# Syncope and Primary Care

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# Syncope and primary care

- Clarity re Diagnosis:

  ? Syncope ? Falls ? Epilepsy

- Risk stratification

# Syncope and primary care

Adults

- Application NICE guidelines by primary care
- Prevalence Syncope in Community
- Ageing Demographics – importance for differential diagnosis

# Syncope and primary care

NICE Guidelines for Transient Loss of Consciousness

# Initial assessment

- Ask the **person** who has had the suspected TLoC, and **any witnesses**, to describe what happened before, during and after the event. Try to contact by telephone witnesses who are not present. Record details about:
- **circumstances** of the event
- person‟s **posture** immediately before loss of consciousness
- **prodromal symptoms** (such as sweating or feeling warm/hot)
- **appearance** (for example, whether eyes were open or shut) and colour of the person during the event
- presence or absence of **movement** during the event (for example, limb-jerking and its duration)
- any **tongue-biting** (record whether the side or the tip of the tongue was bitten)
- **injury** occurring during the event (record site and severity)
- **duration** of the event (onset to regaining consciousness)
- presence or absence of **confusion** during the recovery period
- **weakness** down one side during the recovery period. **[1.1.1.2]**

# Initial assessment

- Record a 12-lead electrocardiogram (ECG) using automated interpretation. Treat as a **red flag** (see recommendation 1.1.4.2) if any of the following abnormalities are reported on the ECG printout:
- conduction abnormality (for example, complete right or left bundle branch block or any degree of heart block)
- evidence of a long or short QT interval, **or**
- any ST segment or T wave abnormalities etc

# Initial assessment

- Record carefully **the information** obtained from all accounts of the TLoC. Include ***paramedic records*** with this information. Give ***copies*** of the ECG record and the patient report form to the receiving clinician when care is transferred, and to the person who had the TLoC.

# Initial assessment

- Refer within 24 hours for ***specialist cardiovascular*** assessment by the most appropriate local service, anyone with TLoC who also has any of the following.
- An **ECG** abnormality (see recommendations 1.1.2.2 and 1.1.2.3).
- **Heart failure** (history or physical signs).
- TLoC during **exertion.**
- Family history of **sudden cardiac death** in people aged younger than 40 years and/or an **inherited cardiac** condition.
- New or unexplained breathlessness.
- A heart **murmur**.

# Initial assessment

Diagnose uncomplicated faint (uncomplicated vasovagal syncope) on the basis of the initial assessment when:

there are **no** features that suggest an alternative diagnosis (note that brief seizure activity can occur during uncomplicated faints and is not necessarily diagnostic of epilepsy) **and**

there are features suggestive of uncomplicated faint (the 3 „P"s) such as:

- **Posture – prolonged standing, or similar episodes that have been prevented by lying down**
- **Provoking factors (such as pain or a medical procedure)**
- **Prodromal symptoms (such as sweating or feeling warm/hot before TLoC).**

# Initial assessment

**Refer** people who present with one or more of the following features for an assessment by a **specialist in epilepsy**; the person should be seen by the specialist within **2 weeks**

- A bitten **tongue.**
- **Head-turning** to one side during TLoC.
- **No memory** of abnormal behaviour that was witnessed before, during or after TLoC by someone else.
- **Unusual posturing.**
- **Prolonged limb-jerking** (note that brief seizure-like activity can often occur during uncomplicated faints).
- **Confusion** following the event.
- **Prodromal** déjà vu, or jamais vu

# Initial assessment

- Consider that the episode may **not be related to epilepsy** if any of the following features are present.
- Prodromal symptoms that on other occasions have been abolished by sitting or lying down.
- Sweating before the episode.
- Prolonged standing that appeared to precipitate the TLoC.
- Pallor during the episode.

# Initial assessment

- ***Use information gathered from all accounts*** of the suspected TLoC to confirm whether or not TLoC has occurred. If this is uncertain it should be assumed that they had TLoC until proven otherwise. But, if the person did not have TLoC, instigate suitable management (for example, if the person is determined to have had a ***fall***, rather than TLoC, refer to „Falls: the assessment and prevention of falls in older people‟ [NICE clinical guideline 21])]

# Initial assessment

- Refer **all** people with **TLoC** (apart from the exceptions below) for a ***specialist cardiovascular*** assessment by the most appropriate local service. Exceptions are:

people with a firm diagnosis, after the initial assessment, of:

- *uncomplicated faint*
- *situational syncope*
- *orthostatic hypotension*
- people whose presentation is strongly suggestive of *epileptic seizures*.

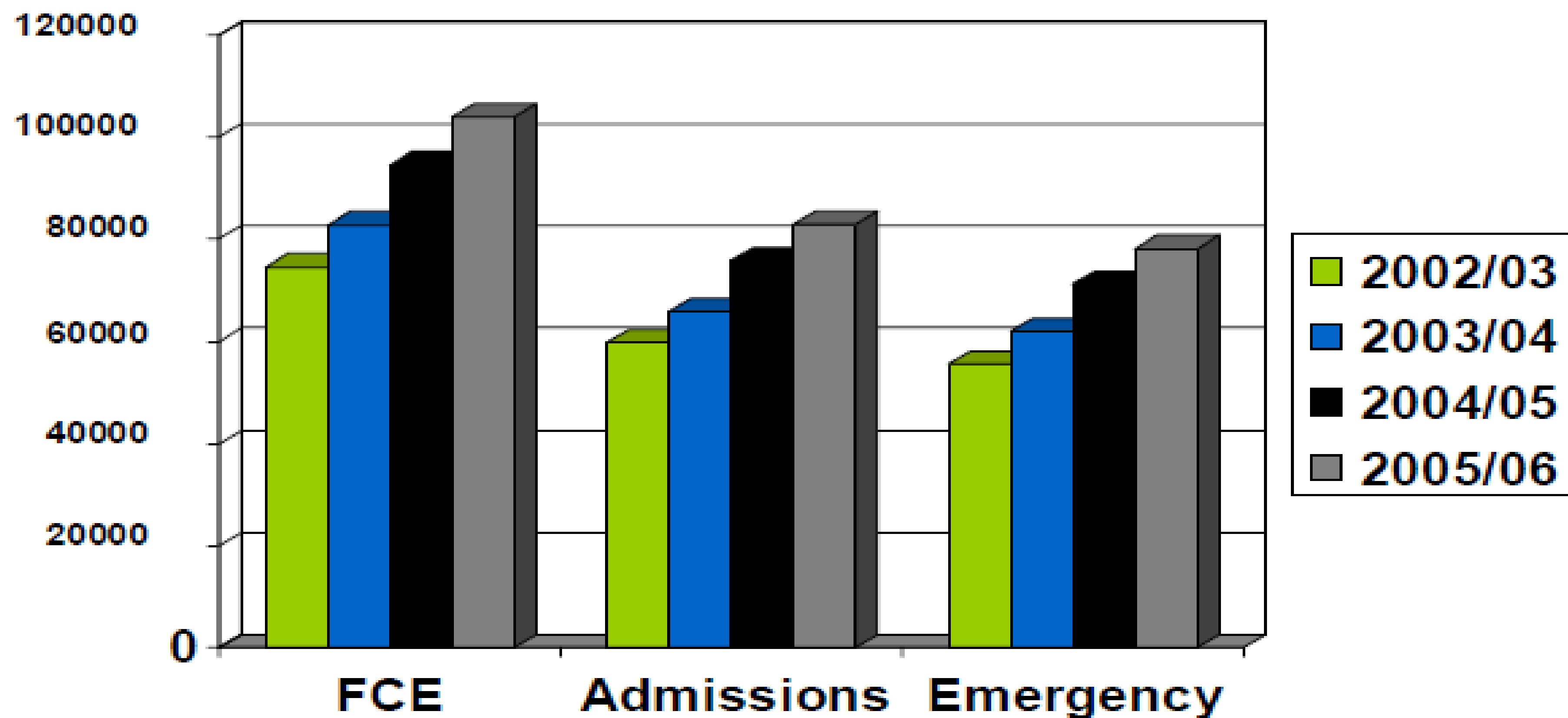
# Syncope, Collapse Common

# R55, ICD 10

NICE TLOC Guidelines

No ICD-10 codes existed for inherited cardiac conditions which could cause TLoC viz., Long QT syndrome or Brugada Syndrome.

(a) R55 Syncope and Collapse (ICD-10) – Data for England




Abbreviations: FCE=Finished Consultant Episode

# Syncope and collapse R55 ICD 10 Data England

| Year | Finished Consultant Episodes | Admissions | Emergency | Mean length of stay (days) | Median Episode Duration (days) | Mean Age (years) |
|---|---|---|---|---|---|---|
| **2005/06** | 103825 (↑ 39%*) | 82999 (↑ 38.6%*) | 78146 (↑ 40.4%*) | 3.9 (↓ 36%*) | 1 | 67 |
| **2004/05** | 94486 | 75850 | 71311 | 4.6 | 1 | 68 |
| **2003/04** | 82773 | 65986 | 61982 | 5.5 | 2 | 68 |
| **2002/03** | 74576 | 59851 | 55651 | 6.1 | 2 | 68 |

*relative to year 2002/03

# Syncope and collapse R55 ICD 10 Data England

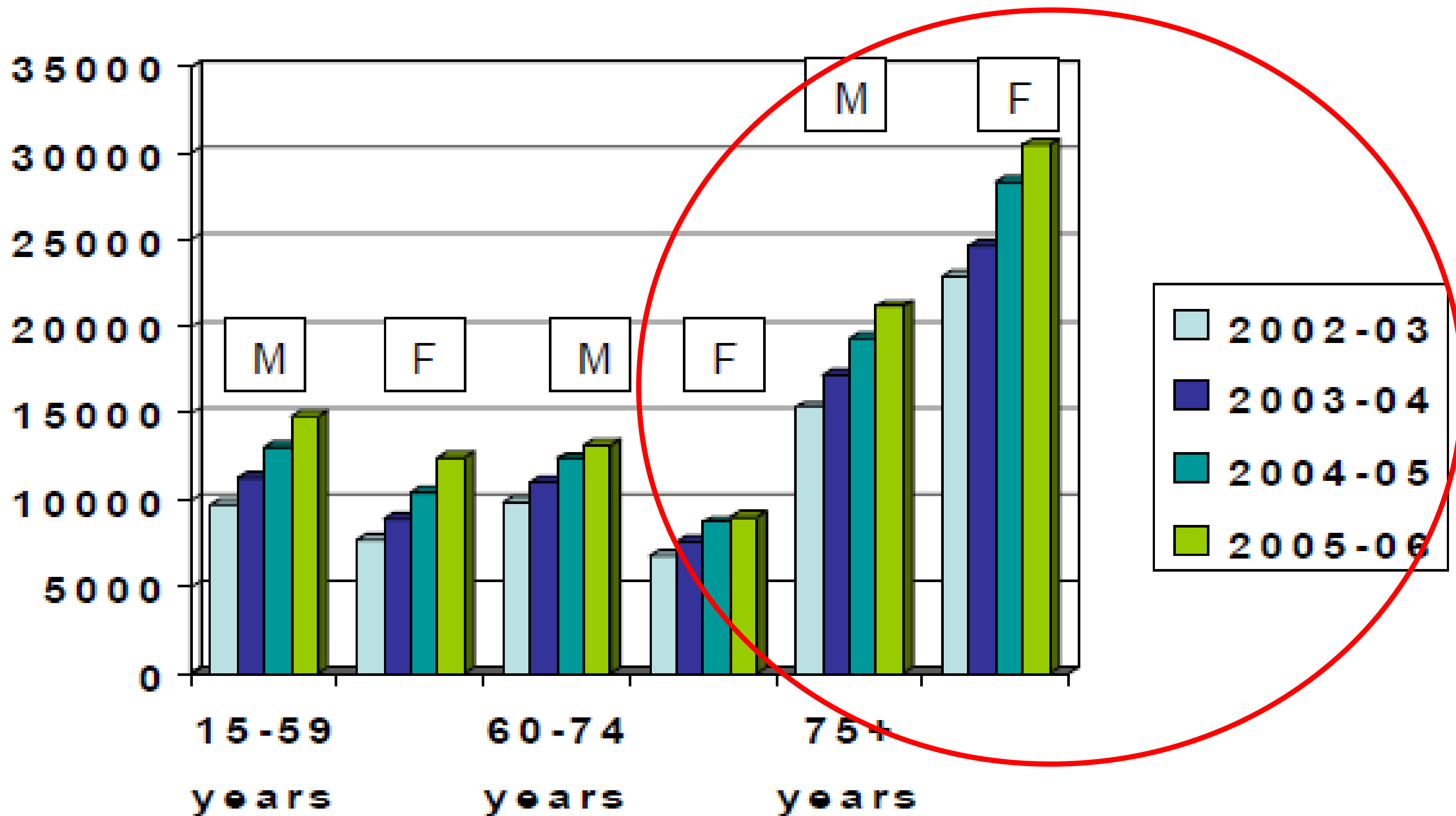
| Year | Finished Consultant Episodes | | | | | |
|---|---|---|---|---|---|---|
| | 15-59 years | | 60-74 years | | 75 + years | |
| | Male | Female | Male | Female | Male | Female |
| 2005/06 | 14839 (↑ 34.1%) | 12413 (↑ 37.8%) | 13207 (↑ 25.3%) | 9049 (↑ 25.0%) | 21175 (↑ 27.4%) | 30483 (↑ 24.7%) |
| 2004/05 | 13032 | 10461 | 12397 | 8716 | 19321 | 28376 |
| 2003/04 | 11239 | 8881 | 11003 | 7564 | 17187 | 24712 |
| 2002/03 | 9765 | 7711 | 9860 | 6787 | 15369 | 22944 |

*relative to year 2002/03

A further analysis of the data between the years 2002 and 2006 shows that the increase in patient numbers has been across all age groups and in both sexes, with the maximum increase being in women in the 15-59 years age group (37.8%).

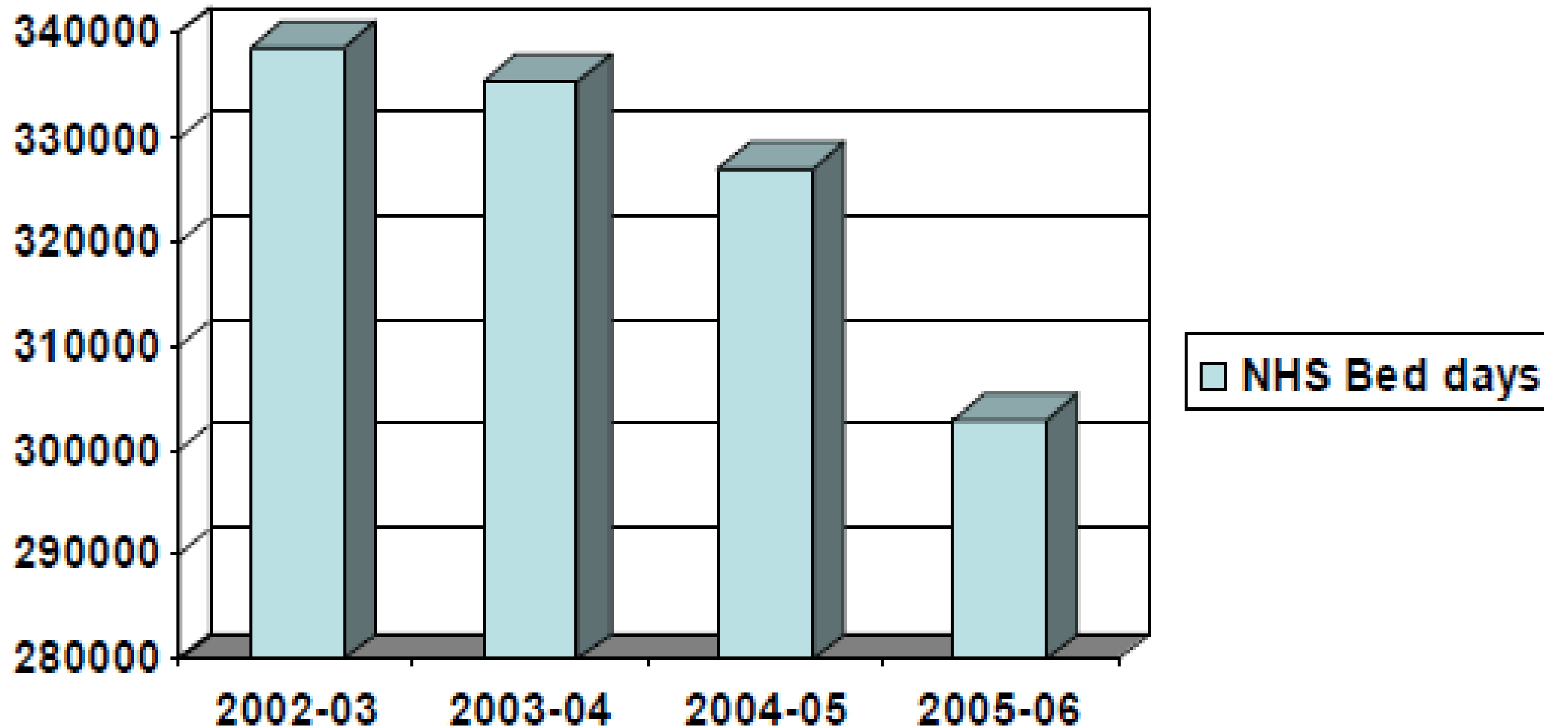
**? More aggressive treatment hypertension**

# Syncope and collapse R55 ICD 10 Data England



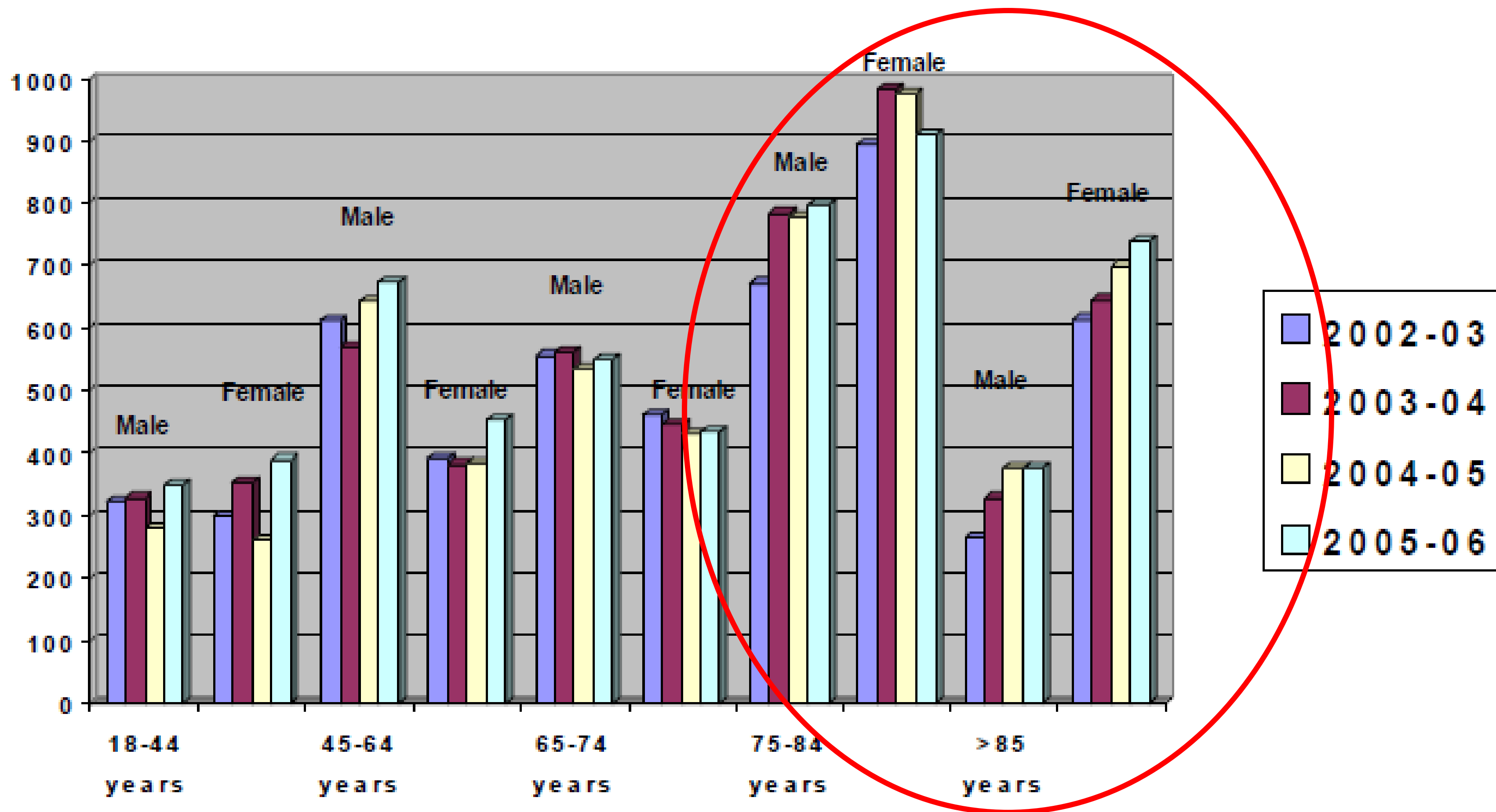

Abbreviations: M=Male, F=Female

# Syncope Collapse decrease Bed Days

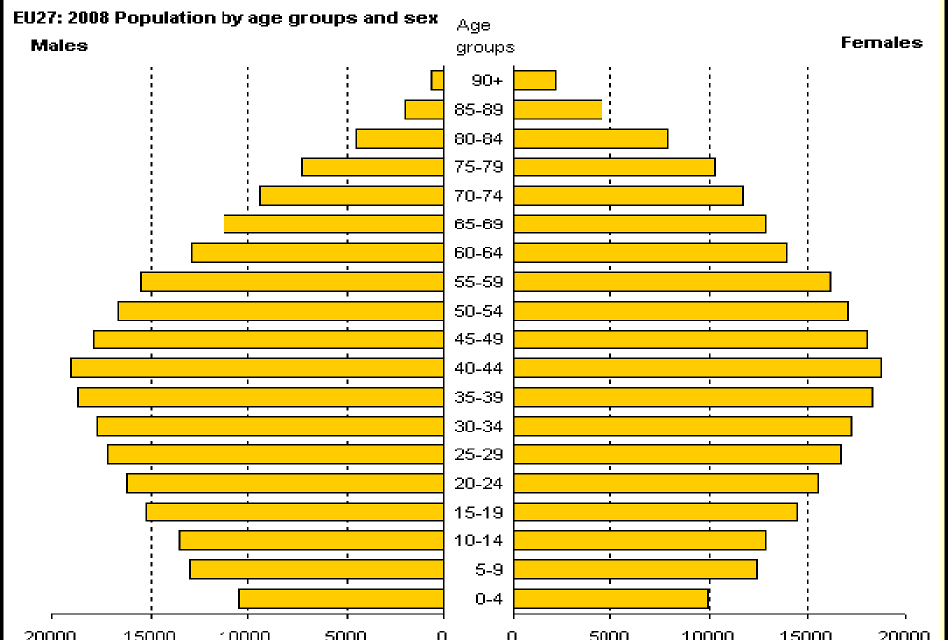



The number of bed days used for this condition has decreased over the period 2002-2006 as a result of the decrease in the mean length of stay and the median episode duration.

# Syncope and Collapse R55 data Wales - age groups




Unlike the data available for England, more detailed age-specific data were available for Wales. These data show that the number of patients presenting with R55 Syncope and Collapse (ICD 10) has increased across all age groups between years 1995 and 2006, with the largest increase being among females over 85 years of age.


EU27: 2008 Population by age groups and sex
Males
Age groups
Females
90+
85-89
80-84
75-79
70-74
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
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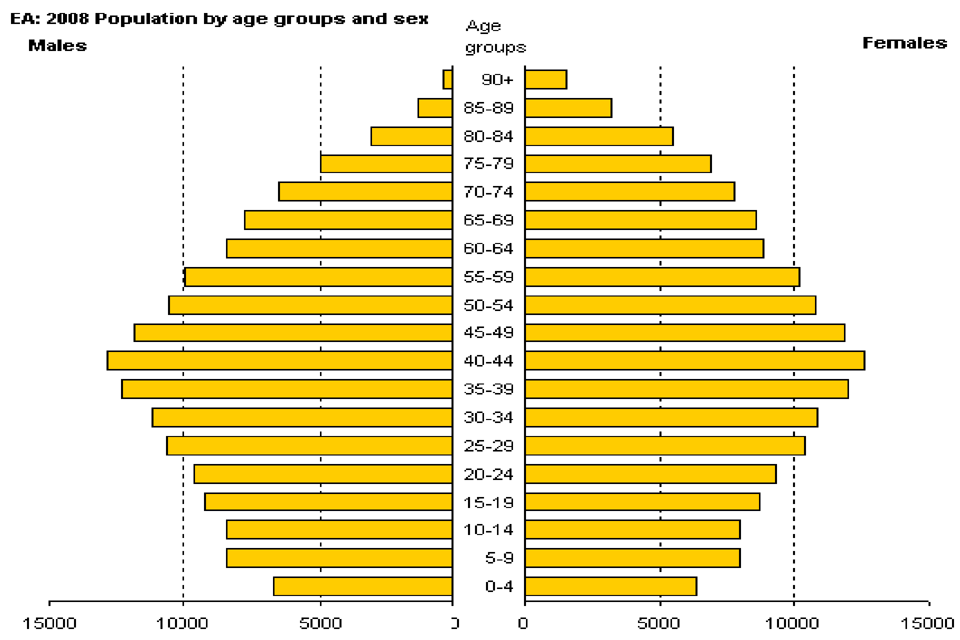
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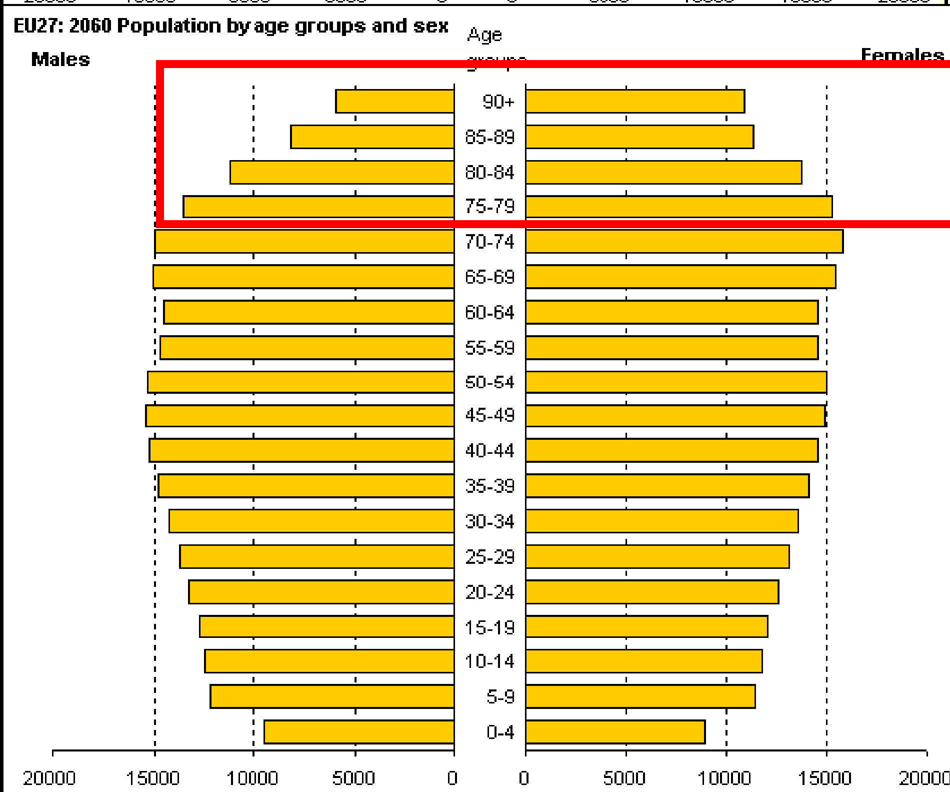
EU27: 2060 Population by age groups and sex
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Age groups
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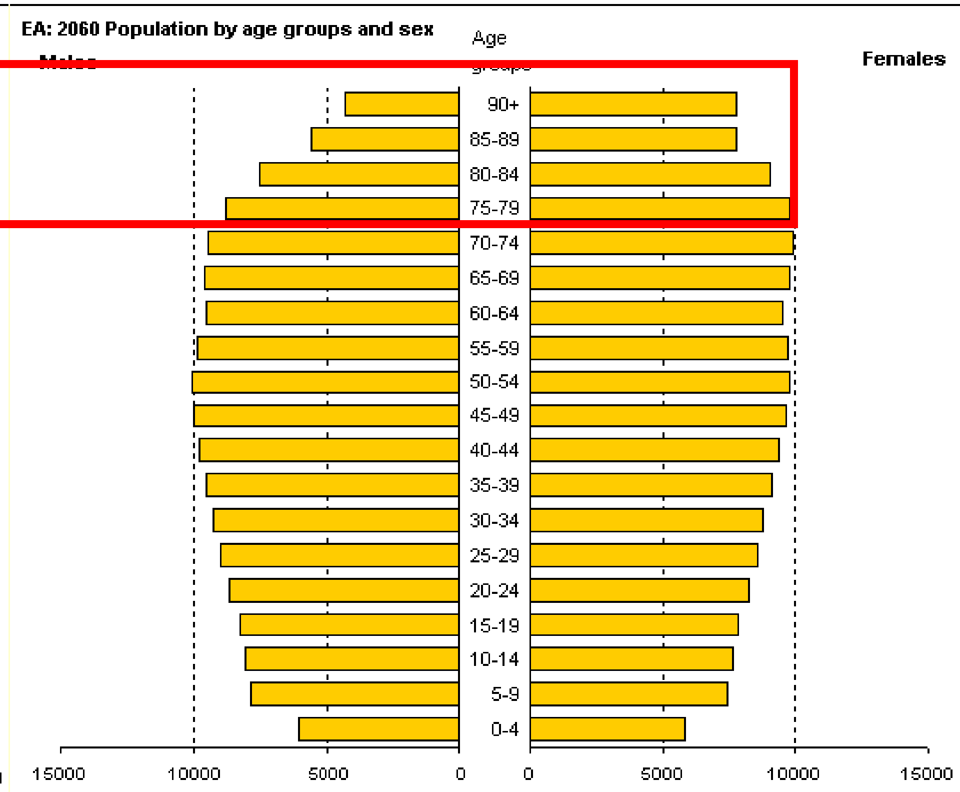
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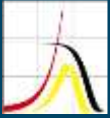


## Female life expectancy in the record-holding country from 1840 to the present

**50% females born today Live to 100yrs or beyond**

Norway
New Zealand
Iceland
Sweden
Japan
The Netherlands
Switzerland
Australia

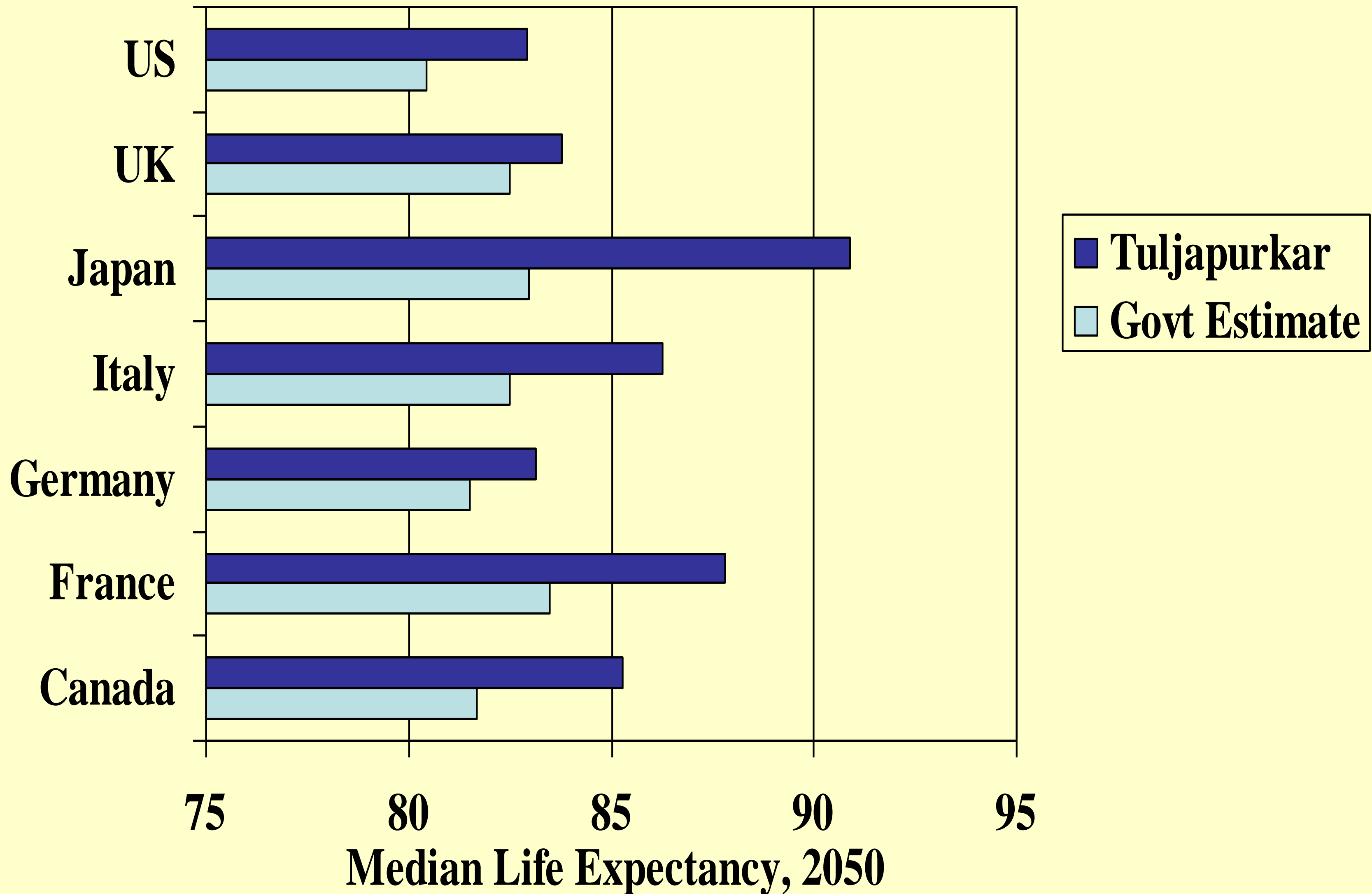
Life-expectancy in years

95 90 85 80 75 70 65 60 55 50 45

1840 1860 1880 1900 1920 1940 1960 1980 2000

Year

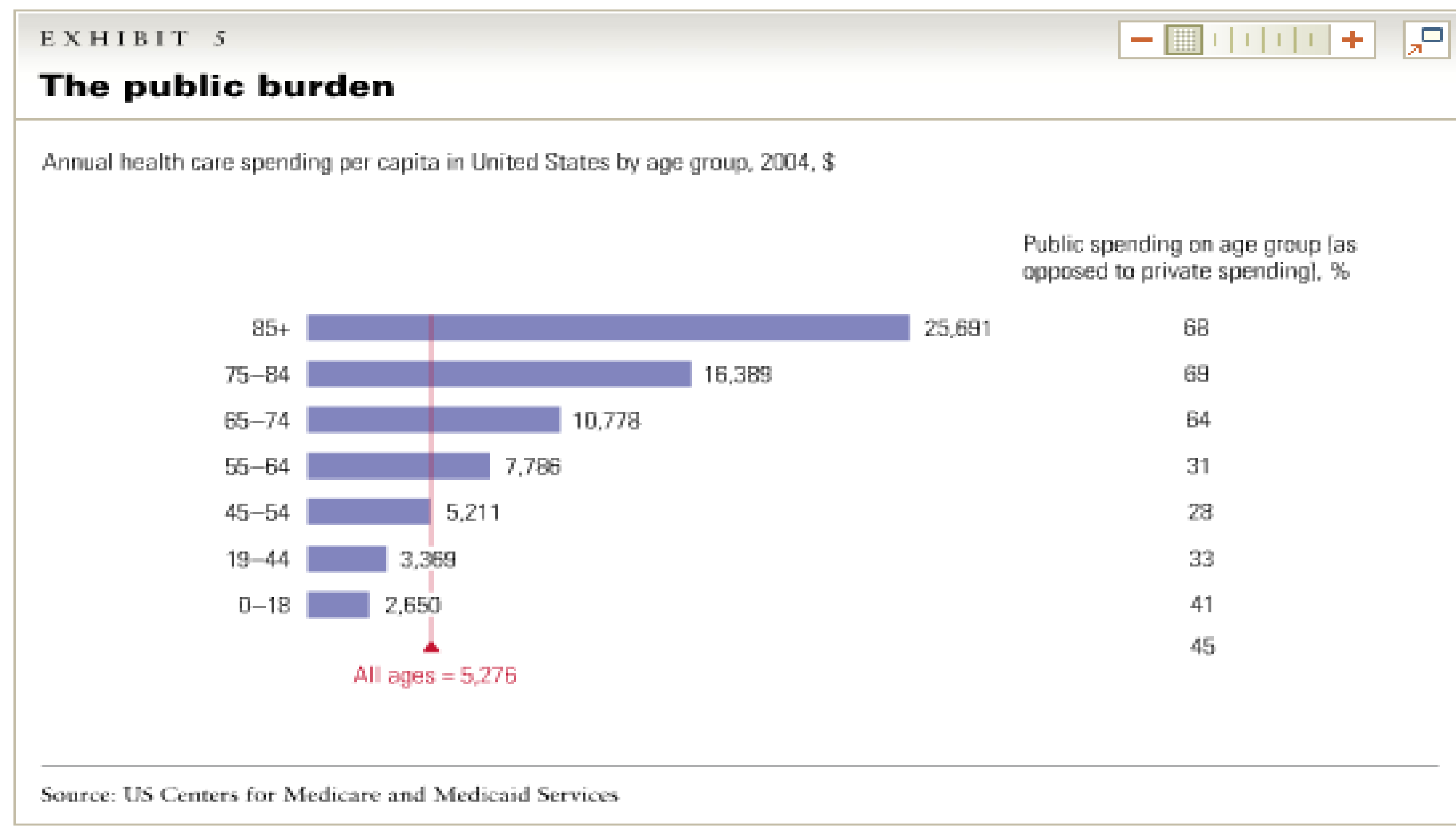
# Life Expectancy in G-7 Industrialized Nations, 2050




Source: Shripad Tuljapurkar, Nan Li and Carl Boe. A UNIVERSAL PATTERN OF MORTALITY DECLINE IN THE G-7 COUNTRIES. **Nature** 405: 789-792 (15 June 2000).

# The already acute economic pressures healthcare spending places on society will grow

A significant part of an average person's health care spending throughout life occurs in its second half, especially the last two years. In many countries, the tax-financed part of health care represents a massive transfer from young taxpayers to older health care users.




Source: McKinsey Quarterly September 2008

Amnesia For Loss of consciousness

# Amnesia LOC

**Atypical presentation**
**Lack awareness low BP**

6% young

30% older adults

70% Unwitnessed- % older persons live alone

**FALL**

**Epilepsy**

**SYNCOPE**

**No Epilepsy half R55 Syncope Collapse, Trend similar- more emergencies, shorter LOS, patients younger**

| Year | Finished Consultant Episodes | Admissions | Emergency | Mean length of stay (days) | Median Episode Duration (days) | Mean Age (years) |
|---|---|---|---|---|---|---|
| **2005/06** | 50112 (↑15.2%*) | 39871 (↑13.3%*) | 34226 (↑15.8%*) | 5.0 (↓12.3%*) | 1 | 42 |
| **2004/05** | 45811 | 36984 | 31722 | 5.5 | 1 | 41 |
| **2003/04** | 43453 | 35327 | 29989 | 5.5 | 2 | 41 |
| **2002/03** | 42473 | 34580 | 28818 | 5.7 | 2 | 40 |

# EPILEPSY

Finished Consultant Episodes

| Year | Finished Consultant Episodes | | | | | |
|---|---|---|---|---|---|---|
| | 15-59 years | | 60-74 years | | 75 + years | |
| | Male | Female | Male | Female | Male | Female |
| 2005/06 | 15090 (↑15.3%*) | 11689 (↑18.5%*) | 3829 (↑15.6%*) | 3006 (↑20.1%*) | 2984 (↑16.2%*) | 3836 (↑13.5%*) |
| 2004/05 | 13682 | 10809 | 3478 | 2790 | 2617 | 3541 |
| 2003/04 | 12785 | 10076 | 3251 | 2510 | 2419 | 3462 |
| 2002/03 | 12088 | 9531 | 3230 | 2403 | 2502 | 3320 |

*relative to 2002/03

Similar to R55 Syncope and Collapse, there has been an increase in patients presenting with epilepsy across all age groups and for both sexes. However, the magnitude of this increase is less so for patients presenting with epilepsy.

# Epidemiology Syncope

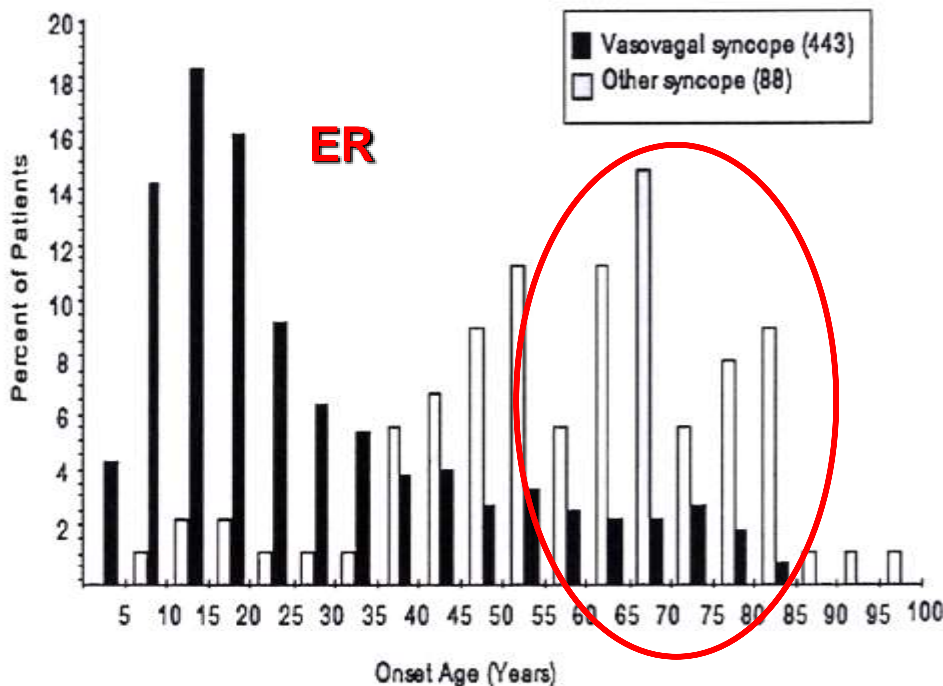
15% < 18y

25% 17-26y military

16% m 40-59y
19% f

**23% nursing home**

ECS Eur Ht J 2004




Weiling 02

per 1000 person years

Adults: *6.2*

70-79 : *11*

**> 80 *19***

Soteriades NEJM 2002

n=8000 > 50
58% 50-65
mean age 62

# Falls and syncope are common

**20% fallen past year**

60% one
20% 2
20% > 2
23% unexplained
32% injury

**6% blackout/near blackout past year**

**Fear of Falling**

**24**% afraid falling

26% very afraid of falling; 22% limit activities because of fear

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# Risk Factors for *Falls* in a Community-Based Epidemiologic Study

- Environmental hazards
- Sedative use
- Multiple medications
- Cognitive impairment
- Lower extremity disability
- Impairments of balance and gait
- Foot problems

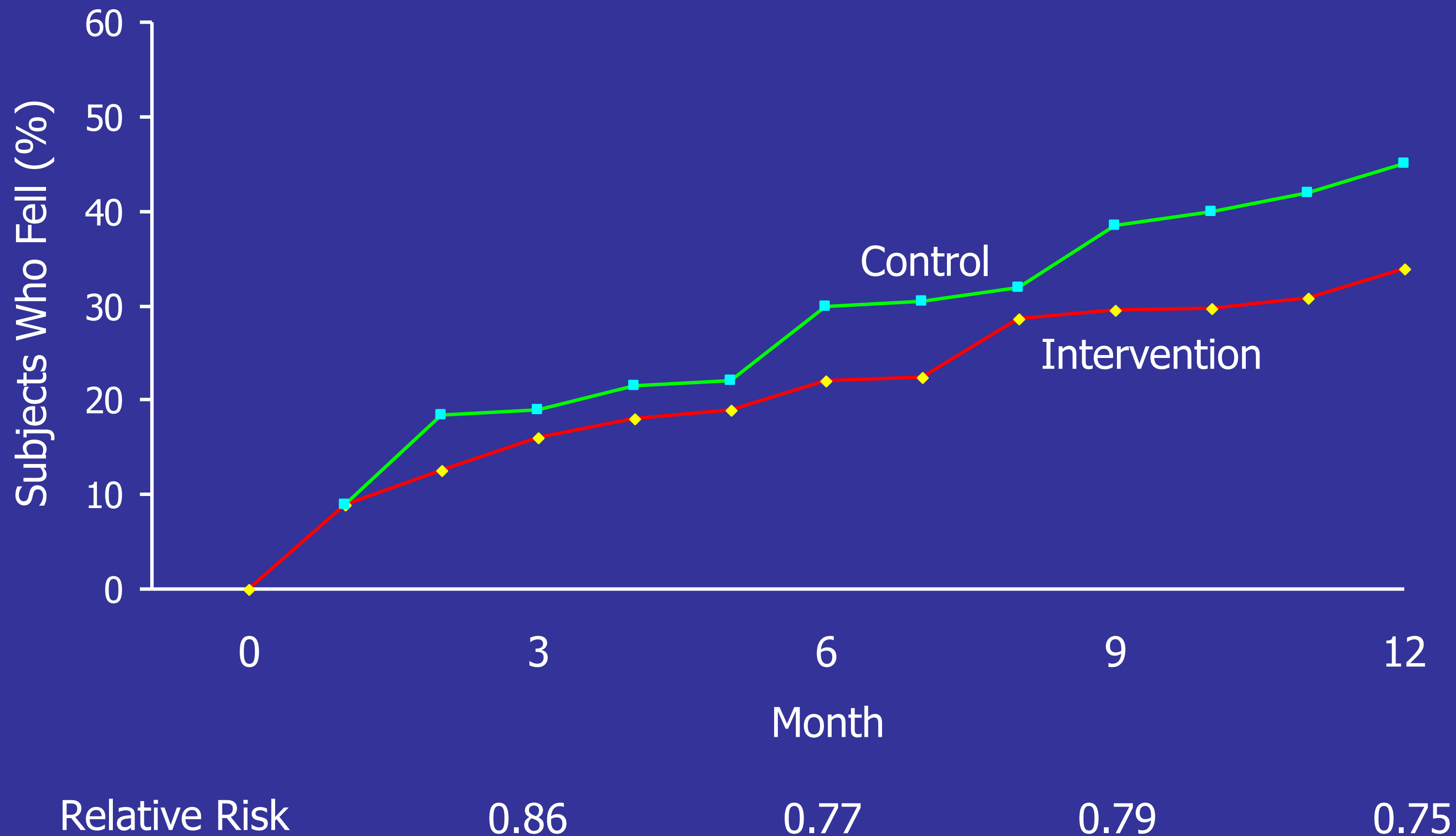
Tinetti et al. Risk factors for falls among elderly persons living in the community. *N Engl J Med.* **1988** ;319:1701-7.

# A Mutifactorial Intervention to Reduce the Risk of Falling Among Elderly People Living in the Community

| Risk Factors | Interventions | | | |
|---|---|---|---|---|
| | Medication Adjustment | Behavioral Training | Exercise Program | Environmental Change |
| Postural hypotension | • | • | | |
| Use of sedatives/hypnotics | • | • | | |
| Use of ≥4 prescription medications | • | | | |
| Unsafe transfer to tub or toilet | | • | • | • |
| Environmental hazards | | | | • |
| Impaired gait | | • | • | |
| Impaired balance/transfer skills | | • | • | |
| Impaired arm or leg strength or ROM | | | • | |

Source: Tinetti et al. *N Engl J Med* ***1994***;331:821-827.

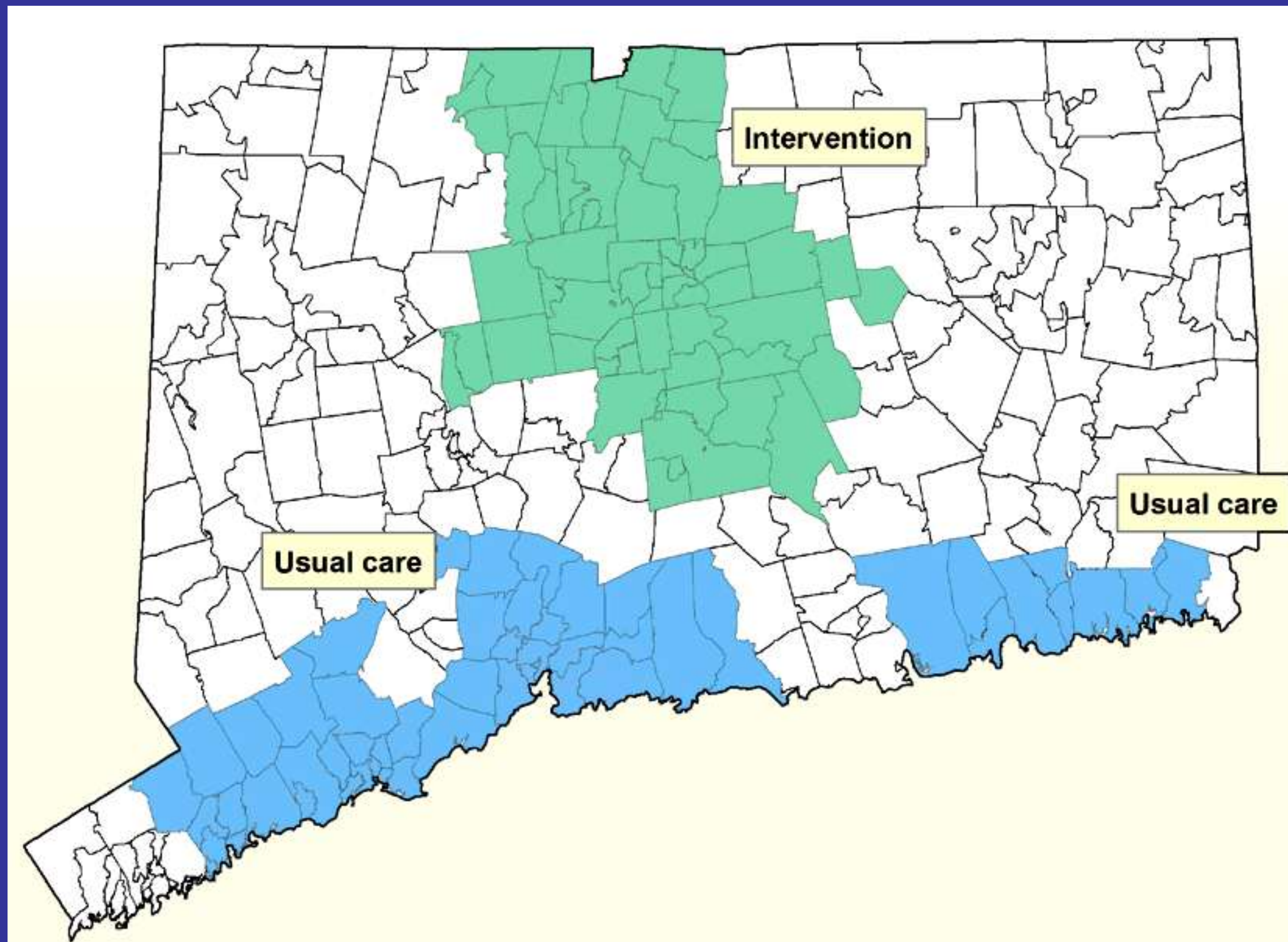
# Cumulative Percent Falling During One-Year Follow-up




| Relative Risk | 0.86 | 0.77 | 0.79 | 0.75 |
|---|---|---|---|---|

Source: Tinetti et al. A Multifactorial Intervention to Reduce the Risk of Falling Among Elderly People Living in the Community. *N Engl J Med* **1994**;331:821-827.

# Intervention and Usual-Care Regions for the Connecticut Collaboration for Fall Prevention




**30%**

Source: Tinetti et al. *New Engl J Med* **2008;**359:252-61.

# Syncope and primary care

- Implementation in Prim ary Care challenging
- Takes Time
- Recommendations refreshed and renewed
- Some experts contentious guidelines
- Common problem
- Will become more common with demographic changes