

# Falls among older adults in the EU-28: Key facts from the available statistics

## 1. IN SUMMARY

- In the EU, an average of 35,848 older adults (65 and above) are reported to have died from falls on an annual basis (data 2010-2012). This figure is expected to be an underestimation of the true number of fall-related deaths.
- Falls are also the predominant cause (58%) of injury related emergency department (ED) attendances for older people within the EU.
- For each fall related death, in adults aged 65 and above in the EU, there are:
  - 40 fall-related hospital admissions
  - 65 fall-related ED attendances

Injury pyramid for falls in people aged 65 and above in the EU:



- **Approximately 36,000 older people are reported to be fatally injured from falls every year in the EU**
- **1,443,000 fall-related injuries are admitted to hospital each year (40 x number of deaths)**
- **2,314,000 older people attend emergency departments with fall-related injuries each year (65 x number of deaths)**

Age and gender related functional decline and impairment result in an increased risk of fall related injuries in older people. The costs of falls are high, both to the individual, carers and society. The health care expenditure for treating fall-related injuries in the EU is estimated to be 25 billion Euros each year.

However, falls are an inevitable part of ageing. There is ample evidence that multimodal falls prevention programmes which target a combination of risk factors and which are tailored to select high risk groups, are effective and can significantly reduce fall-related fractures in community dwelling older adults.

Each additional healthy life year that can be gained for an older person, counts.

## 2. FALL RELATED DEATHS IN OLDER ADULTS

Among the 35,848 fall related deaths among older adults:

- 88 % relate to people aged 75 or older; and
- 59 % relate to women.

As the population of older people (65 and above) in the EU is expected to grow by 60% by 2050, the number of fall-related deaths is expected to increase to almost 60.000 by 2050; this is unless additional measures are taken to prevent falls in older adults.

All EU-countries report death statistics annually to the World Health Organisation. As we can see in the annexed table, there are huge variations in national fall-related death rates: Hungary and Croatia reporting rates of more than 100 per 100,000 older persons and Luxemburg, Estonia and Bulgaria reporting less than 10/ 100,000. These variations are largely due to variations in coding conventions between countries. For example, in a number of countries the

underlying cause of death is often left unreported and therefore these countries report lower rates of fall-related deaths than would be expected.

From this we can conclude that the actual number of fall related deaths within the EU-region is far larger than current statistics suggest.

### 3. FALL-RELATED ED ATTENDANCES AND HOSPITAL ADMISSIONS

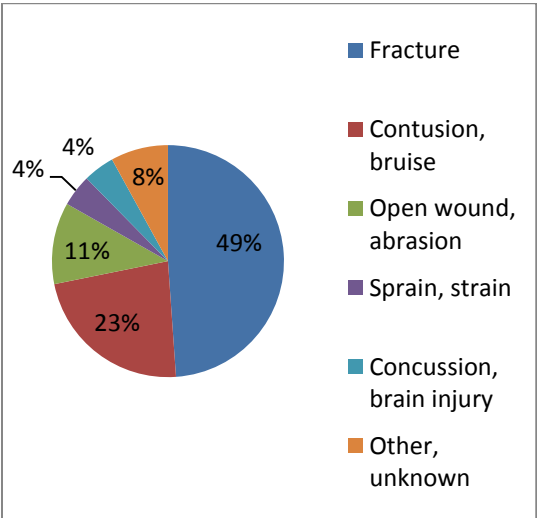
Based on a sample of over 200 hospitals from across Europe, it can be estimated that every year within the EU, 3.8 million older people attend emergency departments (ED) with a fall-related injury; of which 1.4 million are admitted to hospital for further treatment. It is important to highlight that the actual number of fall-related attendances and admissions are likely to be much higher than this due to current inadequacies in many hospital data collection systems.

It is also important to emphasise, that without additional fall prevention efforts, the annual number of fall-related ED attendances is expected to increase to over 6 million by the year 2050, with more than 2.3 million cases admitted to hospital with subsequent long term care.

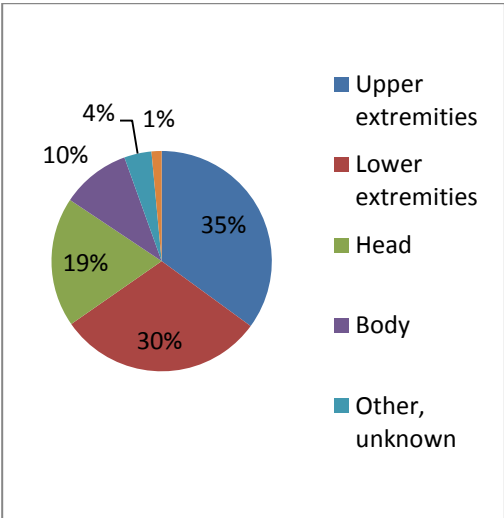
It is well known that the risk of experiencing a fall increases with age due to reduced physical function, muscle strength and flexibility. This is reflected in the statistics, with the rate of fall related injuries in people aged 85 years and older 3 times higher than the rate of fall-related injuries in people aged 65-74 years of age (28 per 1,000 people aged 65-74, and 90 per 1,000 people aged 85years and above).

With increasing age, the severity of a fall-related injury also increases: for those aged 65-74 years 32 % of fall-related injuries require admission to hospital, whereas this proportion increases to 39% for those aged between 75 and 84, and 45 % for people aged 85 or older. Twice as many women are hospitalised or attend ED's after a fall compared to men (2,285,000 females vs. 1,124,000 males). This is partly due the fact that women live longer than men, but the fall-injury rate of women still remains 44% higher than that of men..

Almost half of all fall-related ED attendances across Europe result in a fracture, with 1 in 4 presenting with bruises/contusions, 1 in 10 open wounds/abrasions, 1 in 20 sprains/strains, and 1 in 20 presenting with fall-related concussion/brain injury. 1 in 3 cases suffered injuries to the upper extremities, 1 in 3 suffered injuries to the lower extremities, 1 in 5 experienced an injury to the head and 1 in 10 experienced an injury to other parts of the body.



Type of injury after a fall reported to hospital



Body part affected by fall-related injury

Falls often lead to post-fall anxiety, fear and subsequent dependency on family carers or even admittance into nursing care facilities.

A number studies have been carried out in order to estimate the costs of medical care related to fall injuries in older people. Although the resulting national estimates can vary quite markedly, the cost of fall-related injuries are staggering.

A recent comprehensive study in the Netherlands estimated that the average medical and social care costs for a fall-related injury to be 9,370 EUR per case, with average costs from 3,880 euros in the 65-70 year age group, increasing by age to 14,600 euros per case in the 85+ age group.

If the figures from this study are applied to the whole of the EU, it can be estimated that at least 25 billion euros are spent treating fall related injuries across the EU every year. Furthermore, shifting demographics over the next 35 years could result in annual fall-related expenditures exceeding 45 billion euros by the year 2050.

### 4. RISK FACTORS

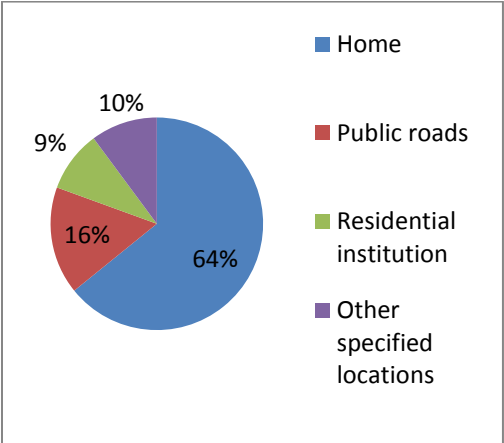
Age and gender related functional decline, chronic diseases, impaired mobility and multiple medication use, increase the risk of fall-related injuries in older people and result in higher rate of falls for women compared to men.

Risk factors for falls are commonly grouped into three main categories:

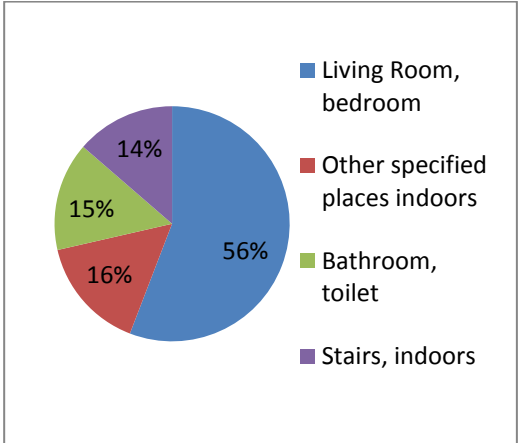
- Intrinsic factors, including: poor muscle strength and flexibility, poor balance, reduced physical function and gait speed, reduced cognition and sensory impairment, medical conditions and related medication
- Behavioural factors, including: inadequate diet, use of inappropriate footwear, above moderate alcohol use, and changes in mobility patterns due to fear of falling;
- Environmental factors, including: uneven pavements, slippery surfaces, poor lighting, worn carpeting, and hazardous steps.

The majority of fall related injuries occur while older people move around home; predominantly in the living room or bedroom (56%), followed by the bathroom/toilet (15%) and lastly on the stairs (14%). The remaining fall-related injuries which occur in the home take place in other or unspecified areas of the home (16%).

1 in 6 fall-related injuries occur on public roads (mainly side-walks) and 1 in 10 fall-related injuries occur in residential institutions such as nursing and sheltered homes.



Majority of falls occur at home



At home most injuries occur in living or bed room

### 5. HOW TO PREVENT THIS RISING EPIDEMIC?

There is considerable evidence that multimodal falls prevention programmes which target a combination of risk factors, and which are tailored towards select high risk groups, are

effective and can reduce fall-related injuries in community dwelling older adults.

Multi-modal interventions typically focus on four main areas of prevention:

1. Offering multifactorial post-fall risk assessments to all 'first-time fallers', including review of their multi-medication and enrolment in a physical activity programme supervised by a physiotherapist
2. Encouragement to join home- or group-based exercise programmes focussing on balance training and muscle strength, tailored to the physical condition of each participant
3. Design modifications to both the home and public environment, including: 'age-friendly' transportation modifications, home modifications by facilitating home visits by a trained professional, and seeking opportunities from the Information and Communication Technologies (ICT) sector to provide solutions for fall-detection and -prevention;
4. Enhancing 'Fall Awareness' among health and social care professionals and older adults, and maximising opportunities for accessing evidence based fall prevention methods and tools.

Studies reveal that dedicated falls prevention programmes targeted at high risk groups can help decrease injury rates by 20-40%. Fall prevention activities also have the potential to be cost effective, and reduce substantially the health care costs associated with fall-related injuries.

The European Commission has identified active and healthy ageing as a major societal challenge in all European countries. The European Innovation Partnership on Active and Healthy Ageing (EIP-AHA), which includes a component dedicated to preventing fall injuries in older people, aims to increase the average healthy lifespan for all individuals in the EU by two years by 2020.

## **6. IN CONCLUSION**

Falls present a significant threat to health and well-being in older people and are a major cause and contributor to morbidity, disability and premature death.

Falls also result in significant costs, both to the individual and carers in terms of physical and psychosocial costs, and to society in terms of healthcare and social service utilization.

Currently there are huge variations in national fall-related deaths, hospitalisations and ED attendances. These variations are largely due to variations in coding conventions between countries, and as a result of poor quality hospital data on the external cause of injuries.

Therefore, a key priority for health authorities is focus on the improvement of their death reporting systems, as well as their hospital data collection systems, to ensure fall related deaths and injuries are more accurately recorded in the coming years.

Age and age-related health problems are an important determinant of falls and subsequent injuries. For a healthy active aging population, access to a multifactorial assessments and appropriate interventions is vital, including access to safe environments which encourage physical activity and allow safe movement. Such programmes have been proven to be effective in reducing the number of falls.

Promoting effective fall's prevention initiatives and encouraging older people to live healthy active lifestyles is the responsibility of everyone. The citizens of Europe, all levels of government, communities, practitioners, family and carers, researchers, the non-profit sector and the private sector all have a role to play.

This factsheet is by:

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Sources used :

- Fatal falls: World Health Organisation, Mortality database 2010-2012: [http://www.who.int/healthinfo/mortality\\_data/en/](http://www.who.int/healthinfo/mortality_data/en/)
- Hospital visits and admissions due to falls: IDB Network & EU Commission, EU Injury Database 2011-2013: [http://ec.europa.eu/health/data\\_collection/databases/idb/index\\_en.htm](http://ec.europa.eu/health/data_collection/databases/idb/index_en.htm)
- Estimated medical and social care costs of falls: Hartholt, K, Falls and drugs in older population: medical and societal consequences, Erasmus University Rotterdam, 2011
- ProFouND, Prevention of Falls Network for Dissemination: <http://profound.eu.com/>
- European Innovation Partnership on Active and Healthy Ageing: [http://ec.europa.eu/research/innovation-union/index\\_en.cfm?section=active-healthy-ageing&pg=about](http://ec.europa.eu/research/innovation-union/index_en.cfm?section=active-healthy-ageing&pg=about)



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**Annex: Table on fatal falls reported by EU-member states to the WHO-office for the European Region over the years 2010-2012 (IR 65+ means age standardized incidence rate per 100.000 persons 65 and older,)**

	Fatal falls 65+	Pop 65+	IR 65+
Austria	704	1706551	<b>41,23</b>
Belgium	1107	1676350	<b>66,06</b>
Bulgaria	128	1414308	<b>9,07</b>
Croatia	910	762664	<b>119,32</b>
Cyprus	16	5676956	<b>0,28</b>
Czech Republic	733	1185077	<b>61,88</b>
Denmark	439	823617	<b>53,30</b>
Estonia	46	982505	<b>4,72</b>
Finland	971	3655800	<b>26,55</b>
France	5015	10936782	<b>45,85</b>
Germany	8681	11553329	<b>75,14</b>
Greece	274	5734847	<b>4,78</b>
Hungary	1522	1135797	<b>133,97</b>
Ireland	176	558561	<b>31,57</b>
Italy	2864	7816841	<b>36,64</b>
Latvia	79	817381	<b>9,62</b>
Lithuania	164	364934	<b>45,03</b>
Luxembourg	42	906153	<b>4,67</b>
Malta	28	526893	<b>5,38</b>
Netherlands	1602	3711225	<b>43,17</b>
Poland	2776	4445561	<b>62,45</b>
Portugal	243	1373418	<b>17,72</b>
Romania	556	2316382	<b>24,02</b>
Slovakia	202	771813	<b>26,17</b>
Slovenia	449	767308	<b>58,52</b>
Spain	1718	8445526	<b>20,35</b>
Sweden	822	1201149	<b>68,46</b>
United Kingdom	3578	8669589	<b>41,27</b>