A clinico-ethical framework for multidisciplinary review of medication in nursing homes

Steven Barrett

on behalf of the SHINE project team
Excess medicines (unnecessary, inappropriate)
Lack of structured review
Lack of patient involvement
Shine Care Home Project(1)

Objective

Optimise medicines use in care home residents...

...ensuring that residents or their family are fully involved in any decisions around prescribing and stopping medicines
Shine Care Home Project(2)

Process

1. Is the medication currently performing a function?

2. Is the medication still appropriate when taking co-morbidities into consideration?

3. Is the medication safe?

4. Are there medicines missing that the patient should be taking?

Is the patient/family/carer fully involved in any decisions about their medicines?
Shine Care Home Project(3)

Process

- Medicines screen & review by pharmacist
  - Review

- MDT: Pharmacist, Care home nurse, GP/NP
  - MDT

- Patient, family & carers involved in any decisions
  - Shared Decisions

- Hotline for urgent advice
  - Follow up

Follow up
Shine Care Home Project(4)

Summary of Results

- 422 residents reviewed in 20 care homes
- 16 general medical practices
- 1346 interventions in 91% (384) residents
  - 15 types of intervention
  - 704 (17.4%) medicines stopped
  - Average no. medicines per resident: 9→7
Involving Patients: Our Model

Patient 1:1

Family 1:1

Family by letter

Advocacy

16%

39%

41%

4%
Capacity

- Always assume capacity but...
- Informal capacity assessments
  - Senior nurse asked “Does the resident have the capacity to make decisions?”
  - Family asked to confirm (+/- chat with resident)

- Subsequent analysis of formal vs informal matched in 91% of cases (20/22)
Working with GPs & Residents

Carehome N residents
Assumption 1: that all residents receive same MDT model

Pharmacist Review of Medical Notes (at GP practice or at hospital)

Model 0: No GP involvement

Model 2: Review discussed with GP prior to MDT

MDT Pharmacist and Care home Nurse

Model 1: GP attends MDT

Model 3: Review discussed with GP after MDT

POAS referral:
1. New patient
2. Existing patient
3. Telephone/Email advice

Patient/Family/Advocate Involvement Model A Patient present at review

Patient/Family/Advocate Involvement Model B Review discussed with patient or letters sent

Decisions Made Data entry on to clinical system and project database
What worked

- Pharmacist led reviews
- MDTs with pharmacists and care home nurses
P.D.S.A. Cycles

- **PDSA 1**: Working with psychiatry
- **PDSA 2**: Working with residents
- **PDSA 3**: Working with GPs

<table>
<thead>
<tr>
<th>Act</th>
<th>Plan</th>
<th>Study</th>
<th>Do</th>
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Jan | Feb | Mar | Apr | May
Additional Outcomes

• Evaluation of additional outcomes 12 months following reviews ($n=271$)
  
  – ↓ hospital admissions ($p=0.002$)
  
  – ↓ out-of-hours urgent visits ($p<0.001$)
  
  – Non significant difference in GP visits
“He explained things in layman terms. Pharmacist couldn’t tell us to take [mum] off the medication but he told us the pros and the cons and it was our decision and at least we were able to make an informed decision from the information from the pharmacist”

Daughter of resident
- £184 saved for every 1 resident reviewed

>£70 million could be saved across England
Other Efficiencies

- Reduced medicines waste
- Medicines administration time – 6.6 hours per week saved per home

“Our drugs round had decreased by approximately 20%. It is less stressful for residents as they are not taking as much medication and are more compliant as they were part of the review process”
Care home nurse
<table>
<thead>
<tr>
<th>Models</th>
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<th>2¹</th>
<th>3</th>
<th>Total</th>
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<tbody>
<tr>
<td>n patients</td>
<td>115</td>
<td>160</td>
<td>21</td>
<td>126</td>
<td>422</td>
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**Outputs**

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<tr>
<td>Interventions/Patient</td>
<td>3.2</td>
<td>3.5</td>
<td>3.8</td>
<td>2.7</td>
<td>3.2</td>
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<tr>
<td>Medicine stopped/patient</td>
<td>1.7</td>
<td>1.9</td>
<td>2.4</td>
<td>1.2</td>
<td>1.7</td>
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<tr>
<td>Net saving/patient</td>
<td>£204.02</td>
<td>£233.84</td>
<td>£203.71</td>
<td>£100.77</td>
<td>£184.48</td>
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**Cost of delivering service**

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<tr>
<td>Cost per patient</td>
<td>£57.81</td>
<td>£92.09</td>
<td>£73.75</td>
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**Summary**

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<tbody>
<tr>
<td>For every £1 invested...</td>
<td>£3.53 saved</td>
<td>£2.54 saved</td>
<td>£2.76 saved</td>
<td>£1.30 saved</td>
<td>£2.38 saved</td>
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SHINE report:
http://tinyurl.com/kpc9axe