Confused.com
Dementia & Delirium interface

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Chair – Scottish Delirium Association

**Structure**

- Facts – Dementia & Delirium
- Interface – evidence base

**NHS – Key priorities**

- 7 day working
- Five-year ‘Forward view’ - Vision for future care
  - Breaking down the care barriers - integration
    - Primary & secondary care
    - Physical & Mental health
    - Health & Social care
    - More support to care homes
- Living well with dementia - National dementia strategy

**Strategic Drivers - Scotland**

10 point national action plan – Person Centred Care
HIS/OPAC Inspections

HIS – Care of older people in hospital standards – June 2015 (Standards 7,8,9)
Scottish govt - 2020 vision

• Focus on ensuring that people get back home as soon as appropriate, with minimal risk of re-admission

• NHS workforce adapting to changes in the population's needs and how services are delivered in the future

Older people in Acute hospital

• Older people occupy 2/3 of NHS beds
  – Approximately 60% have, or will develop mental disorder
  – Depression mean prevalence = 29%
  – Dementia mean prevalence = 31%
  – Delirium mean prevalence = 20%

• Mental disorder is frequently missed (>50%)

• 48% of Dementia patients occupy acute beds for reasons other than medical

• 25-30% of all referrals to older peoples mental health services come from general hospitals

Older people in Acute hospitals

A typical district general hospital with 500 beds:

• Will admit 5000 older people each year.
• 3000 of these will have or develop a mental disorder

In an average day:

• 330 beds will be occupied by older people.
• 220 will have a mental disorder
• 96 will have depression
• 66 will have delirium
• 102 will have dementia
• 23 will have other major mental health problems.

Medical admissions over 70

• 9% delirium alone
• 19% delirium complicating dementia
• 23% dementia alone
• Total delirium 28%
• Total dementia 41%
• Previously diagnosed dementia 28%

Whittamore et al, 2013
More evidence

Older adults –
• Account for 65% of bed days at any one time in a general hospital (NHS information centre 2012)
• Average length of stay - 8.6 days (4.2 days in 15-59 age group)
• Inpatients episodes increased by 75% in +75 age group (31% in working age group)
• Making up 80% of hospital bed days taken up within adults group with co-morbid mental and physical problems (Parsonage et al, 2012).

Consequences of Mental health problems on older people in general hospital.

Co-morbid mental disorder has an adverse effect on outcomes:
- Increased length of stay
- Increased mortality
- Poor quality of life
- Institutionalisation
- Disengagement with therapy
- Complaints
- Increased staff stress, staff sickness, etc
- Inappropriate use of psychotropic medication
Dementia - Facts

• 800,000 people with dementia in the UK
• One million by 2021 & 1.7 million by 2050
• One in three people over 65 will die with dementia
• 80 per cent of people in care homes have dementia
• Dementia costs the UK over £23 billion a year, and this figure will rise to £27 billion per annum by 2018.
Dementia

- 95% of acute hospital admissions for people with dementia occur in an emergency
- 60% of these coming through ED
- 25% of all emergency presentations in people with dementia are preventable (Parsonage et al, 2012)
- Frailty screening should be prioritised in A&E

ATTENDANCE RATES

CONVERSION TO ADMISSION

Prevalence of Dementia (DSM IV)

Men:
- 70-79: 16.4% (9.4-23.3)
- 80-89: 40.4% (30.6-50.2)
- 90+: 48.8% (33.6-64.1)

Women:
- 70-79: 29.6% (21.3-37.9)
- 80-89: 52.9% (45.4-60.5)
- 90+: 75.0% (65.1-84.9)
Liaison team diagnoses 50% more dementias than the traditional memory clinics.

Delirium Facts

Prevalence

- General Hospitals
  - 1 in 8 hospital inpatients (Macullich 2013)
    - 10-40% - on admission
    - 25-60% - during stay
    - 80% - ICU settings
- Elderly inpatients — 50% (Cole 2004)
- Nursing homes — 40%
- Underdetected
  - 79% (Collins et al 2010)
  - 33% - 66% (Siddiqui et al 2006)
Delirium

- Subtypes
  - Hyperactive (20%)
  - Hypoactive (50%)
  - Mixed (30%)

- Persistent
  - Symptoms may last up over 6 months (6-13%)
    - Worse outcomes (David Meagher et al)

Length of stay (NICE 2010)

Mortality (NICE 2010)

Institutionalization (NICE 2010)
Older person

Delirium ↔ Dementia

**DSM V – classification Neurocognitive disorder**

- Delirium
- Mild Neurocognitive disorder - MCI
- Major Neurocognitive disorder - Dementia

**Delirium vs Dementia**

**DELIRIUM**
- Acute
- Inattention
- Clouding of consciousness
- Fluctuations
- Reversible
- Hallucinations common
- Medical emergency

**DEMENTIA**
- Gradual
- Memory disturbance
- Clear consciousness
- None/days
- Irreversible
- Hallucinations common only in advanced disease

*It is common for Delirium to be superimposed on Dementia!*

**How to miss Delirium**

- Keep any talk with patients to a minimum
- Do not assess cognitive function
- Assume cognitive impairment is long-standing
- Never talk to nurses, especially night staff
- Don't talk to families either
- If patient is withdrawn, start an antidepressant
- If patient is noisy, start a benzodiazepine
**Differential Diagnosis**

**DELIRIUM - Causes**

- **I**  Infection
- **W**  Withdrawal (alcohol, drugs)
- **A**  Acute Metabolic (hypoglycemia, R Failure)
- **T**  Trauma (head injury, burns)
- **C**  CNS Pathology (epilepsy, SOL, infection)
- **H**  Hypoxia
- **D**  Deficiency (B12, Thiamine)
- **E**  Endocrine (thyroid, parathyroid)
- **A**  Acute Vascular (TIA, Stroke, Shock)
- **T**  Toxins
- **H**  Heavy metals (mercury, lead)

**Delirium**

**Risk Factors**

- Age
- Frailty
- Severe illness
- Sensory impairment
- Polypharmacy
- Comorbidity
- Cognitive impairment

**Precipitating factors**

- Surgery
- Infection
- Pain
- Constipation
- Medications
- Dehydration
- Nutrition

**Delirium & Dementia**

**Complex relationship**

- **Delirium**
  - Accelerates cognitive decline (Fong 2009)
  - Associated with developing dementia in non-demented (Lundstrom 2003)

- **Dementia is a risk factor for delirium** (Inouye)
Delirium & Dementia (Fong et al – 2009)

- Evidence of cognitive decline with delirium
- Dementia is a major risk factor for delirium
- 2/3rds delirium occurs in Dementia and Cognitive Impairment
- Persistent Delirium & Reversible dementia (blur boundaries)
- Neuro-imaging studies – hypoperfusion due to delirium
- Shared pathology - ↓ cerebral Oxidative metabolism & Inflammation
- DLB shares clinical features with delirium as well as cholinergic deficit (Overlap syndrome)

Vantaa cohort (Davis et al 2012)

- The Vantaa 85 + study - 553 individuals
- Assessed at baseline, 3, 5, 8 and 10 years. Brain autopsy was performed in 52%.
- Associations between
  - (i) delirium and incident dementia
  - (ii) decline in MMSE scores
  - (iii) outcomes in dementia
- The relationship between dementia and delirium with common neuropathological markers
Delirium is a strong risk factor for dementia in the oldest-old: a population-based cohort study

The association between delirium and clinical outcomes (Davis et al 2012, Brain Vantaa Cohort (85+))

<table>
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<th>Outcome</th>
<th>LCI</th>
<th>UCI</th>
<th>P-value</th>
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<td>Dementia OR</td>
<td>8.65</td>
<td>2.13</td>
<td>35.12</td>
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<tr>
<td>Dementia worsening OR</td>
<td>3.06</td>
<td>1.49</td>
<td>6.29</td>
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<tr>
<td>Functional worsening OR</td>
<td>2.76</td>
<td>1.38</td>
<td>5.52</td>
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<tr>
<td>Mortality OR</td>
<td>1.61</td>
<td>1.25</td>
<td>2.10</td>
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To summarize

- Delirium is a determinant of cognitive decline
- Independent and additive to classical dementia pathology
- More prospective studies are needed

Major unmet medical need in healthcare

- Needs a collective responsibility
- Collaborative approach – Education & awareness
- Cultural shift - Accepting them and expecting the challenges
- Future – integrated approach based on the 20:20 vision

Our Vision

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<th>Key Elements</th>
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<td>Older Peoples</td>
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<td>Linking Nurses</td>
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<td>Care Home</td>
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Thanks for listening

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