Medication and frail older people – issues and possible solutions

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Care homes - A legacy of poor care

- Evolved from workhouses and poorhouses
- The waiting room for heaven
- “Dumping ground for the elderly”
- Vulnerable population
  - Average age is 80
  - Over 70% are women
  - Tend to be more physically and mentally impaired than those living in their own homes
  - Receive more medication than age-matched patients who live in the community
What influences prescribing in care homes?

- Control
  - Regulation
- Culture
  - The way we do things around here
- Collaboration
  - Working together
Scandal and shame-out of control

- US nursing home scandals throughout the 1970s and 1980s
- Extensively documented by the media and scientific literature
- Older residents were dying as a result of the care they received in US nursing homes
A problem of care

- Nursing home care in the United States-Failure of Public Policy
- Unloving care-the nursing home tragedy
- Tender loving greed; how the incredibly lucrative nursing home ‘industry’ is exploiting America’s older people and defrauding us all
US Congress directed Institute of Medicine to investigate what was happening in US nursing homes
Improving the quality of care in nursing homes

- Unsafe and unsanitary conditions
- Abuse
- Neglect
- Malnutrition
- Medication errors
- Failure to provide prescribed drugs
- Excessive use of physical restraints
- Excessive use of chemical restraints
  - i.e. anti-psychotics, hypnotics, anxiolytics
Omnibus Budgetary Reconciliation Act 1987 (OBRA 87)
- Fully implemented in 1991
- Sought to improve the quality of care in US nursing homes via legislative control
  - Regulations and standards
  - Detailed inspections
  - Enforcement procedures
Controlling prescribing through legislation

“The resident has the right to be free from any psychoactive drug administered for purposes of discipline or convenience and not required to treat the resident’s medical symptoms.”

Under this law, pharmacists are required to monitor the use of these drugs and challenge their unjustified usage.
The Harkness experience

Brown University, Providence, Rhode Island
The Minimum Data Set (MDS)

- Used to collect information on all nursing home residents
- 350 separate pieces of information
- Section U-drugs which resident is receiving
- MDS data stored on database
Control or no control—a cross-national comparison

- Compared prescribing in the USA to places where OBRA had no standing
  - MDS used to collect clinical data in:
    - Denmark, Iceland, Italy, Japan, Sweden
  - Total number of residents ~500,000
## Anti-anxiety/hypnotic drugs

<table>
<thead>
<tr>
<th>Country</th>
<th>% of residents using anti-anxiety/hypnotic drugs</th>
<th>Adjusted Odds ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>34.1</td>
<td>3.24 (2.99-3.51)</td>
</tr>
<tr>
<td>Iceland</td>
<td>61.8</td>
<td>8.80 (7.80-9.93)</td>
</tr>
<tr>
<td>Italy</td>
<td>34.2</td>
<td>2.18 (1.89-2.52)</td>
</tr>
<tr>
<td>Japan</td>
<td>24.8</td>
<td>2.11 (1.83-2.42)</td>
</tr>
<tr>
<td>Sweden</td>
<td>35.5</td>
<td>2.92 (2.49-3.42)</td>
</tr>
<tr>
<td>USA</td>
<td>14.2</td>
<td>1.0 (referent)</td>
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## Anti-psychotic drugs

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<tr>
<td>Denmark</td>
<td>16.9</td>
<td>1.07 (0.97-1.19)</td>
</tr>
<tr>
<td>Iceland</td>
<td>24.5</td>
<td>1.86 (1.61-2.14)</td>
</tr>
<tr>
<td>Italy</td>
<td>22.1</td>
<td>1.47 (1.25-1.72)</td>
</tr>
<tr>
<td>Japan</td>
<td>7.5</td>
<td>0.45 (0.36-0.56)</td>
</tr>
<tr>
<td>Sweden</td>
<td>26.5</td>
<td>1.74 (1.47-2.07)</td>
</tr>
<tr>
<td>USA</td>
<td>14.4</td>
<td>1.0 (referent)</td>
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Beyond control

USA study has shown highest level of antipsychotic use in nursing homes in 10 years (28%)
  - Usually prescribed outside of prescribing guidelines for dementia

Canadian study reported a point prevalence for antipsychotic use of 32.4%
  - Marked variation between homes
  - “….some environments being more permissive about antipsychotic use”
What is it about this place?

- Why are some nursing homes more permissive than others?
- “Nursing home culture appears to influence prescribing”
- Organisational culture and the quality of health care performance
The total institution

- Daily life is organised and regulated according to a predetermined schedule and all aspects of an occupant’s existence are provided for by that institution
Organisational culture

- The way things are understood, judged and valued
- Shared beliefs, attitudes, values and norms of behaviour within an organisation
- *The way we do things around here*
- Does organisational culture influence prescribing of psychoactive medication in care homes?
Organisational culture and care homes

- Resident-centred culture
  - Focussed on the resident, multidisciplinary collaboration, avoidance of physical and chemical restraints

- Traditional-centred culture
  - Custodial care, behavioural control, use of restraints, little multidisciplinary collaboration

- Ambiguous culture

What do these cultures look like and how might they influence prescribing?
Understanding culture

- Interviewed staff from six nursing homes
  - Associated GPs
- Views on prescribing of psychoactive drugs
  - Understanding of culture
  - Perceived influence of culture on prescribing
  - Mapped to culture categorisation of home
Culture and prescribing

- Characteristics of the setting
  - ‘There should be a routine’

- Characteristics of the individual
  - ‘They (antispsychotics) are really beneficial for all of them’

- Relationships
  - ‘..other problems with people not getting along’

- Decision-making
  - ‘Would really have to follow what the doctor orders’
Culture and prescribing

- Characteristics of the setting
  - ‘Everybody doesn’t have to be up at 9.00am’

- Characteristics of the individual
  - ‘Families, patients staff….they know each other’

- Relationships
  - ‘..everybody interacts.. with the patient as the main focus’

- Decision-making
  - ‘Would discuss it with the GP and say’ look this is not really appropriate’
Collaboration

- Pharmacists working with doctors and home staff to improve the quality of prescribing
  - Reduction in the use of inappropriate medication
  - Tackles undertreatment of medical conditions
  - Seeks to reduce adverse drug events
  - Promotion of evidence-based practice
- Trial undertaken in N. Carolina and N. Ireland
Cluster randomised controlled trial
- 12 months’ duration

Focus on psychoactive drugs
- Anxiolytics, hypnotics, antipsychotics

Primary outcomes
- Change in proportion of residents receiving inappropriate psychoactive drugs
Fleetwood N.I. Project - Intervention

- Monthly visits by prescribing support pharmacists to homes
- Algorithm to assess appropriateness of psychoactive drug prescriptions
- Liaison with GPs, nurses and other healthcare professionals
- Documentation on pharmaceutical care plan
- Outcomes assessed at 3, 6 and 12 months
Fleetwood NI: Algorithm to assess the appropriateness of psychoactive* drug prescriptions

- Psychoactive prescribed?
  - Indication documented?
    - NO
    - YES
      - OBRA** appropriate indication?
        - NO
        - YES
          - Behavioural indication?
            - NO
            - YES
              - Quantitatively documented\(^b\)?
                - NO
                - YES
                  - Objectively documented?
                    - NO
                    - YES
                      - Documented dose reduction attempted in past 6 months or
                        - Documented medication review in which cited drugs were highlighted to prescriber who confirmed as appropriate or
                          - Long-term prescription appropriate e.g. epilepsy prophylaxis
                            - YES
      - Psychiatric indication?
        - NO
          - On admission to nursing home, drug history unknown and drug prescribed <6 months ago

- Appropriate prescribing
- Reason for non attempt documented in the notes
- Inappropriate prescribing

\(^{*}\) Antipsychotic, hypnotic, anxiolytic
\(^{**}\) Omnibus Budgetary Reconciliation Act (Nursing Home Reform Act) 1987, USA
\(^a\) Appropriate indications according to OBRA regulations: psychotic disorders, organic mental syndromes with behaviour presenting danger to others or interfering with provision of care, hiccough, nausea, vomiting (short-term only). Inappropriate indications: unspecified aggression, wandering, restlessness, agitation that is not a danger, anxiety, uncooperative.
\(^b\) Number/frequency of episodes
c. For example, biting, kicking, or screaming.
## Northern Ireland 12 months’ findings

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<tr>
<th>Drug category</th>
<th>Intervention</th>
<th>Control</th>
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<tbody>
<tr>
<td>Inappropriate psychoactive</td>
<td>28/128 (22%)</td>
<td>72/125 (58%)</td>
</tr>
<tr>
<td>Inappropriate hypnotic/anxiolytic</td>
<td>20/128 (16%)</td>
<td>52/125 (42%)</td>
</tr>
<tr>
<td>Inappropriate antipsychotic</td>
<td>8/128 (6%)</td>
<td>20/125 (16%)</td>
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Impact of the intervention

- After one year the odds ratio of a resident receiving an inappropriate psychoactive drug in an intervention home is $0.26$ (95% CI: 0.14, 0.49) compared to a resident in the control group of homes.
What do we need to think about?

- Control
  - Not the complete answer
- Culture
  - How to change
- Collaboration
  - How to promote
What do we value?

- “Schools are hot politics, old folks’ homes aren’t”  
  Polly Toynbee, Guardian, Jan 12th 2007

- Increasing prevalence of dementia in UK
  - By 2025, >1 million will have dementia
  - By 2050, 1.7 million will have dementia

- Number of people who require long-term residential care is likely to double over the next 25 years
Telling Tales
Alan Bennett
Ten childhood snapshots from the master of the monologue
Be Nice To Your Kids
They'll Choose Your Nursing Home