

The challenge of Hospital acquired functional decline – preventing the harm?

'There are none so blind as those who will not see'

John Heywood 1546



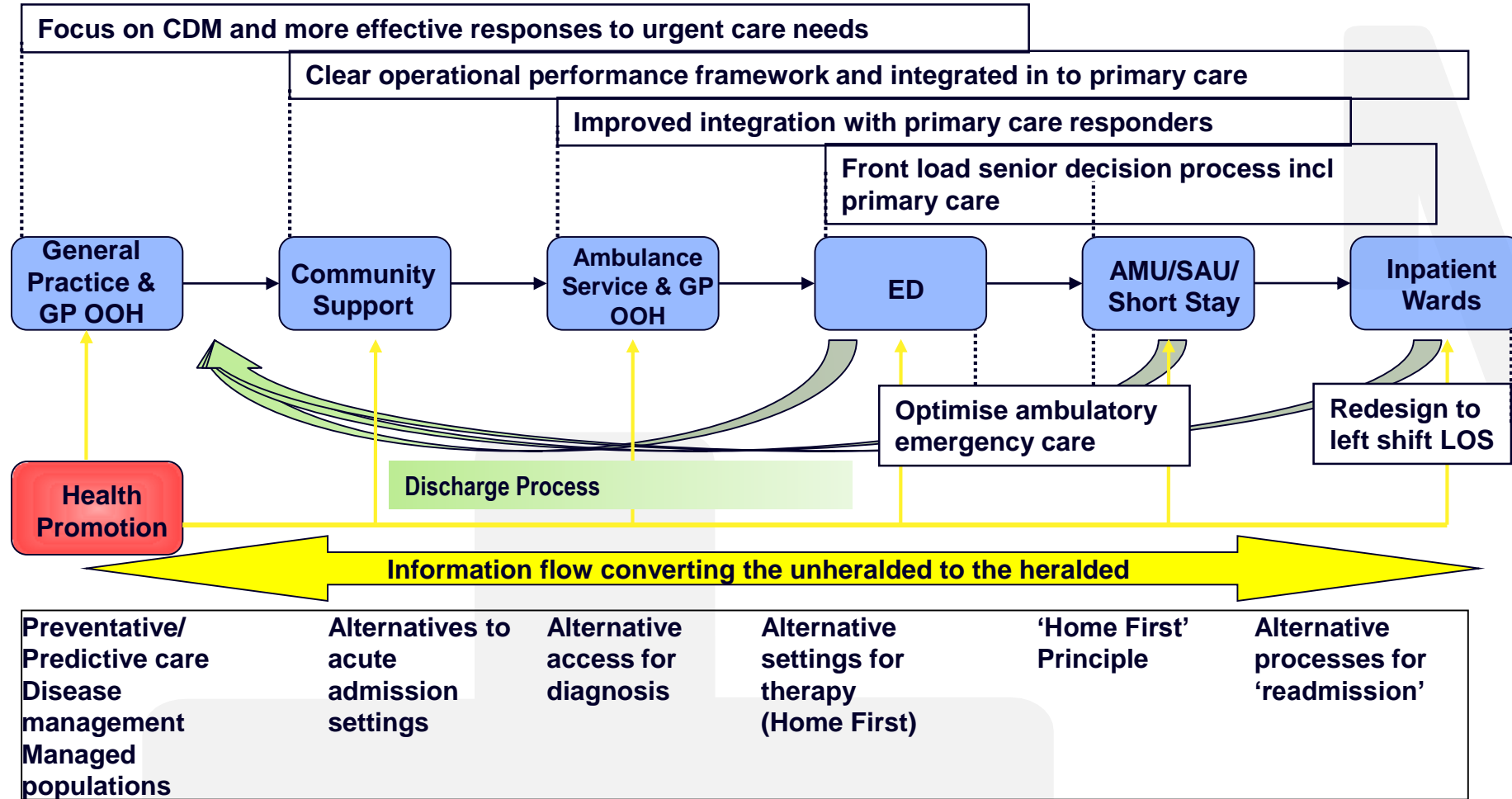
13th NAHC 2019

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6TH AUGUST 2019

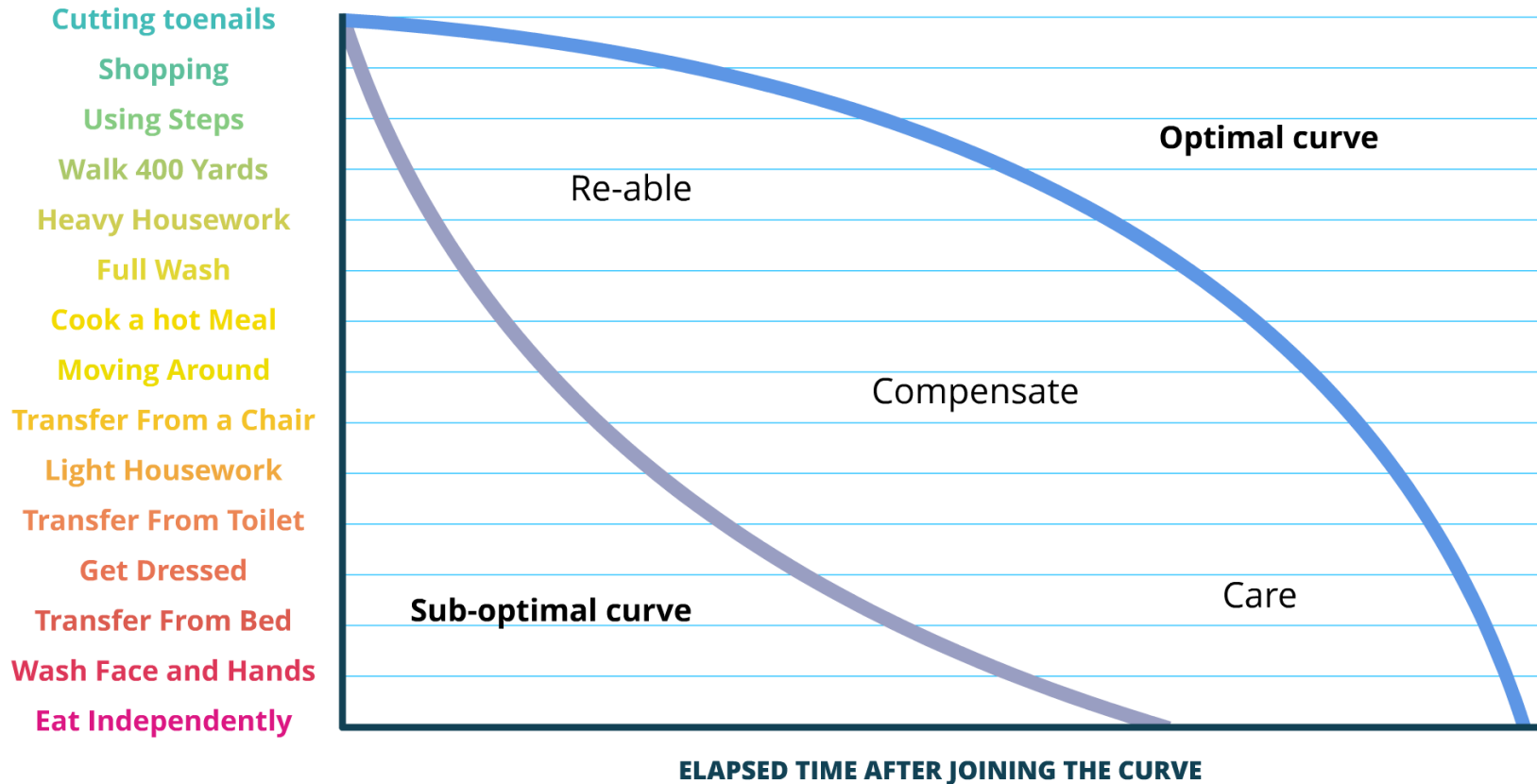


+ A whole system perspective



+ Life Curve

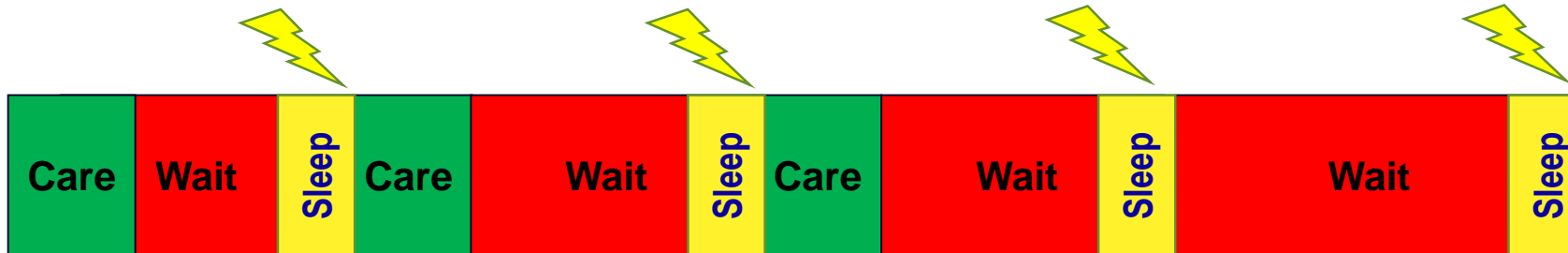
*Based on continuing research carried out at the Newcastle University Institute for Ageing



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+ Care Coordination – Enhanced Recovery 'No Wasting of Patient's Time'

Admitted emergency care is a series of dependent steps with other (often multiple) processes in parallel. Unnecessary waits/variation in lead times, additional unnecessary steps, converting parallel processes to those in series etc create errors and harm.



Red bed days vs Green bed days

Unnecessary Waiting + Sleep Deprivation = HAFD

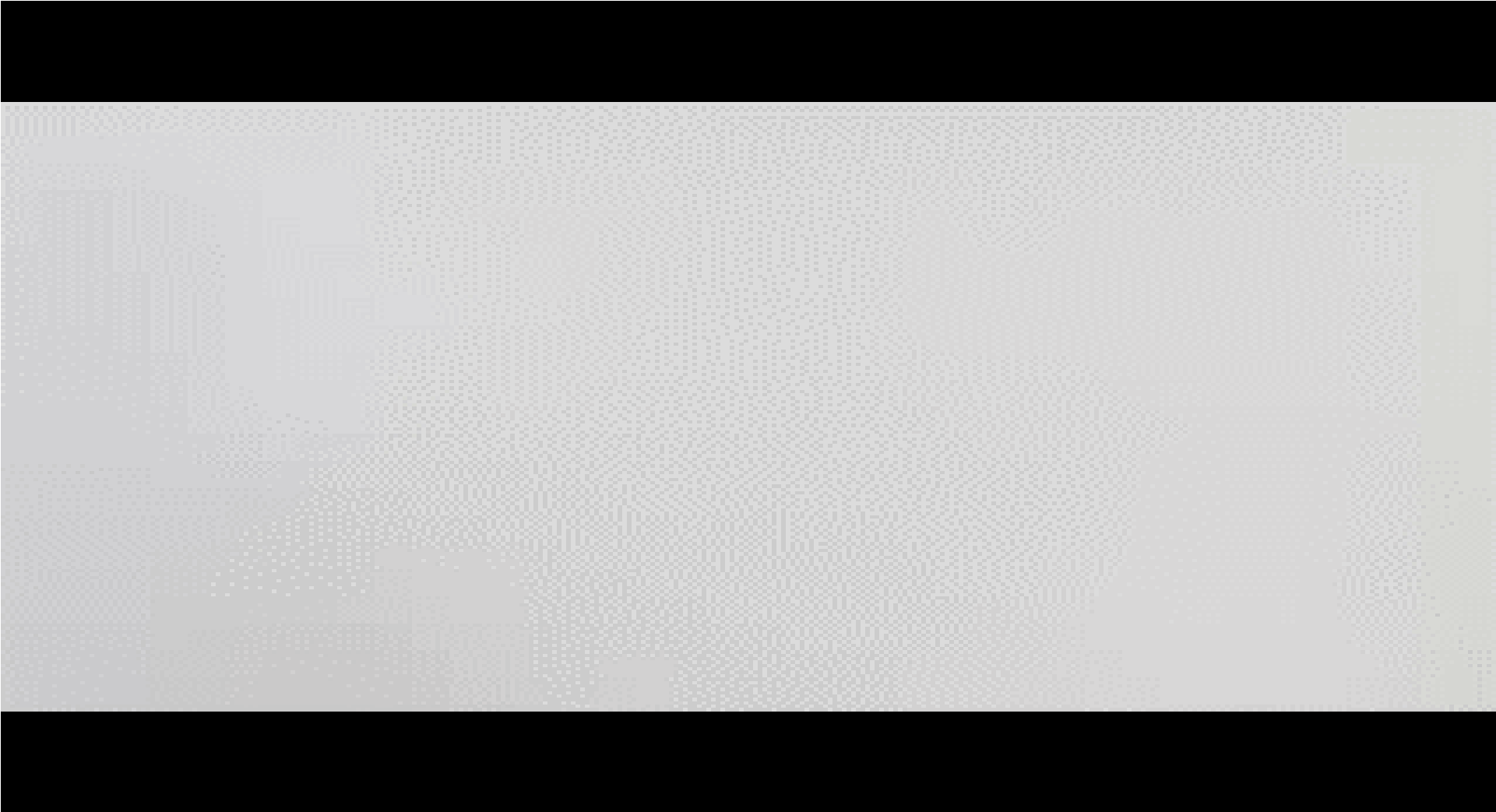
- Physical

- Psychological - Cognitive

- Social

By reducing the waiting time overall LOS is reduced without changing the clinical care received by the patient

+ Healthcare Associated Functional Decline (HAFD)



+ Consequences of Unnecessary Bed Rest

System	Effect
Cardiovascular	↓ Stroke volume, ↓ cardiac output, orthostatic hypotension
Respiratory	↓ Respiratory excursion, ↓ oxygen uptake, ↑ potential for atelectasis
Muscles	↓ Muscle strength, ↓ muscle blood flow, ↓ muscle power
Bone	↑ Bone loss, ↓ bone density
GI	Malnutrition, anorexia, constipation
GU	Incontinence
Skin	Sheering force, potential for skin breakdown
Psychological	Social isolation, anxiety, depression, disorientation

Sources: Amella EJ. Presentation of illness in older adults. Am J Nurs 2004;104:40-52. Creditor MC. Hazards of hospitalization of the elderly. Ann Intern Med 1993;118: 219-23. Convertino VA. Cardiovascular consequences of bed rest: effect on maximal oxygen uptake. Med Sci Sports Exerc 1997;29:191-6.

+ Scale and Impact of HAFD

'There are none so blind as those who will not see'

John Heywood 1546

- The commonest harm event in hospitals - outnumbers HCAI at its peak by 10-100 times.
- Unreported – thus hidden.
- 25-40% of older people in hospital are affected.
- Markedly increased LOS
- Hypostatic pneumonia, UTI, etc are the secondary acute illnesses. Increased mortality
- A study of hospitalized patients 65 years and older found that delayed discharge was associated with “decline in basic activities of daily living” and the “need for skilled nursing.” Chin JJ, et al. Critical role of functional decline in delayed discharge from an acute geriatric unit. *Ann Acad Med Singapore* 2001;30(6):593-9.

+ Observations – Systems with high rates of HAFD tend to:

- Have Cohort Sub-Acute Wards
- Have access to high numbers of community beds
- Have lower rates of ‘discharge to usual address’
- Frequently lay the blame on external services
- Have higher consumption of post-discharge services and higher rates of institutionalisation
- Focus on the ‘end of the journey’ rather than the continuum
- Consider it is all ‘down to old age’

‘We wouldn’t do to children what we do to older people’

+ Risk Factors for HAfD

- **Advanced age**
- **Pre-morbid functional impairment**
- **Dementia**
- **Living alone**
- **Grip strength**
- **Get up and go test**
- **CFS**

+ What Does Good Look Like For Older People With Frailty In Acute Care?












1. **Identify frailty early**
2. **Commence Comprehensive Geriatric Assessment (“CGA”) within the first hour**
3. **Set up a rapid response system for frail older people in urgent care settings**
4. **Adopt clinical professional standards to reduce unnecessary variation**
5. **Develop a measurement mind-set**
6. **Strengthen links with services both inside and outside hospital**
7. **Put in place appropriate education and training for key staff**
8. **Identify clinical change champions**
9. **Patient and public involvement**
10. **Identify an Executive sponsor and underpin with a robust project management structure**

+ 'Patients at Risk of Increased Stay'

Clinical Frailty Scale – pre-morbid state

Clinical Frailty Scale

 <p>1 Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.</p>	 <p>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).</p>
 <p>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.</p>	 <p>8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.</p>
 <p>3 Managing Well – People whose medical problems are well controlled, but are not regularly active beyond routine walking.</p>	 <p>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.</p>
 <p>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.</p>	
 <p>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.</p>	
 <p>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.</p>	

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.

+ Evidence Base For CGA – Cochrane Review September 2017



Comprehensive geriatric assessment for older adults admitted to hospital

-  Giving older people who are admitted to hospital access to specialist co-ordinated geriatric assessment (CGA) services on admission to hospital increases the chances that they will be alive in their own homes at follow-up.
-  Updated Cochrane review of 29 trials from nine countries involving 13,766 people.

epoc.cochrane.org | [@CochraneEPOC](https://twitter.com/CochraneEPOC) | [#cochranevidence](https://twitter.com/cochranevidence) [#blogshot](https://twitter.com/blogshot)



+ Preventing HAFD

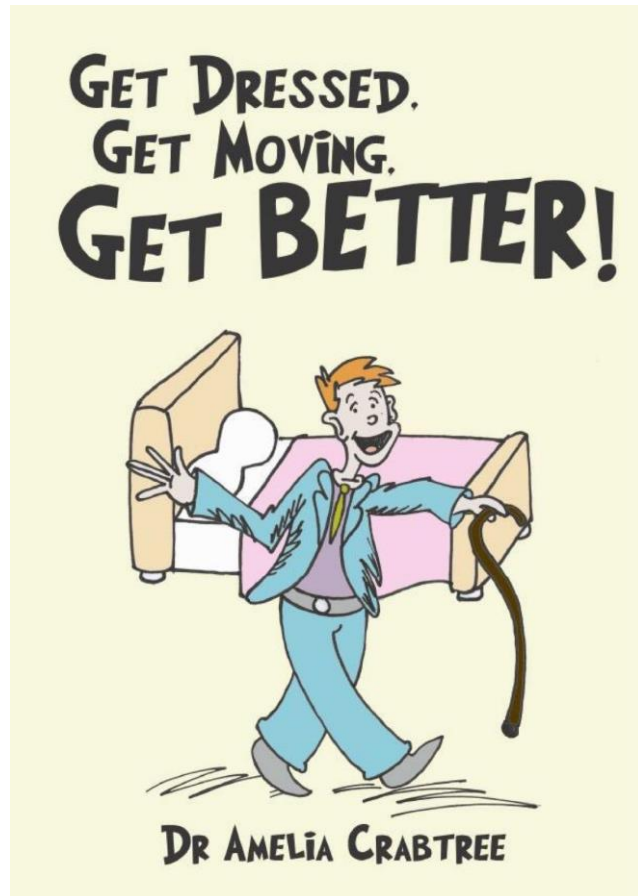
- **Best practice approaches to minimise functional decline in the older person across the acute, sub-acute and residential aged care settings**

Developed by the Clinical Epidemiology and Health Services Evaluation Unit, Melbourne Health. Commissioned on behalf of the Australian Health Ministers' Advisory Council (AHMAC) by the AHMAC Care of Older Australian Working Group. November 2004

+ How might we reduce HAFD?

- **Raise awareness across the whole system**
- **The approach needs to be individualised and assertive – all to have EDD and CCD**
- **Patient, family/carer and public awareness + involvement**
- **Hospitals are not ‘places of safety’ for the cohort at risk.**
- **Delirium bundle**
- **Mobilisation plans**
- **Address elimination issues, nutrition + hydration**
- **Medication review – STOPP/START, TRIM tools etc**
- **Pain control**
- **Avoid unnecessary cannulation or catheterisation**
- **Balanced risk – I/P falls vs Mobility, Home vs Hospital**

+ #EndPJparalysis



Cambridge University Hospitals NHS Foundation Trust

Cambridge University Hospitals **NHS**
NHS Foundation Trust

"You don't have to take your clothes off..."

Spot the difference

- Loss of muscle strength
- Longer stay in hospital
- High risk of infection

- Quicker recovery
- Maintain normal routine
- Return home sooner

Get dressed – Get moving!

#endPJparalysis **Addenbrooks**

Produced by the CUH Corporate Communications Team | Addenbrooke's Hospital | Rosie Hospital

+ Defining an effective acute frailty process through metrics

- **Outcomes**

- **Impact Metrics**

- Reduced admissions
- Of those admitted : Higher rates of 0, 1 and 2 day LOS
- Reduced Stranded aged 75 and over

- **Quality Metrics**

- Reduced mortality, falls
- Increased rate of return to usual address
- Patient experience, functional state 90 days post discharge

- **Cost**

- Reduced income for the Hospital but increased income per bed day
- Reduced costs of post discharge long term care

- **Process Metrics**

- CGA within 1 hour
- 4 hr standard for over 75 ***

- **Balancing Metrics**

- Reduced or stable re-admissions



+ Most studies suggest that admissions can be avoided in 20-30% of >75 year old frail persons

*“Avoiding admissions in this group of older people depended on **high quality decision** making around the time of admission, either **by GPs or hospital doctors**. Crucially it also depended on sufficient appropriate capacity in alternative community services (notably **intermediate care**) so that a person’s needs can be met outside hospital, so avoiding ‘defaulting’ into acute beds as the only solution to problems in the community”.*

Mytton et al. British Journal of Healthcare Management 2012 Vol. 18 No 11



+ NICE Delirium Guidance

The Confusion Assessment Method (CAM) diagnostic algorithm (short version)¹

Patient's name: _____

Date of birth: ____/____/____

Hospital number: _____

Feature 1 Acute onset and fluctuating course

This feature is usually obtained from a family member or nurse and is shown by positive responses to the following questions:

1. Is there evidence of an acute change in mental status from the patient's baseline?
2. Did the (abnormal) behaviour fluctuate during the day, that is, tend to come and go, or increase or decrease in severity?

Feature 2 Inattention

This feature is usually obtained by interacting with the patient, but may also be reported by family members or staff and is shown by a positive response to the following question:

3. Did the patient have difficulty focusing attention, for example being easily distractible or having difficulty keeping track of what was being said?

Feature 3 Disorganised thinking

This feature is usually obtained by interacting with the patient, but may also be reported by family members or staff and is shown by a positive response to the following question:

4. Was the patient's thinking disorganised or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject?

Feature 4 Altered level of consciousness

This feature is obtained by observing the patient and is shown by any answer other than 'alert' to the following question:

5. Overall, how would you rate this patient's level of consciousness?
 - Alert (normal)
 - Vigilant (hyperalert)
 - Lethargic (drowsy, easily aroused)
 - Stupor (difficult to arouse)
 - Coma (unarousable)

Scoring the test (please tick as appropriate)

	Positive	Negative
Feature 1		
Feature 2		
Feature 3		
Feature 4		

Reference

1. Inouye SK, van Dyck CH, Alessi CA et al. Clarifying confusion: the Confusion Assessment Method. A new method for detection of delirium. Ann Intern Med 1990; 113: 941-948.

Figure I. 4AT assessment sticker

4AT Delirium assessment tool

(65 years and over)

Has your patient been more **confused, sleepy or drowsy**? Place this sticker in the notes and complete to assess for delirium.

	Circle score for each section
1 Alertness	
Normal (fully alert, but not agitated)	0
Mild sleepiness for <10 seconds after waking, then normal	0
Clearly abnormal	4
2 AMT4 Ask your patient the following: age, date of birth, name of hospital/building, current year	
No mistakes	0
1 mistake	1
2 or more mistakes or untestable	2
3 Attention Ask your patient to list the months of the year backwards	
7 months or more correctly	0
Starts, but scores <7 months/refuses to start	1
Untestable (cannot start because unwell, drowsy)	2
4 Acute change or fluctuating course Evidence of significant change or fluctuation in alertness, cognition, other mental function arising over the last 2 weeks and still evident in last 24 hours	
No	0
Yes	4
4 or above - possible delirium - use the Delirium pathway	Total score
1-3 - possible cognitive impairment	
0 - delirium or severe cognitive impairment unlikely (but delirium still possible if 4 information incomplete)	

Adapted from MacLulich A (2014). See full delirium guideline on intranet.

Or SQiD – Single Question in Delirium

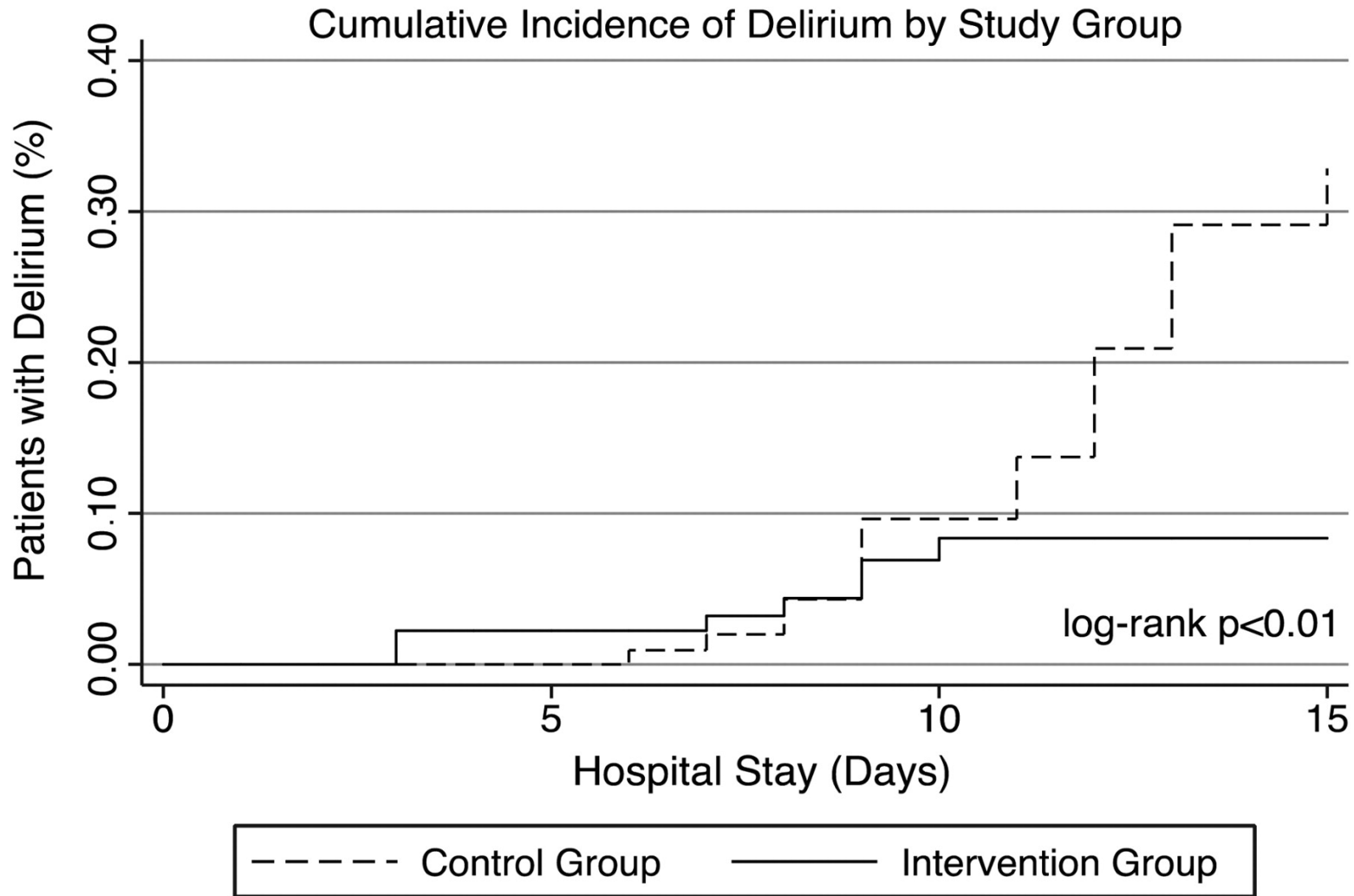
+ Preventing Delirium

Preventing delirium in an acute hospital using a non-pharmacological intervention

Felipe Tomas Martinez, Catalina Tobar, Carlos Ignacio Beddings, Gustavo Vallejo, Paola Fuentes. *Age and Ageing* 2012; 41: 629–634

- **The intervention consisted of following six elements:**
- **Education:** the observers conducted brief interviews with each patient's family members + pamphlet.
- **Provision of a clock (analogue or digital as required by the patient) and calendar in the room.**
- **Avoidance of sensory deprivation (glasses, denture and hearing aids must be available as needed).**
- **Presence of familiar objects in the room (photographs, cushions and radio).**
- **Reorientation of patient provided by family members (current date and time, recent events).**
- **Extended visitation times (5 h daily).**

+ Figure 2. Time-to-event curves of the studied patients.



Age and Ageing, Volume 41, Issue 5, September 2012, Pages 629-634

+ HELP* is cost-effective for both hospital and long-term costs

Reference	Results Summary
Rubin FH (2011) Journal of the American Geriatrics Society	>\$7.3 million per year savings in hospital costs (>\$1000 savings/patient)
Rizzo JA (2001) Medical Care	\$831 savings per person-year in hospital costs
Leslie DL (2005) Journal of the American Geriatrics Society	\$9,446 per person-yr in nursing home costs
Caplan GA (2007) Internal Medicine Journal	\$121,425 per year savings in sitter costs, decreased delirium incidence
Inouye (2006) Journal of the American Geriatrics Society	Enhances patient satisfaction and improves nursing job satisfaction, serves as training resource, improves public relations and community outreach

* Hospital Elder Life Program. <https://www.hospitalelderlifeprogram.org/>

+ Setting Intent

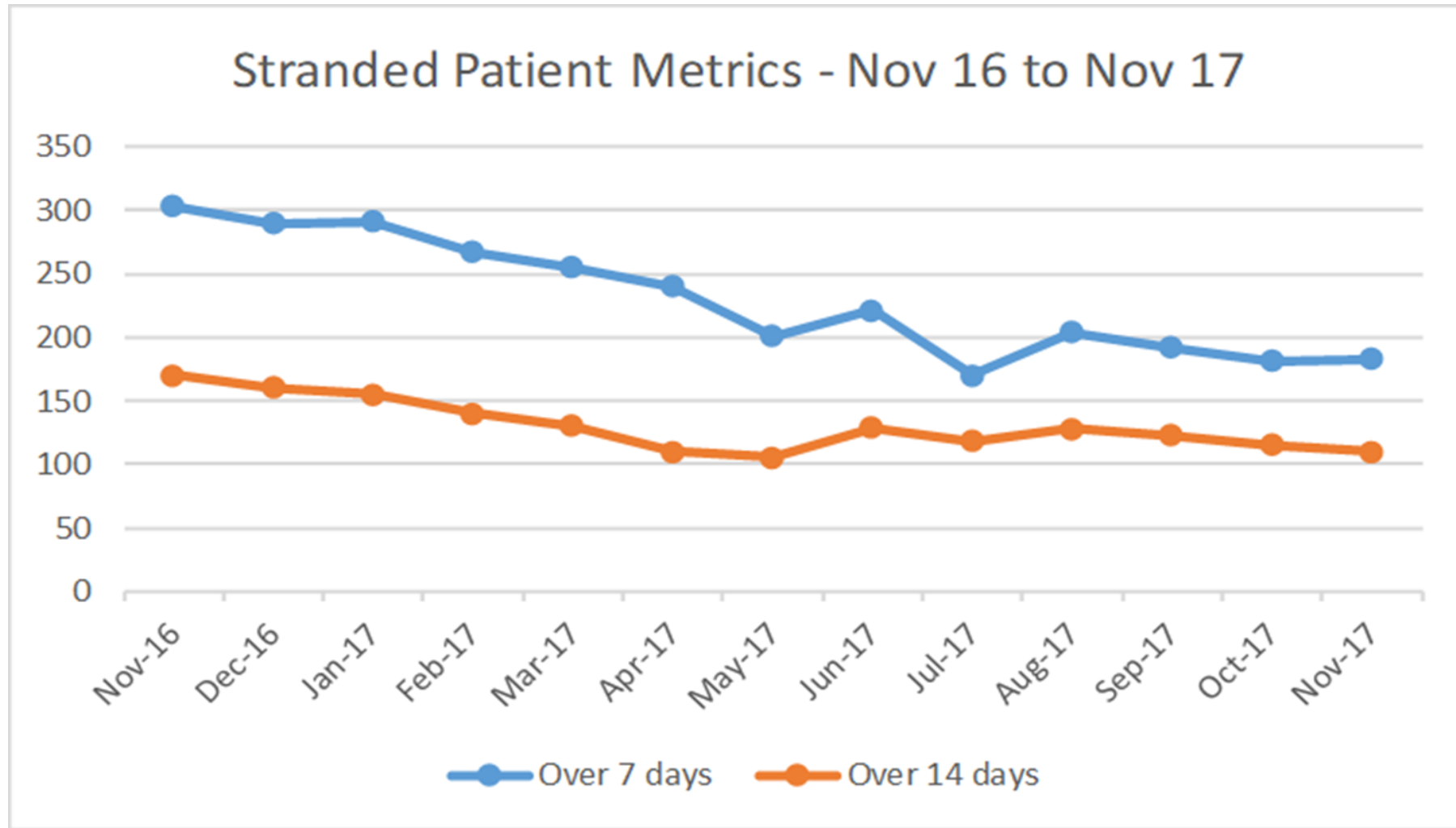
Acute Trust Discharges – Ipswich – Aged 75 and Over:

•
•



• Pathway	Baseline	Performance Dec 2017	Target – Year 2
• 0	75%	78%	80-85%
• 1	19%	17%	12-16%
• 2	5%	4%	3%
• 3	1%	1%	1%

- Note – Pathway 0 = simple and timely discharges which includes re-starts and would include Physio and or OT follow up visit and DN input.
- Pathway 1 is ‘Home First D2A’
- Pathway 2 is ‘Bed Based D2A’
- Pathway 3 is ‘Assessment bed function’ = expectation that very highly unlikely to return home

+ Focus on Preventing HAFLD



+ Let's end with what we are trying to prevent - HAFD



**Look at the patient lying alone in bed
What a pathetic picture he makes.
The blood clotting in his veins.
The lime draining from his bones.
The scybola stacking up in his colon.
The flesh rotting from his seat.
The urine leaking from his distended bladder
and the spirit evaporating from his soul.
Teach us to live that
we may dread unnecessary time in bed.
Get people up and we may save
patients from an early grave.**

Dr. Richard Asher, 1942