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

‘There are none so blind as those who will not see’

John Heywood 1546

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Clinical Lead UEC (Frailty) Midlands Region

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A whole system perspective

Focus on CDM and more effective responses to urgent care needs

Clear operational performance framework and integrated into primary care

Improved integration with primary care responders

Front load senior decision process incl primary care

General Practice & GP OOH

Community Support

Ambulance Service & GP OOH

ED

AMU/SAU/Short Stay

Inpatient Wards

Health Promotion

Discharge Process

Information flow converting the unheralded to the heralded

Preventative/Predictive care

Disease management

Managed populations

Alternatives to acute admission settings

Alternative access for diagnosis

Alternative settings for therapy (Home First)

‘Home First’ Principle

Alternative processes for ‘readmission’

Are we doing enough to prevent healthcare associated functional decline?
Are we doing enough to prevent healthcare associated functional decline?
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.

Are we doing enough to prevent healthcare associated functional decline?
Healthcare Associated Functional Decline (HAFD)

Are we doing enough to prevent healthcare associated functional decline?
### Consequences of Unnecessary Bed Rest

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

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.

Are we doing enough to prevent healthcare associated functional decline?
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
Are we doing enough to prevent healthcare associated functional decline?
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.

e poc.cochrane.org | @CochraneEPOC | #cochraneevidence #blogshot

Are we doing enough to prevent healthcare associated functional decline?
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
Are we doing enough to prevent healthcare associated functional decline?

#EndPJparalysis
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”.

### NICE Delirium Guidance

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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feature 1</strong></td>
<td>Acute onset and fluctuating course</td>
</tr>
<tr>
<td>Patient’s name:</td>
<td></td>
</tr>
<tr>
<td>Date of birth:</td>
<td></td>
</tr>
<tr>
<td>Hospital number:</td>
<td></td>
</tr>
</tbody>
</table>

1. **Alertness**
   - Normal (fully alert, but not agitated): 0
   - Mild sleepiness for <10 seconds after waking, then normal: 0
   - Clearly abnormal: 4

2. **Acute onset**
   - No mistakes: 0
   - 1 mistake: 1
   - 2 or more mistakes or untestable: 2

3. **Awareness**
   - 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

   **Total score**

   - 0 - delirium or severe cognitive impairment unlikely
   - 1-3 - possible cognitive impairment
   - 4 or above - possible delirium - use the Delirium pathway

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**Reference**


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**Or SQiD – Single Question in Delirium**

*Are we doing enough to prevent healthcare associated functional decline?*
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 (analog 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.

Cumulative Incidence of Delirium by Study Group

- Control Group
- Intervention Group

log-rank p<0.01

Are we doing enough to prevent healthcare associated functional decline?
**HELP* is cost-effective for both hospital and long-term costs**

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

* Hospital Elder Life Program. [https://www.hospitalelderlifeprogram.org/](https://www.hospitalelderlifeprogram.org/)
## Setting Intent

**Acute Trust Discharges – Ipswich – Aged 75 and Over:**

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Baseline</th>
<th>Performance Dec 2017</th>
<th>Target – Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>75%</td>
<td>78%</td>
<td>80-85%</td>
</tr>
<tr>
<td>1</td>
<td>19%</td>
<td>17%</td>
<td>12-16%</td>
</tr>
<tr>
<td>2</td>
<td>5%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>3</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
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- **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

Are we doing enough to prevent healthcare associated functional decline?
Focus on Preventing HAFD

Are we doing enough to prevent healthcare associated functional decline?
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