Geriatric Emergency Medicine

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A little bit of history

The distant past...

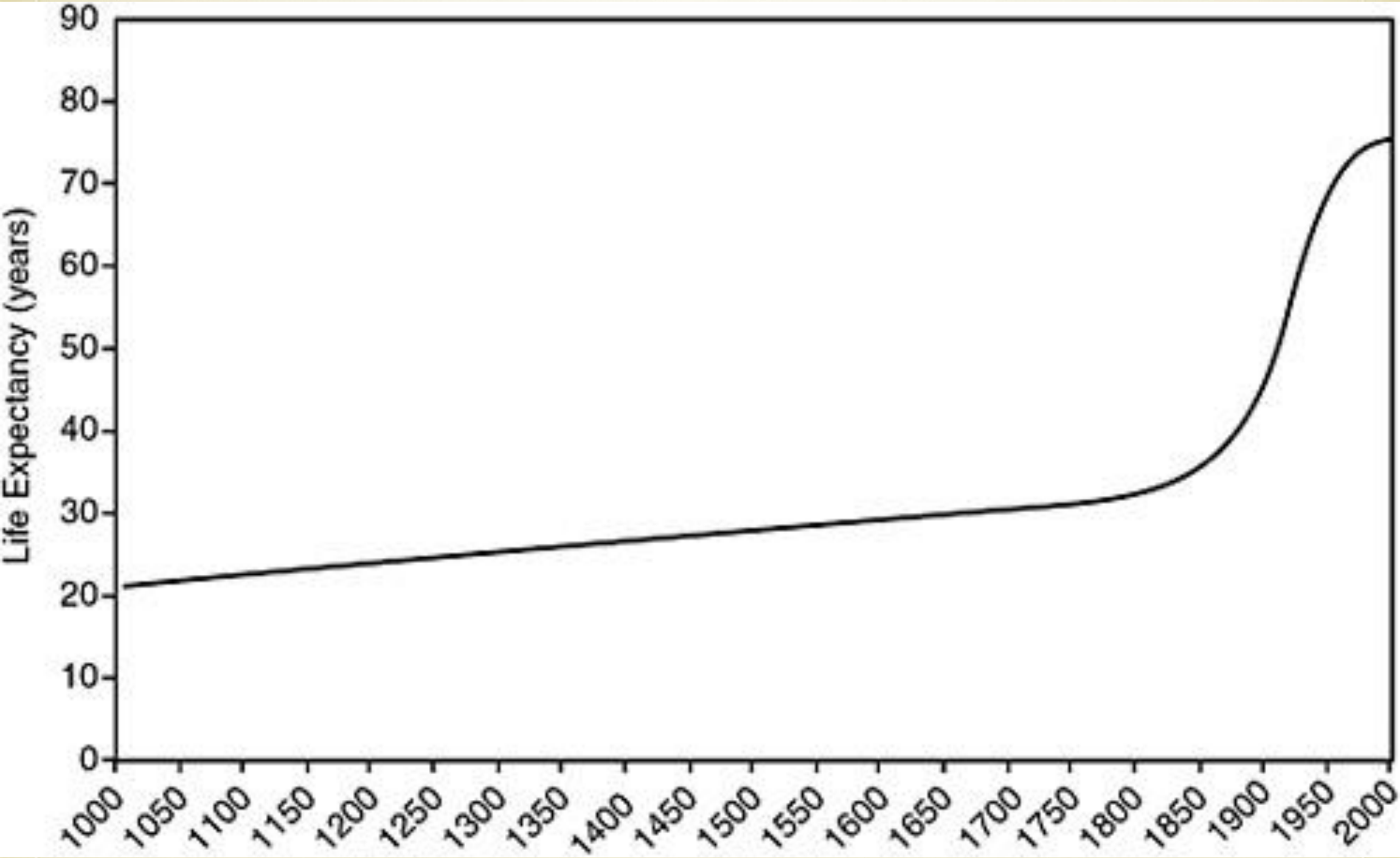
- Monasteries and Convents
  - Hospital wings
  - Preferential food and care for older people
- Poor Laws 1597 & 1601
  - for those without money or accommodation, ill, chronically sick and orphans
  - 1630 first workhouses opened
  - Late 1700s asylums for the old, infirm and insane

Victorian times...

- 1834 New Poor Law
  - To curtail public spending on poverty
  - Parish Buildings and ~700 larger Workhouses
  - Lancet 1840 “ante chambers of the grave”

Early pioneers...

- Diseases of Advanced Life 1849
  - George Day
- Charcot 1881
  - Advocated separate speciality
  - “Gerocomie”
  - Segregation of older people improves health and wellbeing


Life Expectancy (years)
0
10
20
30
40
50
60
70
80
90
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000

Post WW1

- Local government act 1929
  - 2 tiers of hospital care
    - ‘Voluntary Organizations’ (posh), high status, didn’t admit older people
    - Became the first teaching hospitals
    - Infirmaries (old workhouses), local authority run
    - Older people
    - Poor staffing levels, inferior facilities

When everything started...

- Nascher 1909
  - Coined the term Geriatrics
  - Iatros and geros
  - Need for a separate speciality to address the problems of senility
  - Warned of the harmful effects of medications on the ageing heart

Marjory Warren

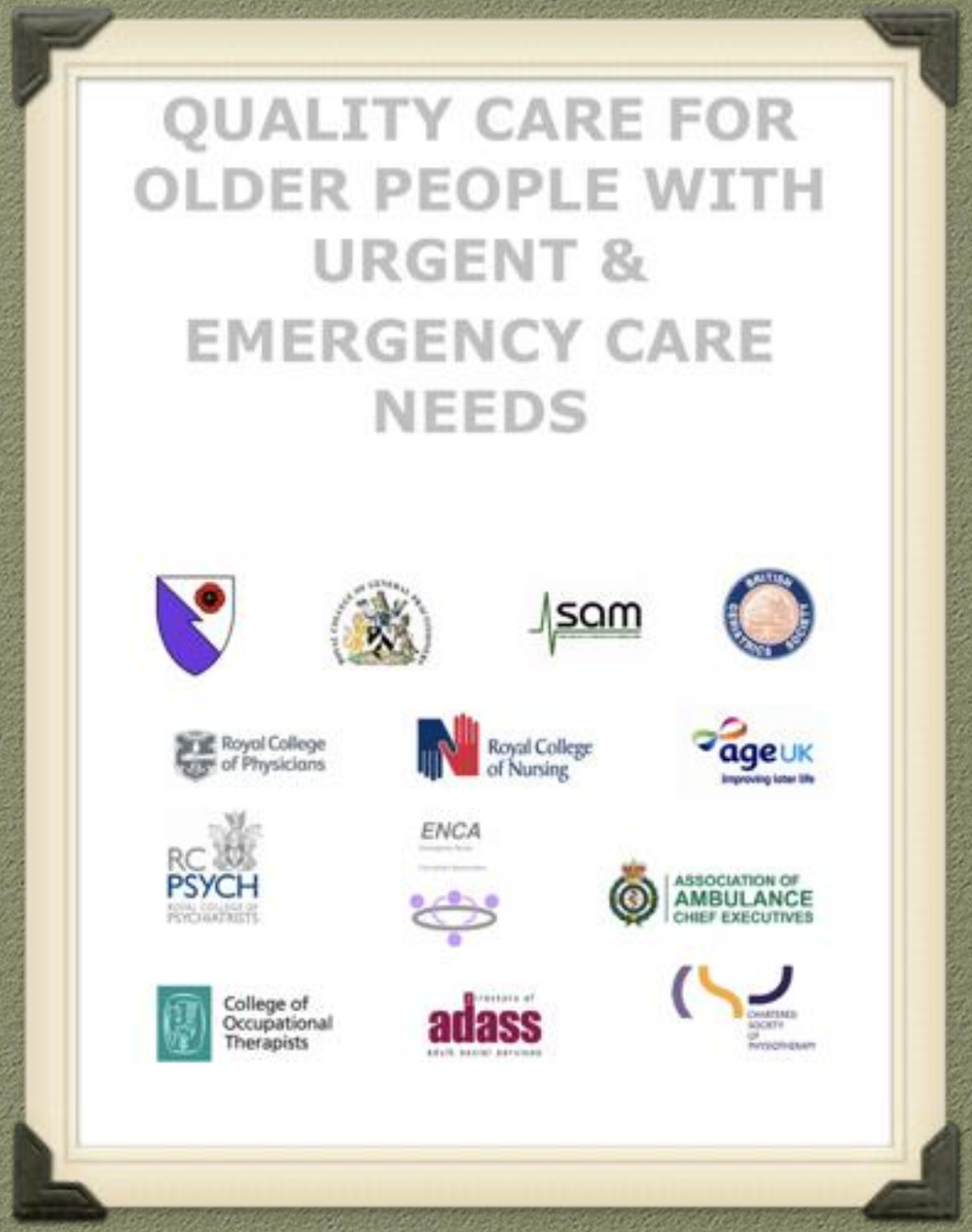
- 714 patients from the Poor Law infirmary
  - Examined them
  - Separated sick from healthy, old from young
  - Treatment and rehabilitation
- Improved the environment
- Encouraged patients to get up and walk
- Separate Geriatric Assessment units within hospitals to offer the best chance of diagnosis and treatment

First geriatric society

1947

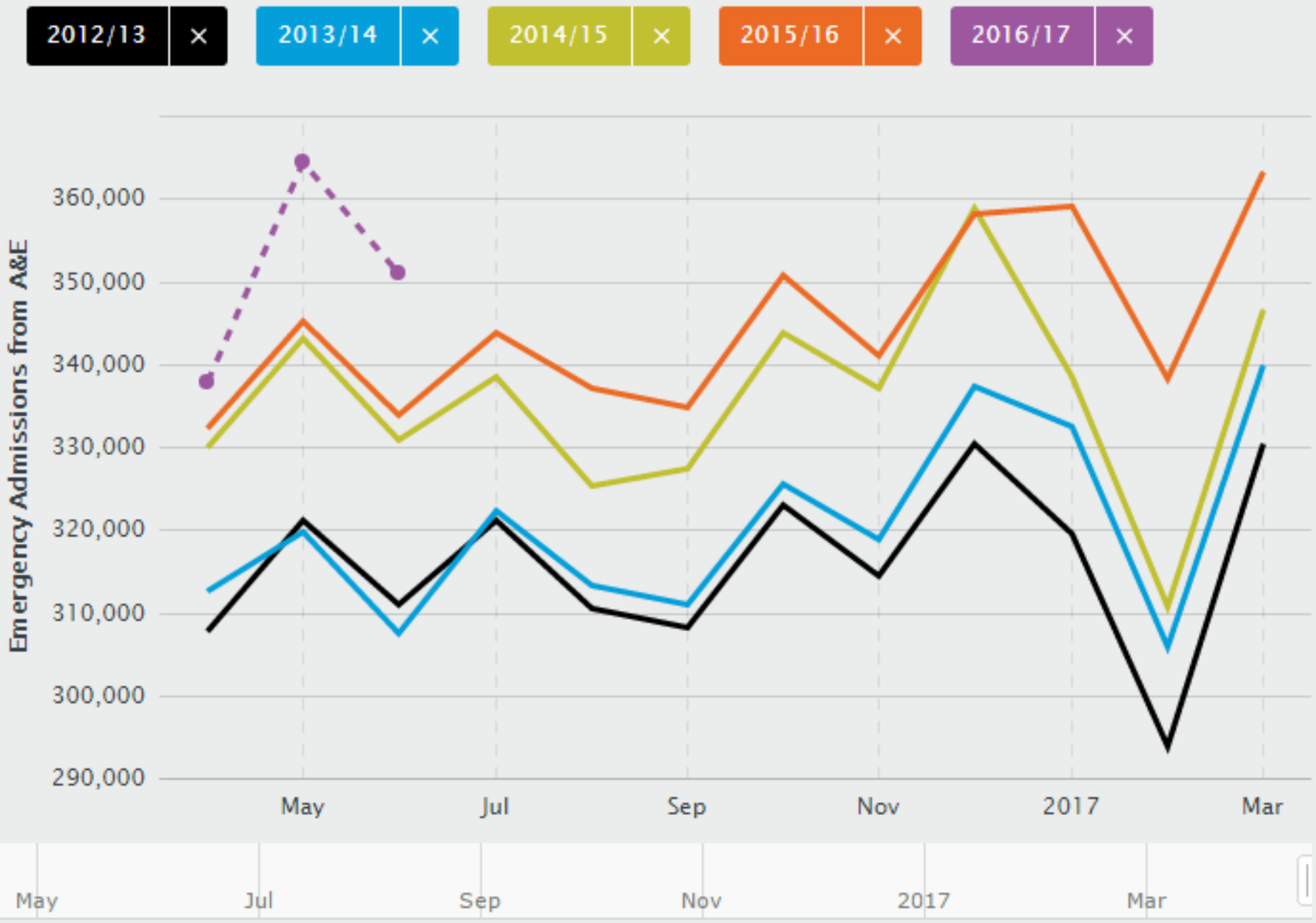
Silver book

January 2012

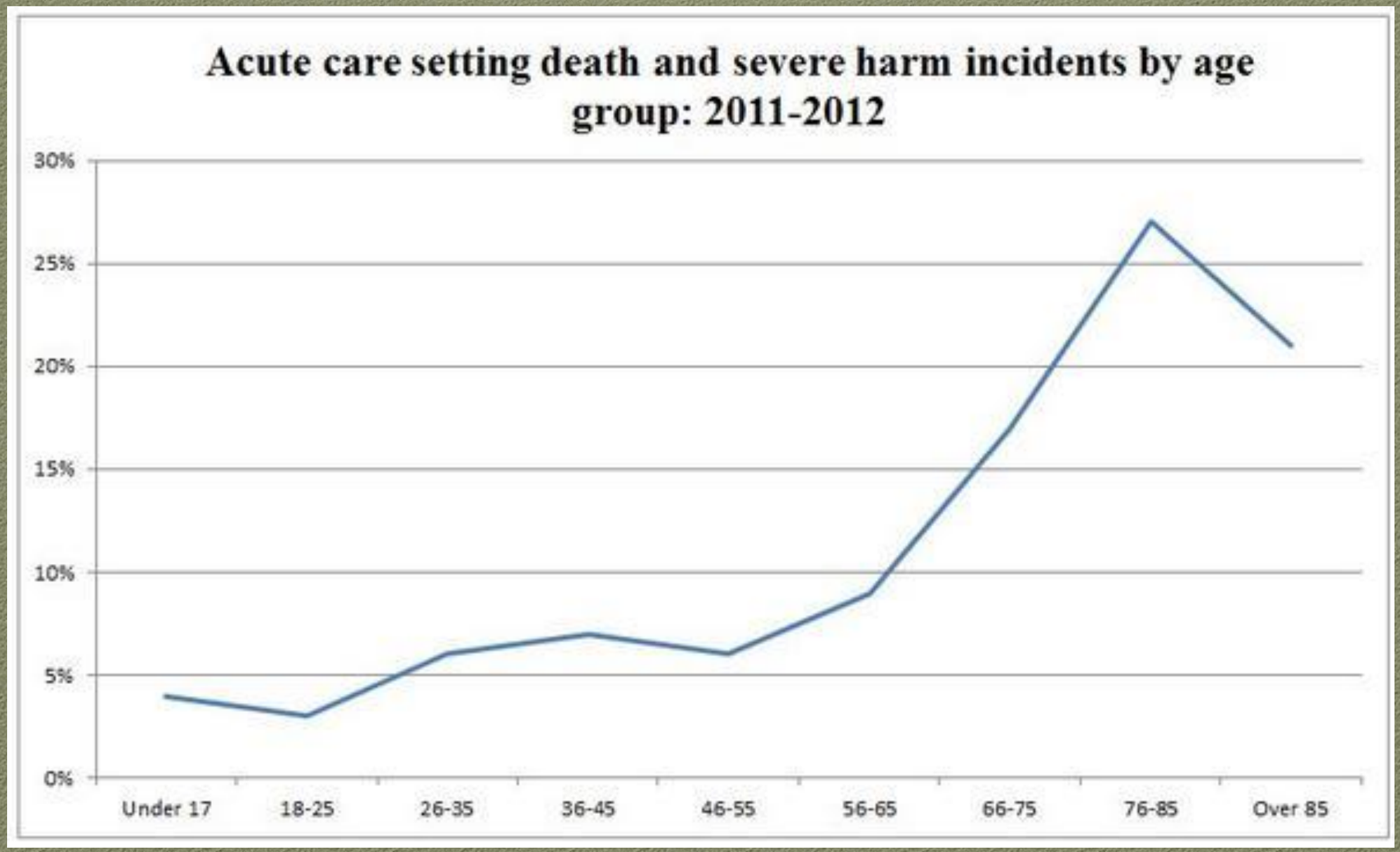


Why does correct assessment matter?

Figure 29: Emergency admissions from accident and emergency departments, monthly data



Data source: A&E attendances and emergency admissions www.england.nhs.uk


Acute care setting death and severe harm incidents by age group: 2011-2012
30%
25%
20%
15%
10%
5%
0%
Under 17
18-25
26-35
36-45
46-55
56-65
66-75
76-85
Over 85

"Getting the assessment of older people right in the AMU has the potential to improve outcomes, reduce inappropriate hospitalisation, and potentially reduce the need for long term care"

RCP Acute Care Toolkit 3 - Acute medical care for frail older people

Standards

1. All older people accessing urgent care should be routinely assessed for:

○ Pain	○ Delirium and dementia
○ Depression	○ Nutrition and hydration
○ Skin integrity	○ Sensory loss
○ Falls and mobility	○ Activities of daily living
○ Continence	○ Vital signs
○ Safeguarding issues	○ End of life care issues

These assessments will need to be undertaken by various teams and should be prioritised according to the needs of the patient.

2. The presence of one or more frailty syndrome (see Box 1) should trigger a more detailed comprehensive geriatric assessment, to start within 2 hours (14 hours overnight) either in the community, person's own home or as an in-patient, according to the person's needs

3. There must be an initial primary care response to an urgent request for help from an older person within 30 minutes

4. Ambulatory emergency pathways with access to multidisciplinary teams should be available with a response time of less than four hours for older people who do not require admission but need on-going treatment (e.g. in a Clinical Decisions Unit)[3-6]

Box 1 Frailty syndromes – a 30 second guide

Older people tend to present to clinicians with non-specific presentations or frailty syndromes, in contrast to the classical presentation seen in younger people. The reasons behind the non-specific presentations include the presence of multiple comorbidities, disability and communication barriers. The ability to recognise and interpret non-specific syndromes is key, as they are markers of poor outcomes.

Falls

Distinguish between syncopal (e.g. cardiac, polypharmacy), or non-syncopal (strength, balance, vision, proprioception, vestibular and environmental hazards all to be assessed).

Immobility

'Off legs' can hide many diagnoses ranging from cord compression to end-stage dementia. A comprehensive assessment is needed to focus on the urgent and important issues to be addressed.

Delirium and dementia

These are closely interrelated but each requires clinically distinct management – collateral history is key detect a recent change in cognition; it is common for delirium to be super-imposed on pre-existing dementia. Delirium can be hyperactive, hypoactive or mixed.

Polypharmacy

Adverse drug events lead to increased hospital stay, morbidity and mortality[8]. Consider a medication review focussing on identifying inappropriate prescribing, as well as drug omissions (e.g. STOPP/START[9]). Consider also medicines reconciliation

Incontinence

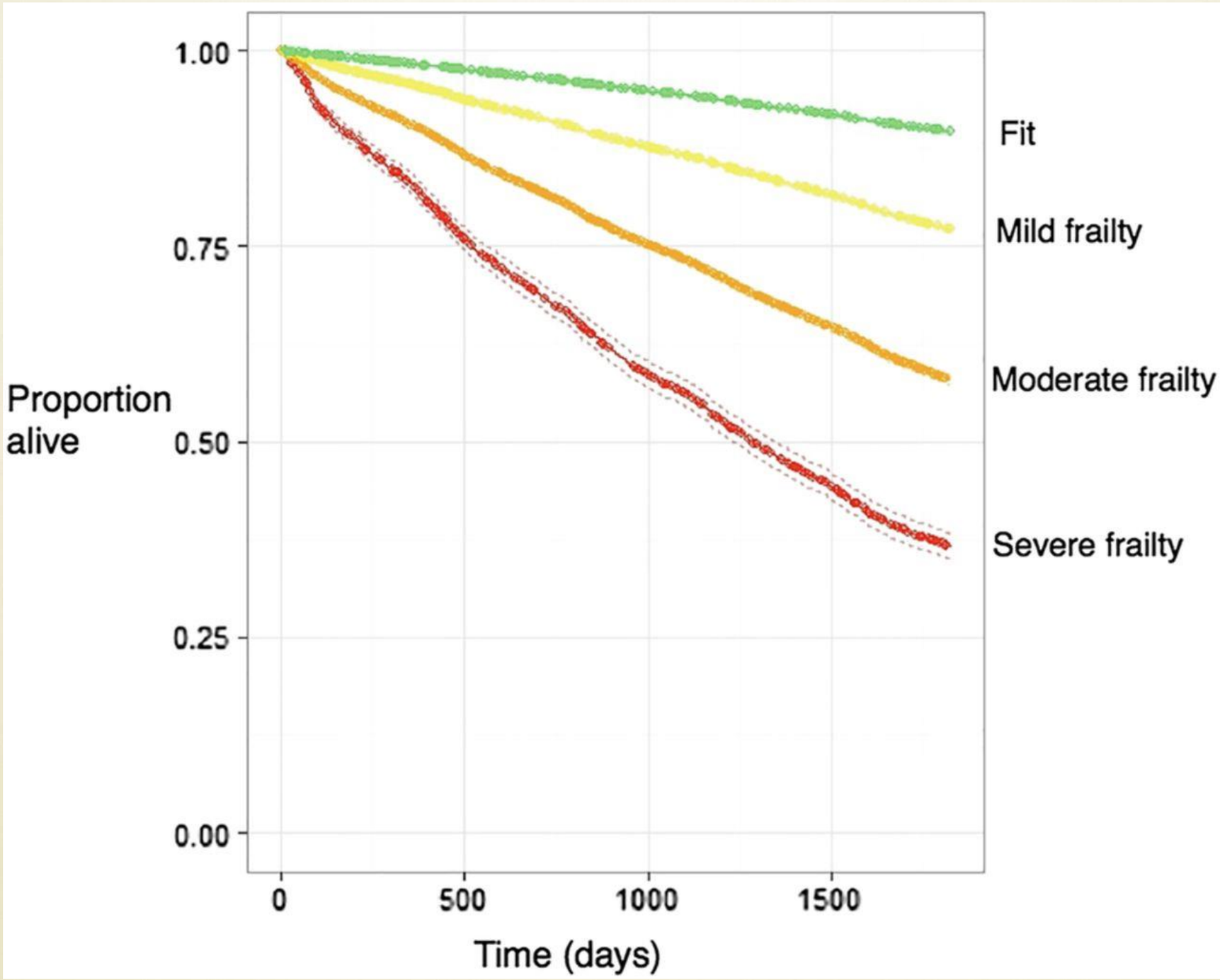
An unusual acute presentation, but a marker of frailty and a risk factor for adverse outcomes. More common is abuse of urine dipstick testing leading to erroneous diagnosis of infection, inappropriate antibiotics and increased risk of complications such as clostridial diarrhoea.

End of life care

Mortality rates for frail older people in the year following discharge from hospital, which presents an ideal opportunity to consider advance care planning[10].

MODELS, SCALES, SCORES, INDEXES AND SCREENING

Five-year Kaplan–Meier survival curve for the outcome of mortality for categories of fit, mild frailty, moderate frailty and severe frailty (internal validation cohort).



Andrew Clegg et al. Age Ageing 2016;ageing.afw039

age and ageing

Frailty Models

Phenotype theory

- Freid
  - Low grip strength
  - Low energy
  - Slow walking speed
  - Low physical activity
  - Unintentional weight loss

Deficit Accumulation

- Rockwood
  - Symptoms
  - Signs
  - Diseases
  - Disabilities
  - Leading to a frailty index

Clinical Frailty Scale*

1 **Very Fit** – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 **Well** – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.

3 **Managing Well** – People whose **medical problems are well controlled,** but are **not regularly active** beyond routine walking.

4 **Vulnerable** – While **not dependent** on others for daily help, often **symptoms limit activities.** A common complaint is being "slowed up", and/or being tired during the day.

5 **Mildly Frail** – These people often have **more evident slowing,** and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 **Moderately Frail** – People need help with **all outside activities** and with **keeping house**. Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.

7 **Severely Frail** – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 **Very Severely Frail** – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. **Terminally Ill** - Approaching the end of life. This category applies to people with **a life expectancy <6 months**, who are **not otherwise evidently frail.**

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging. Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

DALHOUSIE UNIVERSITY
Inspiring Minds

The eFI

- Based on Rockwood's frailty index
- 36 variables
- READ codes on GP systems
- Robust predictive validity for
  - Mortality
  - NH admission
  - Hospitalisation
- Ability to focus resources

The Edmonton Frail Scale

Frailty domain	Item	0 points	1 point	2 points
Cognition	Please imagine that this pre-drawn circle is a clock. I would like you to place the numbers in the correct positions then place the hands to indicate a time of 'ten after eleven'.	No errors	Minor spacing errors	Other errors
General health status	In the past year, how many times have you been admitted to a hospital?	0	1-2	≥2
	In general, how would you describe your health?	Excellent/very good/good	Fair	Poor
Functional independence	With how many of the following activities do you require help: meal preparation, shopping, transportation, telephone, housekeeping, laundry, managing money, taking medications?	0-1	2-4	5-8
Social support	When you need help, can you count on someone who is willing and able to meet your needs?	Always	Sometimes	Never
Medication use	Do you use five or more different prescription medications on a regular basis?	No	Yes	
	At times, do you forget to take your prescription medications?	No	Yes	
Nutrition	Have you recently lost weight such that your clothing has become looser?	No	Yes	
Mood	Do you often feel sad or depressed?	No	Yes	
Continence	Do you have a problem with losing control of urine when you don't want to?	No	Yes	
Functional performance	I would like you to sit in this chair with your back and arms resting. Then when I say 'Go', please stand up and walk at a safe and comfortable pace to the mark on the floor (approximately 3m away), return to the chair and sit down.	0-10 seconds	11-20 seconds	>20 seconds, patient unwilling or requires assistance
Total	**Final score is the sum of column totals**			**/17**

Scoring the Reported Edmonton Frail Scale (/17):

Not frail 0-5
Apparently vulnerable 6-7
Mild frailty 8-9
Moderate frailty 10-1
Severe frailty 12-17

Even easier …

- Slow walking speed - >5 seconds to walk 4 metres
- Timed up-and-go test (TUG) - >10 seconds to stand from a chair, walk 3 metres, turn round and sit down again

Frailsafe screening questions

- Reduced mobility?
- Impaired cognition?
- From a care home?

INTERVENTIONS FOR FRAILTY

Comprehensive Geriatric Assessment (CGA)

- Gold standard intervention for frailty
- An older person who receives CGA by a multidisciplinary team in a specialist environment is more likely to be alive and living in their own home 6 months after an acute illness

WAYS OF DELIVERING ‘FRONT DOOR’ GERIATRIC MEDICINE INPUT

- Separate ‘take’ model
- OPAL
- Frailty units
- In the ED
- In the MAU

OPAL (THE ORIGINAL)

- Early CGA to older medical inpatients leading to targeted geriatric intervention
- Aim to improve processes, thus quality of care and length of stay
- Screened admissions >70 years looking for predictors of prolonged length of stay
- Rapid transfer to specialist ward
- Case management on general ward
- Facilitated discharge with onward referral

Harari D, Martin FC et al. The Older persons' assessment and liaison team 'OPAL': evaluation of comprehensive geriatric assessment in acute medical inpatients. Age and Ageing 2007; 36: 1-6

OPAL

- Improvement in management of ‘geriatric giants’
- Mean transfer time to specialist ward fell by 7 days
- Mean LOS fell by 3 days
- No increase in readmissions or referrals to intermediate care

Harari D, Martin FC et al. The Older persons’ assessment and liaison team ‘OPAL’: evaluation of comprehensive geriatric assessment in acute medical inpatients. Age and Ageing 2007; 36: 1-6

Thank you