosis nurse.

It is estimated that this service would cost the same as managing 15 out of the 104 hip fractures which occur in a population of 100,000 per year.15

The DTI recommends that preventive measures should be taken to reduce environmental hazards through home design – although the greatest impact of this will be on new homes so it will take time for improvements to have a wide effect. Some immediate remedial actions can be taken such as the fixing of handrails to aid stability and increase confidence.14

HPE, in association with the DTI, runs the Avoiding slips, trips and broken hips campaign. The aim of the campaign is to raise public and professional awareness of the risk to older people of falls in the home including the stairs. Many falls are preventable and the campaign information provides simple, practical advice on making the home a safe environment.
Policy issues

As well as the cost benefits, interventions have the potential to prevent reduction in quality of life that often follows serious accidents among older people. An effective strategy can mobilise resources, influence how organisations work and encourage the consultation and engagement of older people themselves.

Accident prevention strategies need to take account of the growing numbers of older and frailer people over the next few decades. Safety education approaches need to be tailored to different circumstances. It may be appropriate to begin this process at a time when people retire, when most are still active enough to be able to make changes in their physical environment.

The majority of older people are women, who live longer and often live alone after the death of a spouse. Safety in the home is a particularly important issue for older women who have more chronic health and mobility problems than men. Early discharge home from hospital may increase the risk of accidents among people still in the process of convalescing from illness or injury and when accident prevention strategies are implemented they need to take into account that an older person’s home is not necessarily a safe place.

References


Contacts

Age Concern
Astral House,
1268 London Road
London SW16 4ER
tel. 0208 765 7200

Department of Trade and Industry
Produce a range of research and information on home accidents
DTI Publications Orderline, Admail 528,
London SW1W 8YT
tel. 0870 1502 500
e-mail. dtipubs@eclogistics.co.uk

Health Promotion England
40 Eastbourne Terrace
London W2 3QR
tel: 0207 7725 9030

Help the Aged
207–221 Pentonville Road
London N1 9UZ
tel. 0207 278 1114

National Osteoporosis Society
Manor Farm
Skinners Hill
Lamerton
Bath BA2 0PJ
tel. 01761 471771

RoSPA
Edgbaston Park
353 Bristol Road
Edgbaston
Birmingham B5 7ST
tel. 0121 248 2000

Websites

Age Concern
www.ageconcern.org.uk

Department of the Environment, Transport and the Regions
Road safety
www.detr.gov.uk

Department of Health
www.doh.gov.uk/osteop.htm

Department of Trade and Industry
www.dti.gov.uk

Health Development Agency
HealthProm contains references and links to a range of sources which aim to provide the most up-to-date information on public health policy, evidence-based health education and health promotion.
www.hda-online.org.uk/hdawebsites.htm

Health Promotion England
www.hpe.org.uk

Help the Aged
www.helptheaged.org.uk

Institute of Home Safety
www.homesafe.dircon.co.uk/home.htm

National Framework for Older People
www.doh.gov.uk/nsf/older.htm

National Osteoporosis Society
www.nos.org.uk

Royal Society for the Prevention of Accidents
www.rospa.org.uk
Avoiding slips, trips and broken hips fact sheets

These fact sheets are part of the Avoiding slips, trips and broken hips campaign which is run by Health Promotion England in association with the Department of Trade and Industry. They provide up to date facts and figures about the subjects described in the title and aim to be a resource and guide for policy makers and those from the statutory and voluntary sectors. They will also benefit all those who have a responsibility for the health and well-being of older people.

1. Older people in the population
2. Older people and accidents
3. Older people, visual impairment and accidents
4. Promoting the health of older people: evaluating approaches and methods
5. Older people and physical activity

All these fact sheets are available from the Department of Trade and Industry Publications Orderline: tel. 0870 1502 500.

e-mail: dtipubs@eclogistics.co.uk

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Health Promotion England
40 Eastbourne Terrace
London  W2 3QR
www.hpe.org.uk