University of Leicester

University Hospitals of Leicester NHS Trust

What did Geriatric Medicine ever do for acute care?

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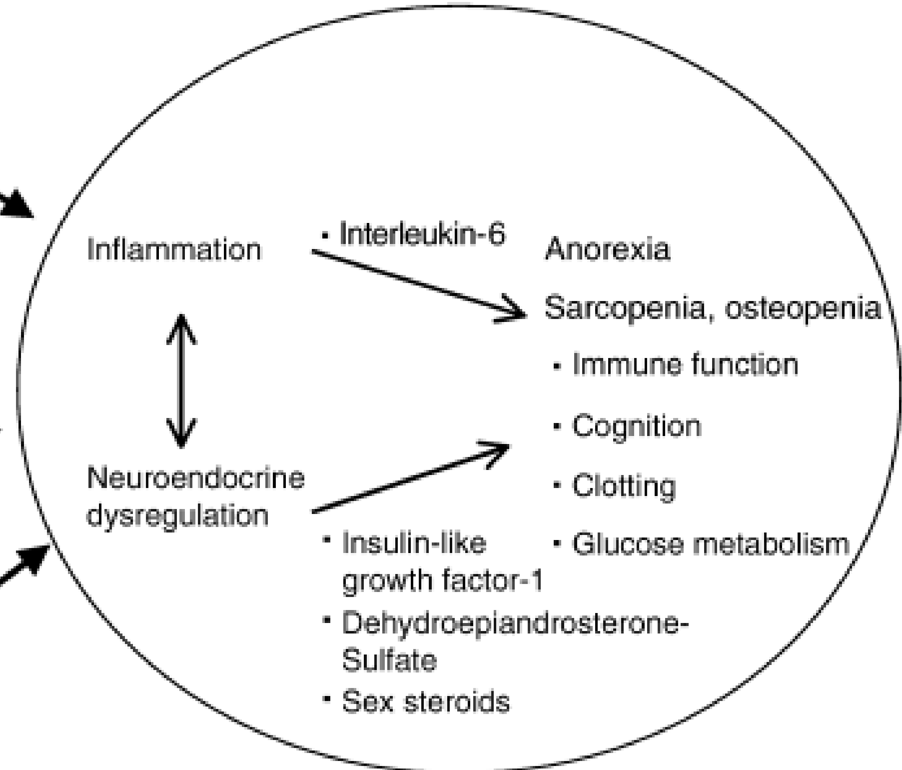
What is geriatric medicine?

- *geron* - ‘old man’ & *iatros* - ‘healer’ = geriatrics
- Focus on the health care of older people
- But NOT just ‘older people’ but *frail* older people

It’s not just ageing…



Molecular & Disease
Impaired Physiological
Clinical
Oxidative stress
Mitochondrial deletions
Shortened telomeres
DNA damage
Cell senescence
Gene variation
Inflammatory diseases
Inflammation
Neuroendocrine dysregulation
· Interleukin-6
· Insulin-like growth factor-1
· Dehydroepiandrosterone-Sulfate
· Sex steroids
Anorexia
Sarcopenia, osteopenia
· Immune function
· Cognition
· Clotting
· Glucose metabolism
Slowness
Weakness
Weight loss
Low activity
Fatigue

‘Freidologists’

Panel 2: The five phenotype model indicators of frailty and their associated measures

Weight loss

Self-reported weight loss of more than 4·5 kg or recorded weight loss of ≥5% per year

Self-reported exhaustion

Self-reported exhaustion on US Center for Epidemiological Studies depression scale[73] (3–4 days per week or most of the time)

Low energy expenditure

Energy expenditure <383 kcal/week (men) or <270 kcal/week (women)

Slow gait speed

Standardised cutoff times to walk 4·57 m, stratified by sex and height

Weak grip strength

Grip strength, stratified by sex and body-mass index

Rockwoodologists

- Accumulation of deficits model
- Frailty Index
  - n/30 (was 92!)
  - ɣ distribution, >0.67 = BAD
- Construction
  - Must be associated with health status
  - Prevalence must generally increase with age
  - Must not have a ceiling-effect e.g. presbyopia
  - Deficits must cover a range of systems
  - Internally consistent

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.

Where dementia is present, the degree of frailty usually corresponds to the degree of dementia:

- **Mild dementia** – includes forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.
- **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.
- **Severe dementia** – they cannot do personal care without help.

K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489–495

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Population

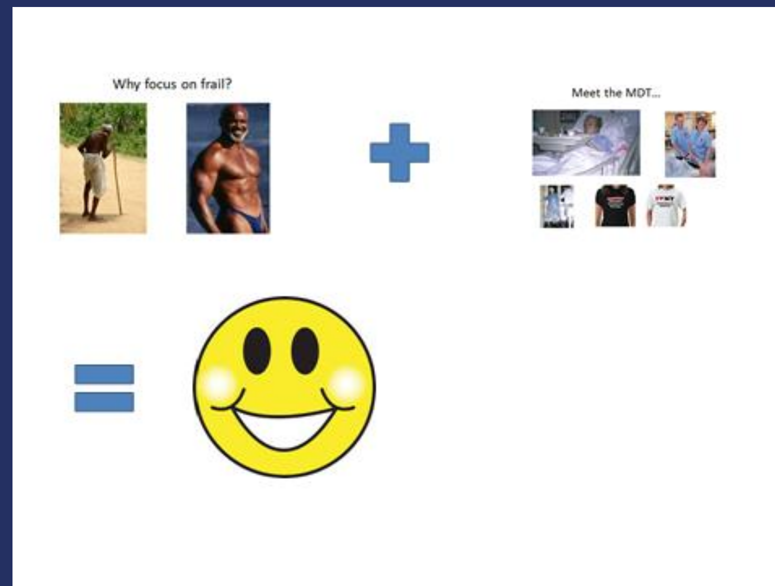
- 85+
- OR
- People aged 65+ with one or more of the following presenting features:
  - Cognitive impairment (delirium or dementia)
  - Care home residents (nursing or residential)
  - People with fragility fractures
  - People with Parkinson’s disease
  - People with recurrent falls

Adverse outcomes associated with frailty

- Falls
- Delirium
- Restricted function (disability)
- Hospitalisation
- Institutionalisation
- Death

Why frail older people?

- Evidence based solutions
  - Comprehensive Geriatric Assessment (CGA)



Evidence:

- Fox 2012: ACE units better than usual care
- Ellis 2011: wards better than teams; frail better than age-specific
- Baztan 2010: acute geriatric units better than conventional care
- Deschodt 2013: teams reduce mortality but not function or service outcomes
- Lessons from stroke care & orthogeriatric care

Some evidence: Fox 2012

- 6839 patients in 13 controlled trials
- Fewer falls RR 0.51
- Less delirium RR 0.73
- Less functional decline RR 0.87
- Shorter LoS WMD −0.61
- More discharges home RR 1.05
- Fewer discharges to NH RR 0.82
- Lower costs WMD –$245.80

So what is CGA?

- ‘a multidimensional, interdisciplinary diagnostic process to determine the medical, psychological, and functional capabilities of a frail older person in order to develop a coordinated and integrated plan for treatment and long-term follow-up’

A bit of detail…

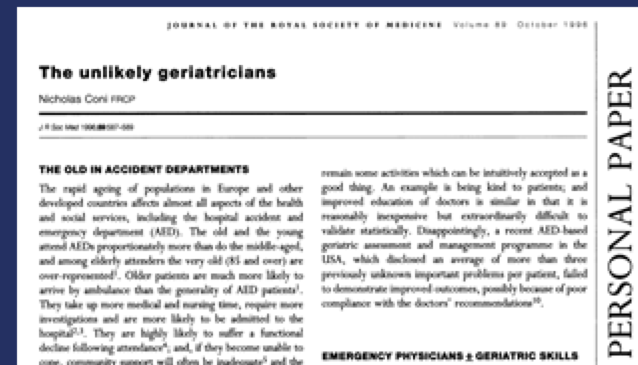
- *Multidimensional*
  - Not just troponin pathways for chest pain
- *Interdisciplinary diagnostic process*
  - Flattened hierarchy, mutual respect, constructive challenge
  - Iterative process
- *Coordinated and integrated plan for treatment*
  - Some understanding of each others roles and expertise
- *Follow-up*
  - Because bad things will happen

So what's different?

- Integrates standard medical diagnostic evaluation
- Problem solving
- Team working
- Patient centred approach

So what's the problem?

- Not enough CGA & too much specialism
- 'Integrated care'
- Fractured care pathway
  - Acute vs rehabilitation
  - Different (competing)
  - 'CCG lottery'



JOURNAL OF THE ROYAL SOCIETY OF MEDICINE

PERSONAL PAPER

The unlikely geriatricians

Nicholas Coni FRCP

THE OLD IN ACCIDENT DEPARTMENTS

The rapid ageing of populations in Europe and other developed countries affects almost all aspects of the health and social services, including the hospital accident and emergency department (AED). The old and the young attend AEDs proportionately more than do the middle-aged, and among elderly attenders the very old (85 and over) are over-represented[1]. Older patients are much more likely to arrive by ambulance than the generality of AED patients[1]. They take up more medical and nursing time, require more investigations and are more likely to be admitted to the hospital[2,3]. They are highly likely to suffer a functional decline following attendance[4]; and, if they become unable to cope, community support will often be inadequate[5] and the

remain some activities which can be intuitively accepted as a good thing. An example is being kind to patients; and improved education of doctors is similar in that it is reasonably inexpensive but extraordinarily difficult to validate statistically. Disappointingly, a recent AED-based geriatric assessment and management programme in the USA, which disclosed an average of more than three previously unknown important problems per patient, failed to demonstrate improved outcomes, possibly because of poor compliance with the doctors' recommendations[10].

EMERGENCY PHYSICIANS ± GERIATRIC SKILLS

'Geriatrics is too important to be left to geriatricians. We are all geriatricians now, and geriatric medicine should be like a caretaker government-self-appointed to instruct others how to do it, and then to preside over its own demise.'

Sheffield AFU

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Timely care for frail older people referred to hospital improves efficiency and reduces mortality without the need for extra resources

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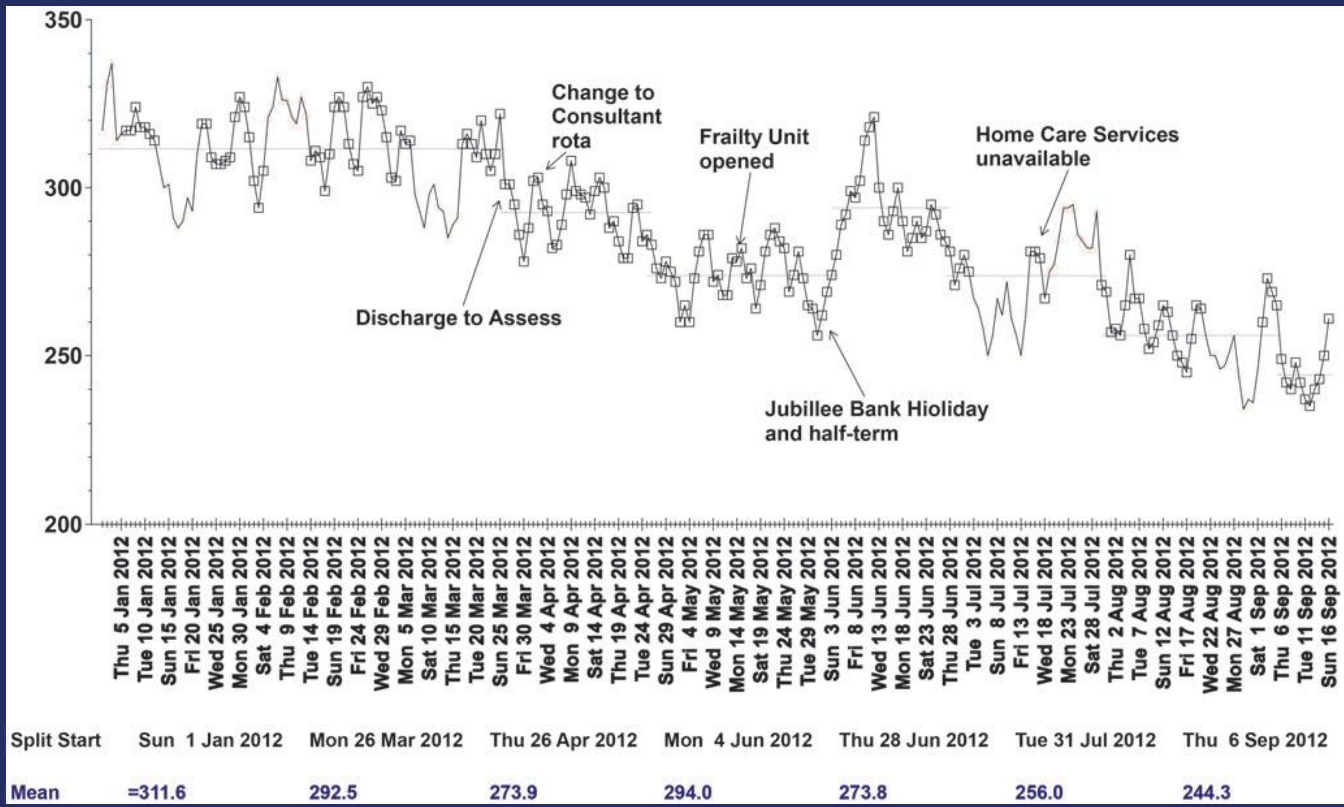

Leicester EFU

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A controlled evaluation of comprehensive geriatric assessment in the emergency department: the 'Emergency Frailty Unit'

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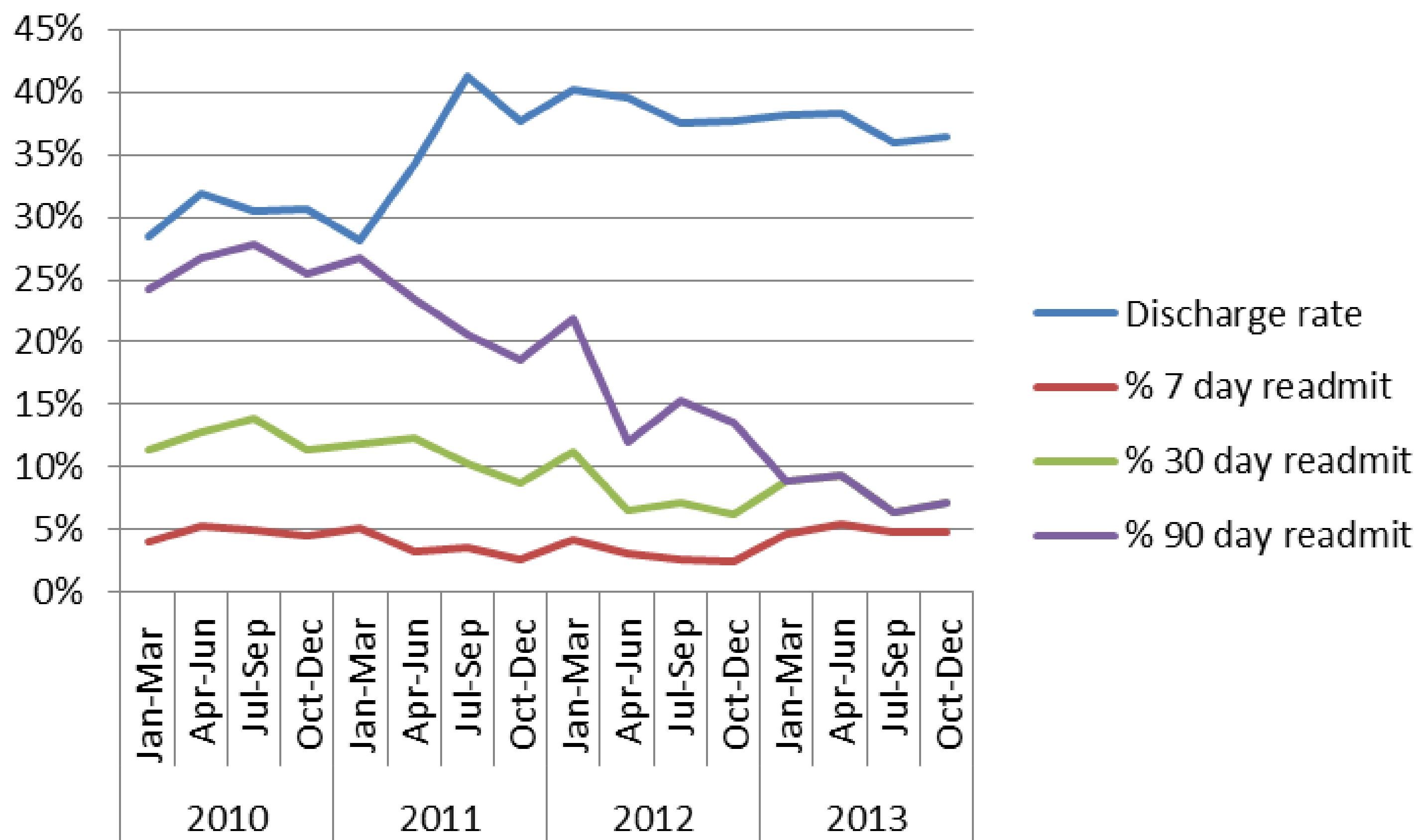

So what has geriatric medicine ever done for acute care?

Royal College of Physicians

Setting higher standards

Acute care toolkit 3

Acute medical care for frail older people March 2012

All staff working in acute medical units (AMUs) will be familiar with the increasing number of frail older people requiring access to acute care. The AMU provides a key role in identifying the urgent and important issues which, if addressed accurately and comprehensively, will improve patient outcomes. Accordingly, acute medical teams need to possess the knowledge and skills, and demonstrate the appropriate behaviours, for managing frail older people.

One of the challenges is that of non-specific presentations, such as delirium, that can mask serious underlying pathology. Delivering a holistic assessment in the AMU is difficult for acute teams, with large numbers of patients to see quickly. Geriatric liaison teams, which have the skills and time to focus on frail older people, can be helpful. Better integration between primary care, emergency departments, AMUs and geriatric services, all working towards achieving high standards of urgent care,[1] should reduce duplication and improve outcomes.

Background

Older people (aged 65+) comprise a relatively small proportion of all patients attending the emergency department (ED), but form a much higher proportion of patients in the AMU, and a substantial proportion (60–70%) of overall hospital inpatients. Most patients will be admitted through AMUs, making this a key area in which care for older people can be influenced.

The oldest patients attending hospitals are often physically, cognitively or socially frail (ie prone to significant deterioration – decompensation after apparently minor stressors). Frailty* contributes to the oldest patients having the longest lengths of stay, highest readmission rates, and highest rate of use of long-term care after discharge.[2] Admission to hospital also adds the specific hazards of cross-infection, noise, disorientation etc. Thus, if effective medical treatment and care can be provided at home, these additional burdens may be avoided. For selected patients, hospital at home can be safe and effective,[3] and has the potential to avoid functional decompensation, reducing the need for rehabilitation and long-term care. But selecting the correct patients who can be safely treated at home is not easy.

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. This article focuses on acute hospital care; broader aspects of urgent care for older people are covered in the *Silver book*, due to be published in early 2012.[4]

> 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...

The silver book

QUALITY CARE FOR OLDER PEOPLE WITH URGENT & EMERGENCY CARE NEEDS

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The King's Fund

Ideas that change health care

Making our health and care systems fit for an ageing population

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So what has geriatric medicine ever done for acute care?

- Championing care for frail older people
- Clinical services for frail older people
- Education & training
- Policy
- Research into new models of care