Preventing Falls in Hospital

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Animation. Mrs Andrews' Story

from HSJ Commission on frail older people in hospital. At every stage what should have been different?

› https://www.youtube.com/watch?v=Fj_9HG_TWEM

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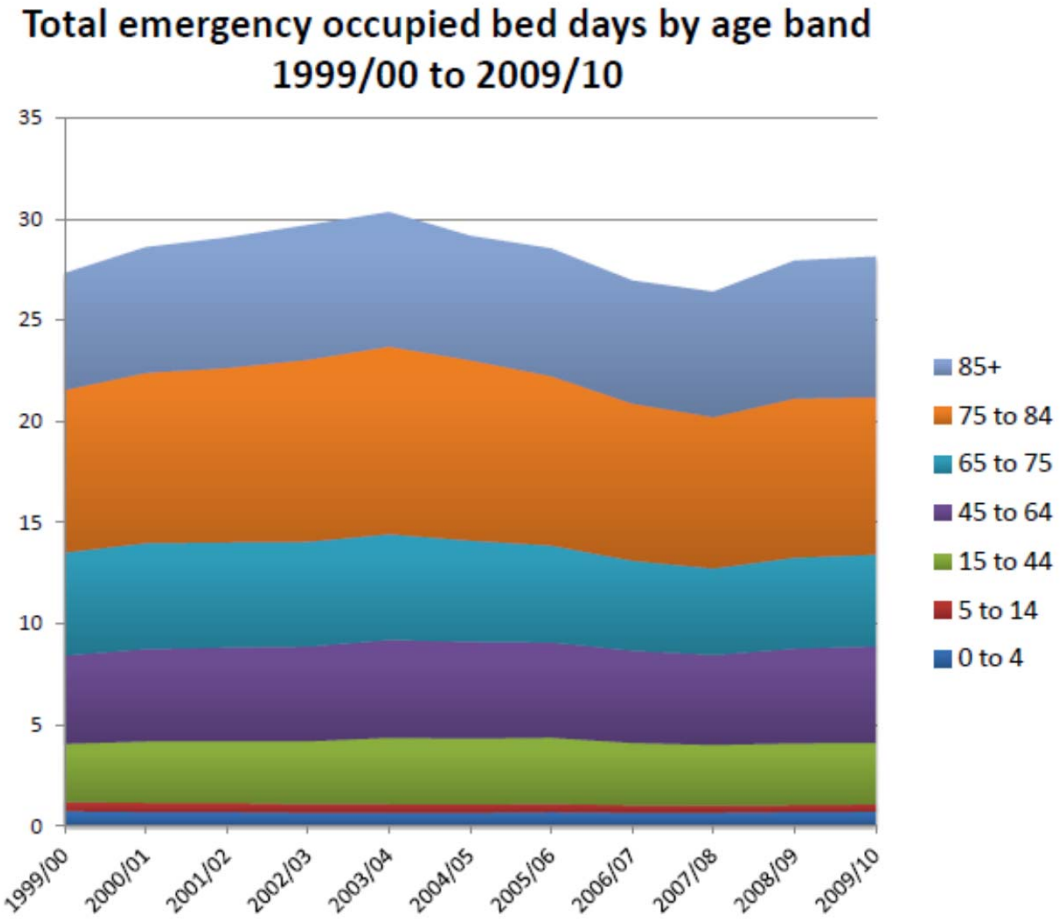
Modern Hospital Age-Mix (England)

(DH analysis of HES data)



- 60% admissions
- 70% bed days
- 85% delayed transfers
- 65% emergency readmissions
- 75% deaths in hospital
- 25% bed days are in over 85s
- 80% of all stays over 2 weeks
- Older you are, more likely to suffer ward moves

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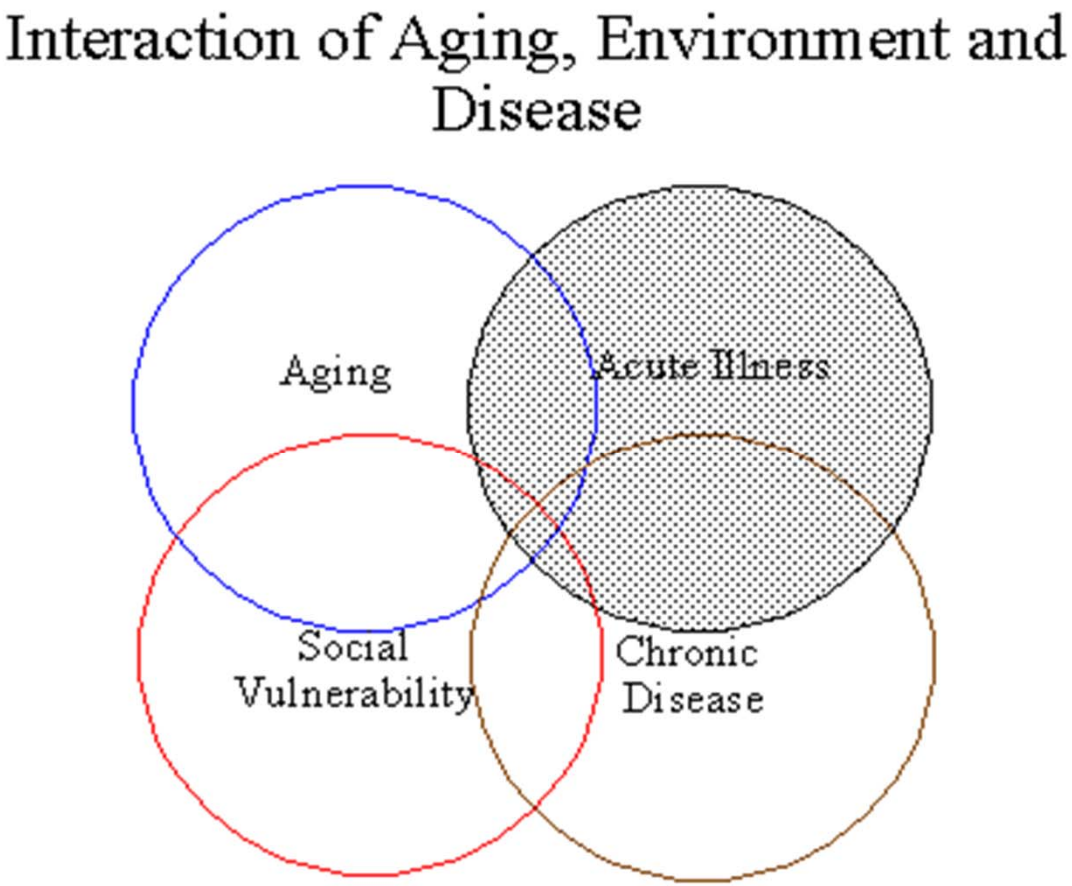
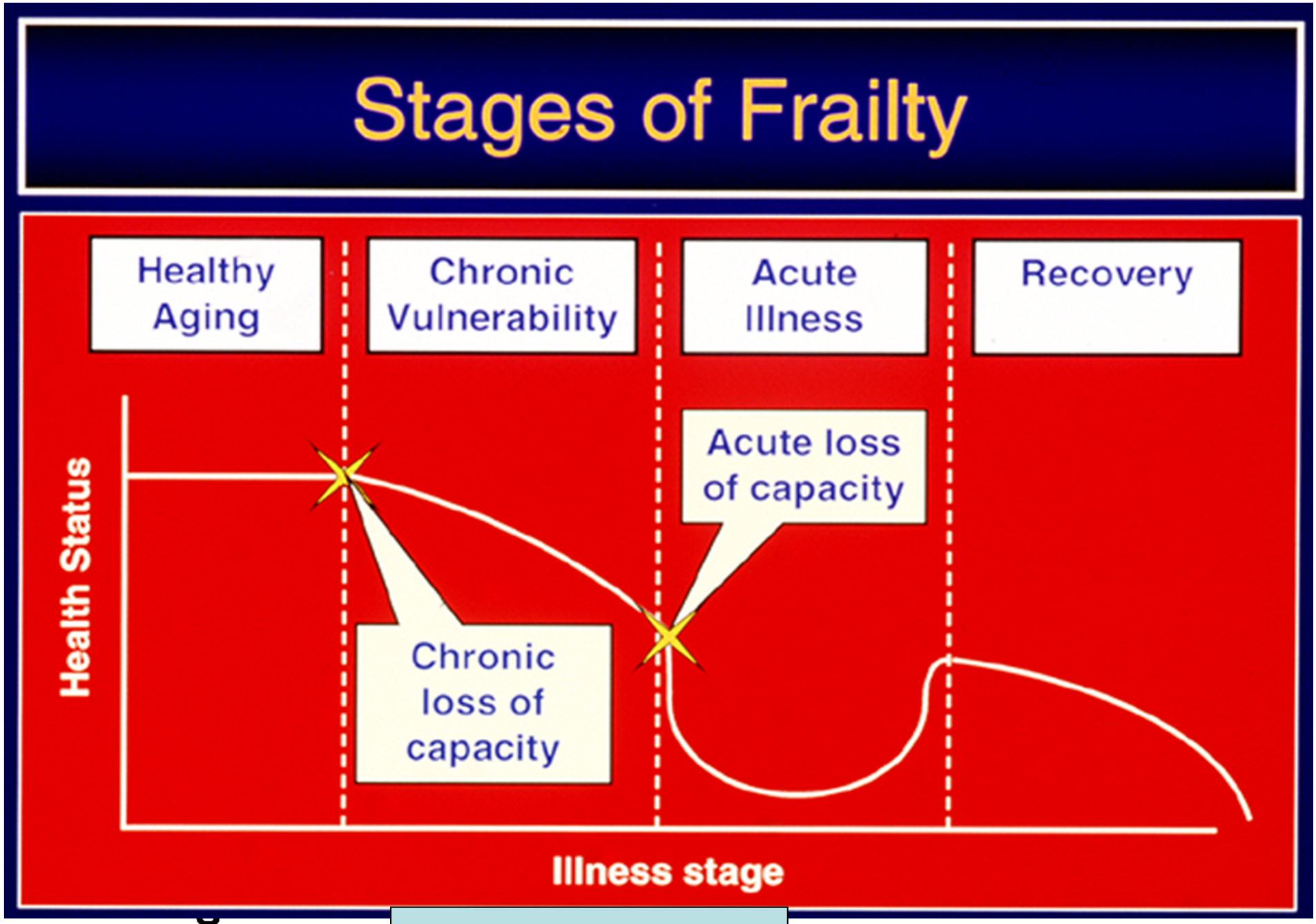
Frequent users of hospital services have overlap of physical and social vulnerabilities




Stages of Frailty
Healthy Aging
Chronic Vulnerability
Acute Illness
Recovery
Acute loss of capacity
Chronic loss of capacity
Health Status
Illness stage

Fried 1999

How frailty presents to services
(Clegg and Young Lancet 2013)

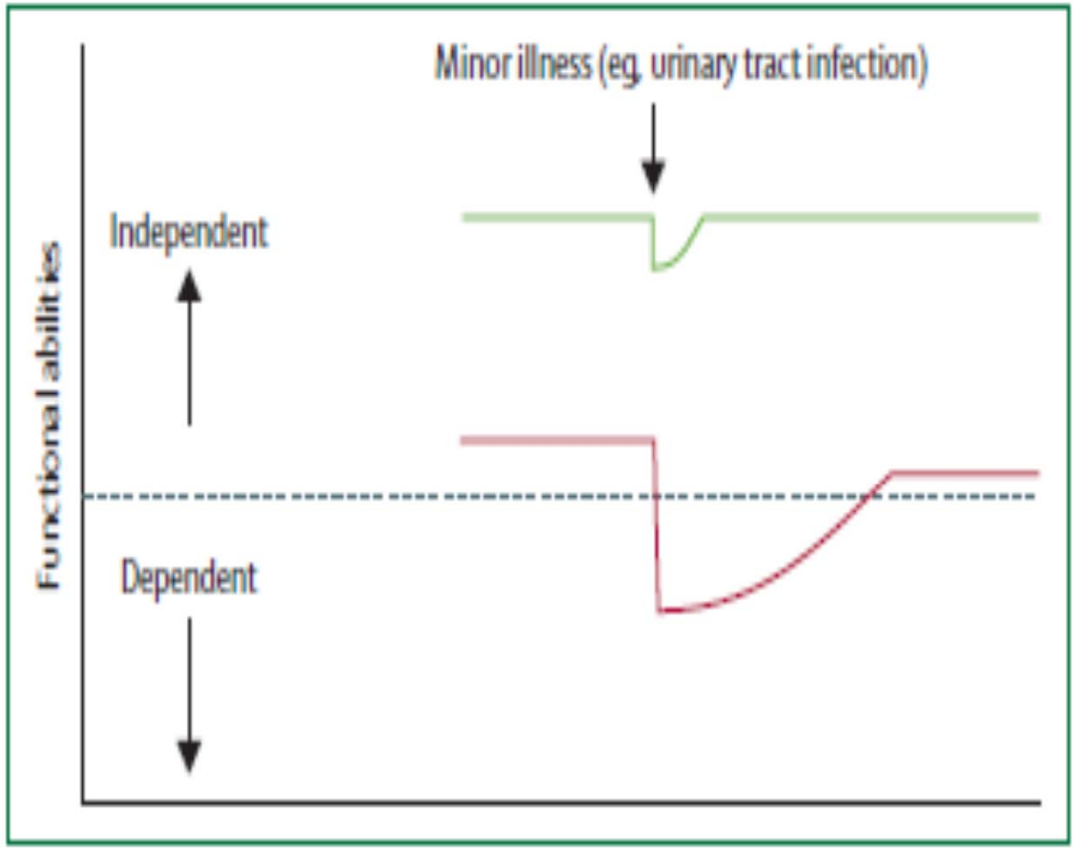


Figure 1: Vulnerability of frail elderly people to a sudden change in health status after a minor illness

- **Fatigue**
- **Weight loss**
- **Frequent infections**
- **“Failure to thrive”**
- **Delirium**
- **Falls**
- **Immobility**
- **Fluctuating Disability**
- **Incontinence**

Mudge et al 2011. Functional independence pre-admission to discharge. Over 65s.

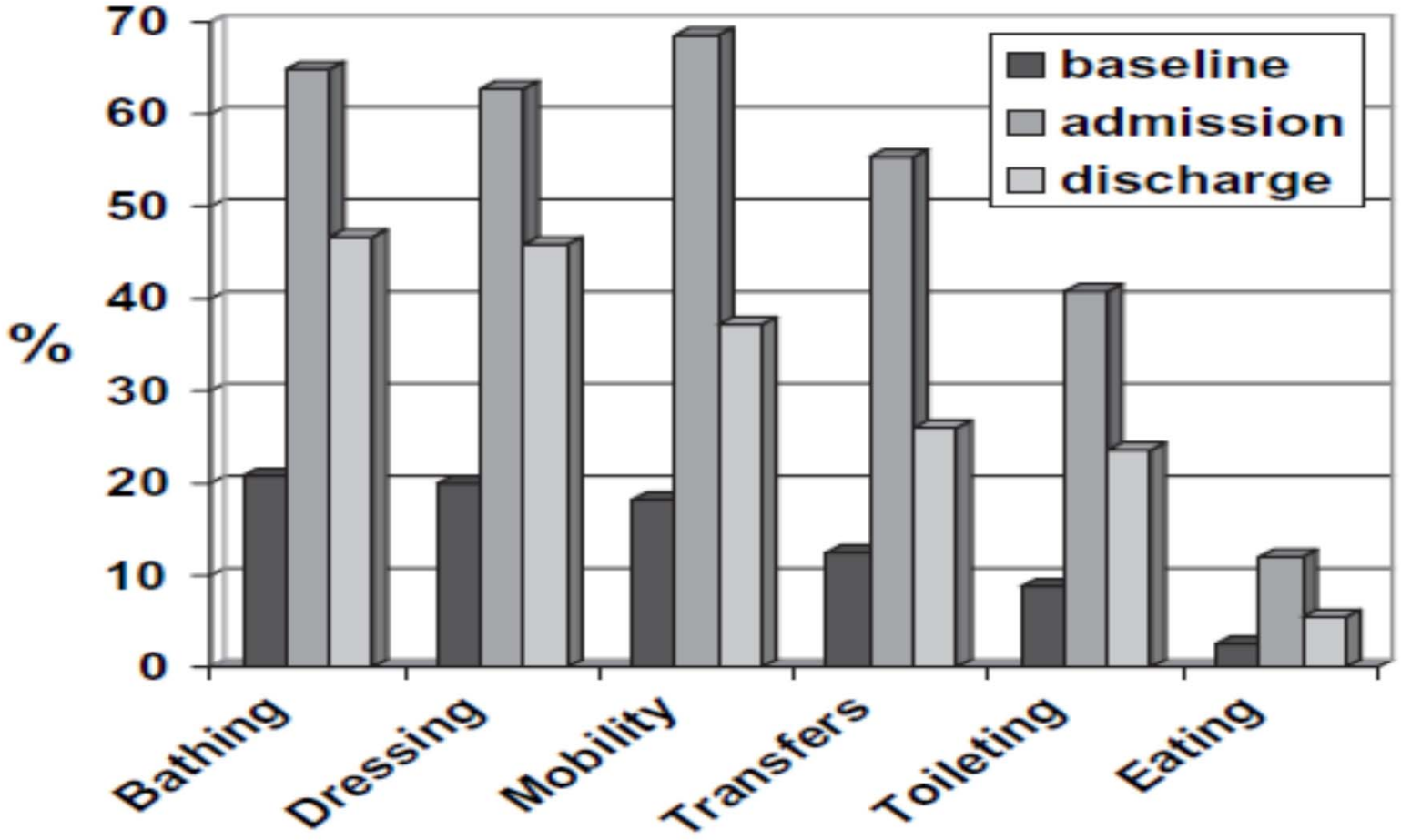
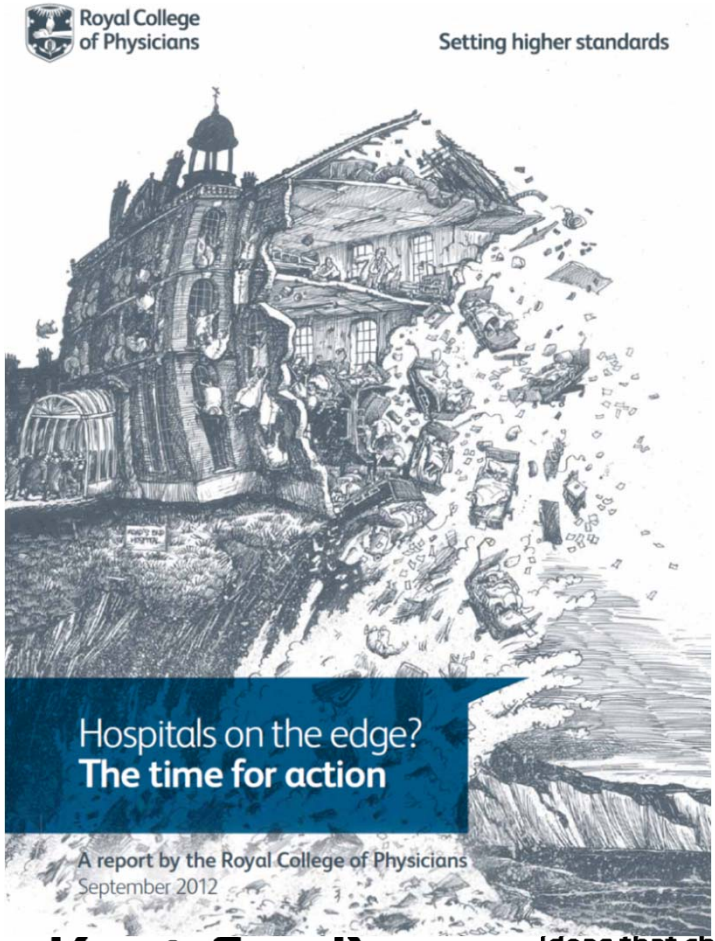


Figure 1. Percentage of study participants (n = 615) requiring human assistance in each activities of daily living, at baseline, hospital admission, and hospital discharge.

From RCP London. Are hospitals “age proof and fit for purpose”?



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- **“Our hospitals are struggling to cope with the challenges of an ageing population and rising emergency admission”**
- **“2/3 of patients admitted to hospital are over 65 and many have dementia, frailty or complex needs….buildings, services and staff are not equipped to deal with them”**

Harms of hospitalisation for frail older people

- Usual safety incidents
  - **Falls**, Drug Errors, Infection, Pressure Sores, DVT
- Physiological deterioration and avoidable mortality
- Poorly planned discharge
- Care transitions
- Delirium
- Immobility
- Incontinence
- Institutionalisation
- Decompensation
- Premature decisions on future care needs in wrong setting

Harm-free Care safety thermometer – NHS England

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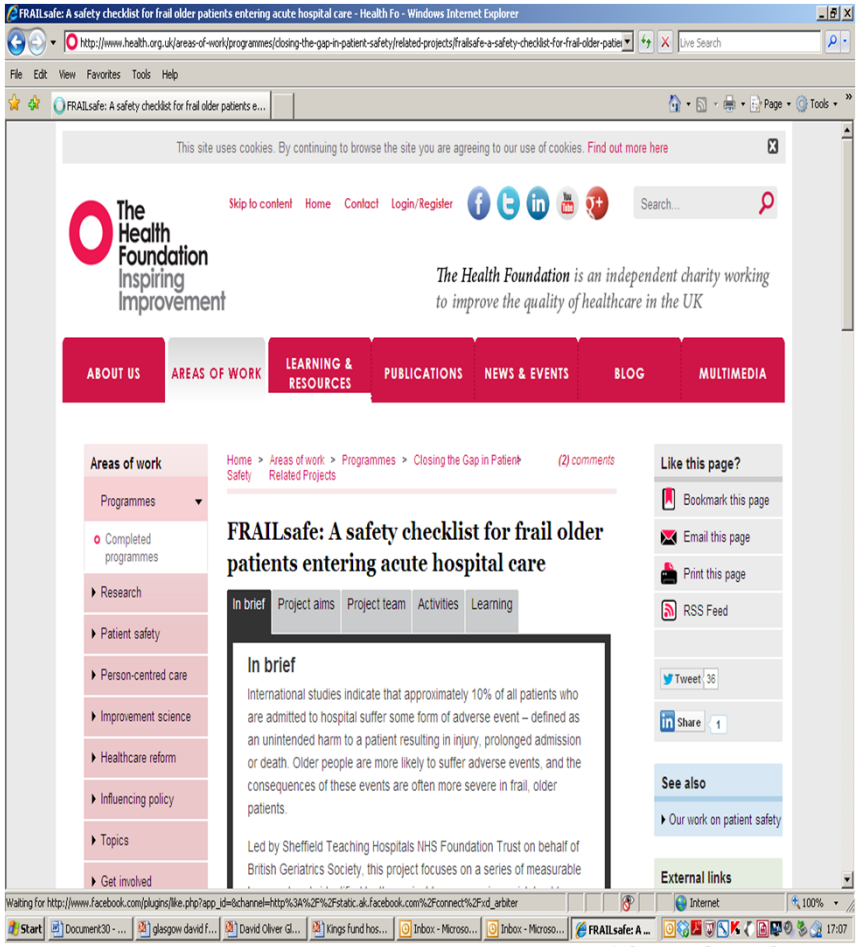
“Frail Safe” QI Project. BGS, Health Foundation. Evidence-based checklist to reduce common harms.



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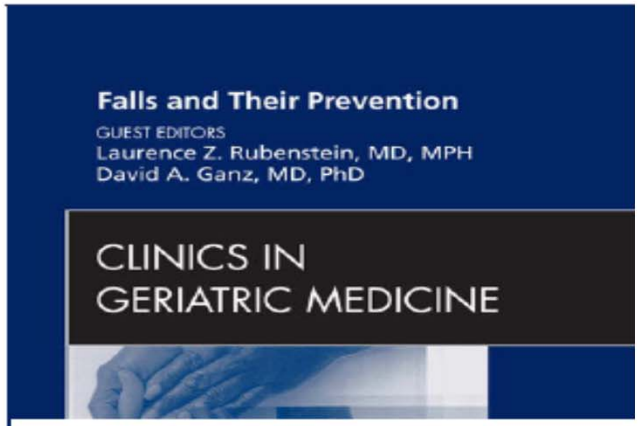
- confusion (identifying delirium & underlying dementia)
- reduced mobility
- DVT risk
- **falls**
- pressure ulcers
- poor advanced care planning
- medication (adverse drug reactions).

Falls in hospital…

- **Rates highest in older age**
  - **Median age 84** *(NPSA 2007)*
- **Common risk factors prevalent in hospital population**
  - **e.g. gait, balance, frailty, sensory impairment, confusion, acute illness, polypharmacy, previous fall**
- **Common**
  - **2 to 8.9 per 1000 bed days** *(Oliver et al CGM 2010)*
  - **35% of all safety incidents in NHS Hospitals – nearly 300,000 per annum** *(NPSA 2007)*
- **Harmful**
  - **Fracture, head injury, soft tissue injury, loss of function**
- **Costly**
  - **Excess bed days, opportunity costs, injuries**
- **Worrying**
  - **For staff, relatives and fear of falling in patient. Can lead to excessive caution over discharge, complaint, litigation. In UK, KPI for regulation and big concern for hospital board. Also English "safety thermometer"**
- **Each fall a "red flag" to identify underlying cause**
- **And produce a plan to stop the next one**
  - **e.g. Veterans' Admin Post Fall "Huddle" or "Fall Safe" Care Bundle** *(Healey et al Age Ageing 2013)*

“Conventional” “gold standard” evidence base here. I won’t dwell on it too long



Preventing Falls and Fall-Related Injuries in Hospitals

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KEYWORDS
• In-hospital falls • Fall-related injuries • Fracture prevention

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Interventions for preventing falls in older people in care facilities and hospitals (Review)

Cameron ID, Gillespie LD, Robertson MC, Murray GR, Hill KD, Cumming RG, Kerse N

THE COCHRANE COLLABORATION®

This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in *The Cochrane Library*

What works in Clinical Trials?

(Cochrane 2012)

- One trial (1822) participants, **educational intervention for patients** by trained research nurses targeting **risk factors** in acute hospital patients at high risk in acute medical wards reduce **risk of falling RR 0.29 (0.11, 0.74)**
- **Multifactorial interventions** in hospitals **reduced rate of falls falls RaR 0.69 (0.49, 0.96)**. 4 trials. n = 6478
- **Multifactorial interventions** reduced **risk of falls RR 0.71 (0.46, 1.09).** 3 trials. n = 4824. Inconclusive
- **Multidisciplinary care in a geriatric ward after hip fracture** surgery c. usual care reduced **rate of falls RaR 0.38 (0.19, 0.74) & risk of falling RR 0.41 (0.2, 0.83)1 trial. N = 199.**
- *"More evidence is required"*

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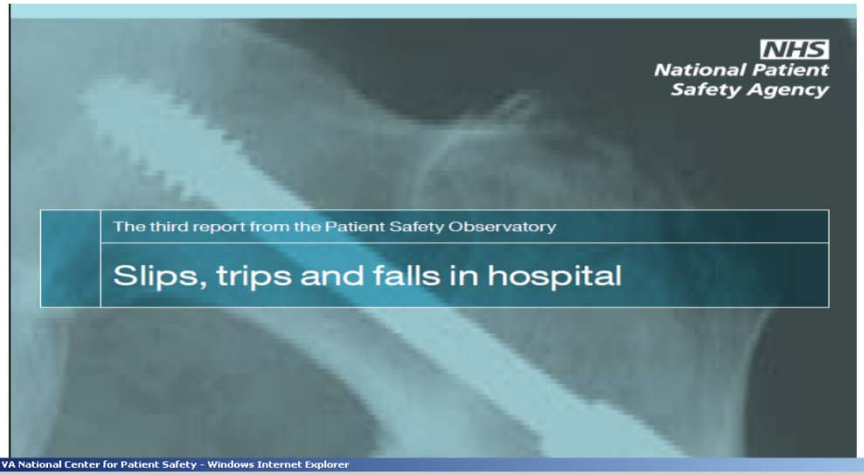
Where conventional trial evidence on single interventions is equivocal, absent or null?

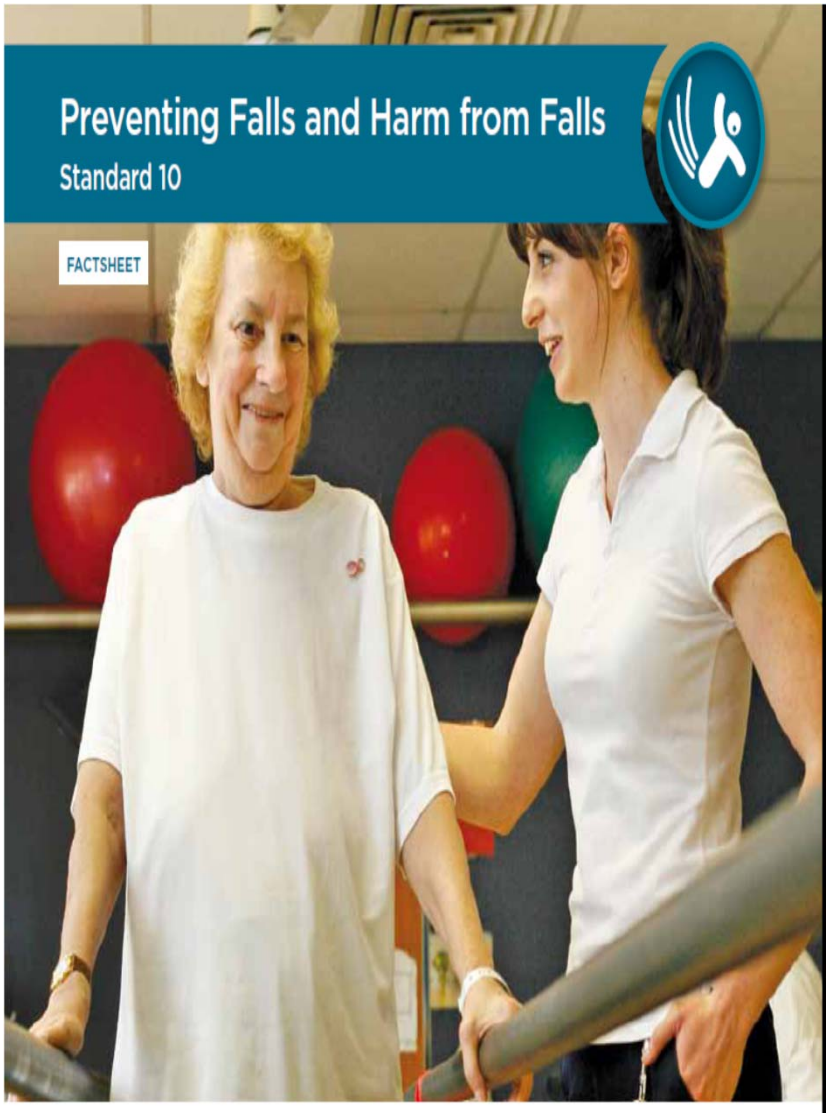
(Oliver D et al 2010, Cochrane 2012)

- Flooring type
- Bed and chair alarms
- Bedrail/restraint use of removal
- Increased observation/assistance/rounding
- Falls risk prediction tools
- Hip protectors
- Footwear
- Environment
- Education for staff and relatives
- Continence Care
- Preventing Delirium
- Additional Physiotherapy
- Wrist Bands/Labels

These are the same kind of components that make up successful multi-factorial interventions…

Practical evidence-based guidance abounds





Local Quality Improvement Initiatives focus on sustained implementation and PDSA cycles. (See also Sheffield, Univ Hosp Birmingham. Age Ageing Fall Safe – Healey)

Using local data for Improvement

- **Reducing Inpatient Falls on the Acute Medical Wards using improvement methods**
- The work of the Multi-Professional frontline staff in collaboration with Yorkshire and Humber Improvement Academy

Unpublished data. Cracknell A et al Leeds

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The Leeds Teaching Hospitals NHS NHS Trust

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Pragmatic quality improvement in action (local data from Leeds)

Interventions:

- Daily multi-professional **falls safety briefing**
- **Toileting prompts** pre meals
- High risk of falling signage for patients bed side and on patient board
- Sharing results and lessons through newsletters, run charts and visual displays of **"days since last fall"**
- Certificates awarded for going 10days, 20days and 30days without a fall
- Education of staff
- Equipment availability (including falls sensors)
- Dedicated leaders for improvement on each ward

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Improvement Academy

Pre-meal intervention measurement

Date: Ward: 28 Team: Red

Bed number	High risk of fall (Yes/No)		Intervention (describe)	Toiletting (Y/N)
1	Yes	No		Yes/No/ n/a
2	Yes	No		Yes/No/ n/a
3	Yes	No		Yes/No/ n/a
4	Yes	No		Yes/No/ n/a
5	Yes	No		Yes/No/ n/a
6	Yes	No		Yes/No/ n/a
7	Yes	No		Yes/No/ n/a
8	Yes	No		Yes/No/ n/a
9	Yes	No		Yes/No/ n/a
10	Yes	No		Yes/No/ n/a

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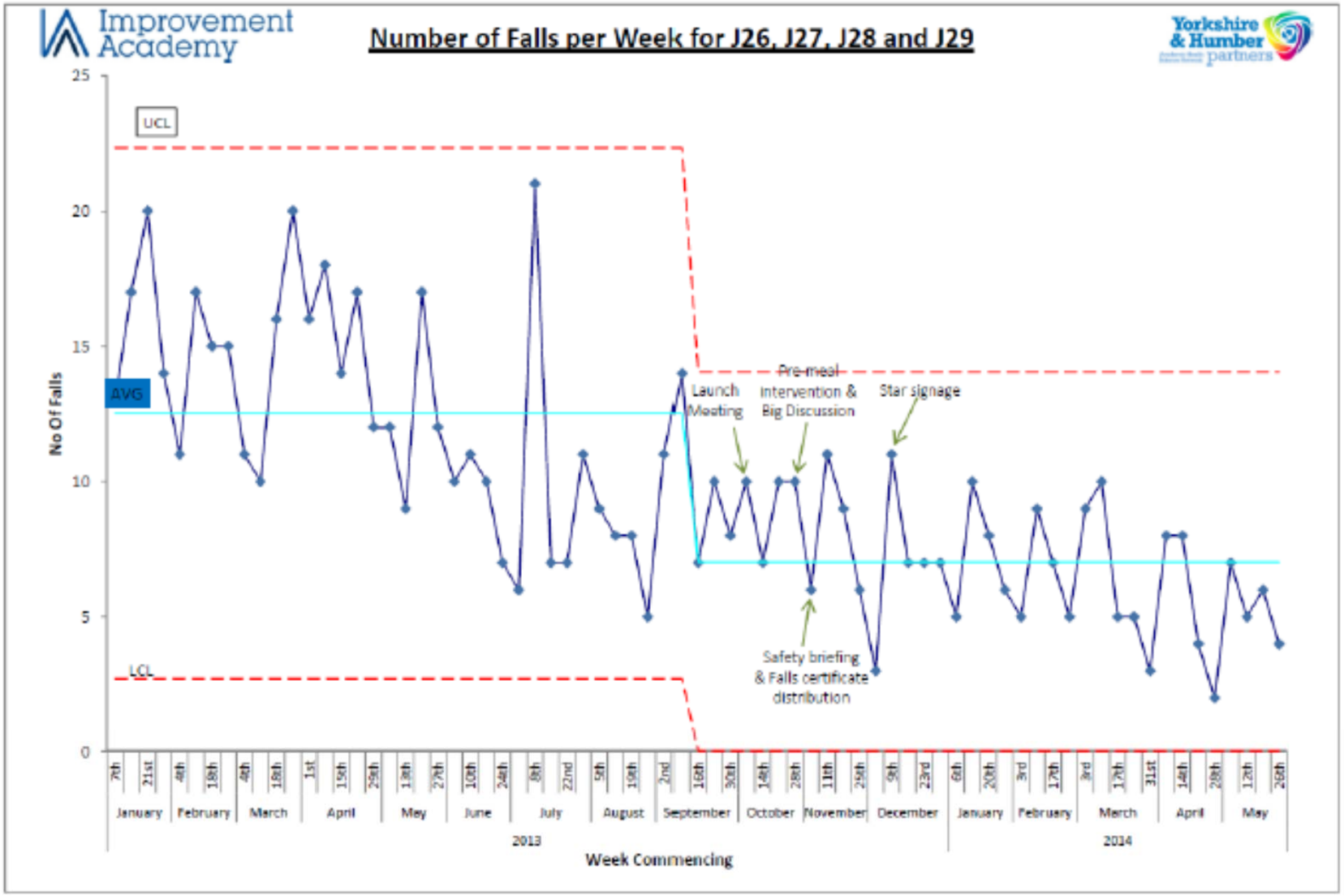
Improvement Academy
Number of Falls per Week for J26, J27, J28 and J29
Yorkshire & Humber partners
UCL
AVG
LCL
No Of Falls
25
20
15
10
5
0
Launch Meeting
Pre-meal intervention & Big Discussion
Star signage
Safety briefing & Falls certificate distribution
7th 21st 4th 18th 4th 18th 1st 15th 29th 13th 27th 10th 24th 8th 22nd 5th 19th 2nd 16th 30th 14th 28th 11th 25th 9th 23rd 6th 20th 3rd 17th 3rd 17th 31st 14th 28th 12th 26th
January February March April May June July August September October November December January February March April May
2013
2014
Week Commencing

My best guess about all this

- Real-time use of data
- Education, training, policies, protocols
- Meaningful learning and feedback from incidents
- Relentless Quality Improvement Focus, PDSA Cycles
- Target frail older people in general – managing them better has potential to minimise several harms with common risk factors
- Especially those with Dementia, Delirium, previous falls
- Focus on patient flow and early assessment and discharge so people aren't in hospital avoidably

Multifactorial Interventions

- Identify *risk factors* in all patients (not using useless/misleading risk prediction tools)
- A plan in place to modify each
- Or reduce associated risks
- Avoid other harms such as immobility caused by excess risk aversion
- Use each fall as a chance to put in place plans to stop the next one
- Whole organisational support “from board to ward”

Enjoy today and the challenge beyond.

Thank you

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