medway school of pharmacy

Caring for people with dementia in care homes

Managing behaviours that challenge within English care homes: an exploration of current practices

Summary of key findings

Phase Four: Medicines Use in Care Homes

Charlotte Mallon, Shivaun Gammie and Janet Krska

Medway School of Pharmacy, The Universities of Kent and Greenwich

Background

Most care home residents take several long-term medicines. In people with dementia, who have difficult and sometimes numerous clinical conditions, some of these medicines may not be suitable. Research studies have found that continually reviewing how care homes use medicines records may help to improve resident safety. This report describes a small study which explored the medicines prescribed and given to a sample of care home residents with dementia.

What we did

We looked at the medicines administration records (known as MAR charts) of 12 residents, and copied them directly. We looked at all of the medicines prescribed for these 12 residents and checked to see if any were potentially unsuitable. The standard way of describing medicines which may be unsuitable for a patient is Potentially Inappropriate Medicine (PIM). There were five reasons why a medicine may be a PIM:

1. No indication – no reason to use the medicine could be found in the resident's medical history. **(PIM-I)**
2. There is a list of medicines for which the risks outweigh the benefits of using them in elderly people (not just people with dementia). The list is called STOPP (Screening Tool of Older Person's Prescriptions) and is internationally accepted by researchers and health professionals. Medicines on this list should ideally not be used in elderly patients. **(PIM-STOPP)**
3. Preventative medicines - medicines taken to avoid certain medical conditions are not always suitable for elderly patients with dementia, because there may not be much benefit and the medicines can cause side effects. **(PIM-P)**
4. Oral nutritional supplements are products given to patients who are not eating, but everyone in a care home should be helped to eat healthy food, so guidelines say these products should not be used. **(PIM-ONS)**
5. Any interactions between medicines, incorrect doses or other reasons why a particular medicine may not be suitable for a particular resident. **(PIM-Other)**

We also calculated the anticholinergic scores for each resident *(anticholinergic medicines worsen dementia – for more about this, see summary of the paper by Fox and others)*, and we looked for errors on the residents' MAR charts, such as wrongly spelt medicine names. We also looked at the number of medicines which act on the brain, because most of these have side effects such as dizziness or confusion which could add to problems in caring for patients with dementia.

What we found

The records kept in care homes varied. One care home used a mixture of pharmacy-printed MAR charts and hand-written charts, while the other two care homes used MAR charts printed by the pharmacies dispensing residents' medicines. Only one care home had information about the medicines residents were taking before they came to the care home. In another care home, some MAR charts had spelling mistakes and the doses of medicines were missing. The 12 residents were prescribed an average of 9 medicines. All 12 residents in this study had at least one problem with a medicine.

1. *Potentially inappropriate medicine – indication (PIM-I)*

Eleven (92%) of the 12 residents in this study were prescribed at least one medicine without a medical reason for it, written in the list of medical conditions. In total, 40 medicines were prescribed without a documented reason.

	Number of residents	Number (%) prescribed PIM-I
Care home 1	7	7 (100%)
Care home 2	3	3 (100%)
Care home 3	2	1 (50%)
Total	12	11 (92%)

2. *Potentially inappropriate medicine – STOPP (PIM-STOPP)*

Eight (66%) residents were prescribed at least one PIM according to the STOPP list. Two or more of these medicines were prescribed for four (33%) residents. One resident was prescribed 6 and one was prescribed 10 of these medicines. Care home 1 had the highest proportion of residents with PIMs of this type (5/7 residents (71%)). Two of the 12 participating residents received an antipsychotic medicine, but these were appropriate because they had a diagnosis.

	Number of residents	Number (%) prescribed PIM-STOPP
Care home 1	7	5 (71%)
Care home 2	3	2 (67%)
Care home 3	2	1 (50%)
Total	12	8 (58%)

3. *Potentially inappropriate medicine – Preventative medicines prescribed (PIM-P)*

Five (42%) residents were prescribed PIM-Ps, which could probably be stopped to reduce side effects and difficulties in persuading patients to take them. Three residents were prescribed a statin. These medicines are widely used to prevent heart attacks and strokes, but do cause side effects in a lot of people. Other medicines prescribed were to prevent bone fractures and to treat high blood pressure. Two residents were prescribed three preventative medicines.

	Number of residents	Number (%) prescribed PIM-P
Care home 1	7	3 (25%)
Care home 2	3	1 (33%)
Care home 3	2	1 (50%)
Total	12	5 (42%)

4. *Potentially inappropriate medicine – Oral Nutritional Supplements (PIM-ONS)*

Four (33%) of the 12 residents were prescribed oral nutritional supplements, and these were all from Care home 1.

	Number of residents	Number (%) prescribed ONS
Care home 1	7	4 (57%)
Care home 2	3	0 (0%)
Care home 3	2	0 (0%)
Total	12	4 (33%)

5. Potentially inappropriate medicine – Other issues (PIM-O)

Six (50%) residents were prescribed medicines with 'other' issues. One medicine is not recommended at all, because it is not very effective, a cream was prescribed too often, two medicines had been prescribed for longer than is recommended and for two others it was not clear how long the medicine should be used, one prescription was potentially unlikely to be effective in treating pain while one patient was prescribed both laxatives and a medicine to treat diarrhoea.

	Number of residents	Number (%) prescribed PIM-O
Care home 1	7	5 (71%)
Care home 2	3	1 (33%)
Care home 3	2	0 (0%)
Total	12	6 (50%)

Anticholinergic burden (ACB) scores

Anticholinergic medicines are not recommended in dementia because they make it worse. Medicines are given a score from 0 to 3 depending on how strong their anticholinergic effects are. If a patient is prescribed more than one medicine with anticholinergic effects, the scores are added together. 21 medicines were prescribed for the 12 residents which had an anticholinergic score of 1,2 or 3. 10 (83%) residents were prescribed medicines with anticholinergic activity, they had scores ranging from 1 to 9. These are displayed in the table below. In 11 (52%) of these medicines prescribed, there was also no reason recorded for prescribing it.

ACB Score	Number of residents
1	5 (50%)
2	2 (20%)
3	1 (10%)
8	1 (10%)
9	1 (10%)

MAR chart errors

Five (42%) residents' MAR charts had errors. There were 12 in total, made up of spelling and dosing errors. Drugs were spelt incorrectly on three MAR charts and for 2 of these residents there were 3 spelling errors. Four charts had errors in the dose written (40mcg of Tamsulosin, instead of 400mcg, for example) or an unspecified dose.

Medicines which act on the brain

Of the 12 residents, 10 (83%) were prescribed medicines which act on the brain, and 9 of these 10 residents were observed exhibiting behaviour that challenges. The resident who had the most of these medicines prescribed also had the highest total number of incidents of behaviour that challenges. Of the seven medicines he was prescribed, five were potentially inappropriate.

Key conclusions

Overall, our findings suggest that there is no standard type of medicines records in care homes. This means that there is an increasing risk that residents may not receive the correct medicines at the correct dosage. All of the residents in this study had at least one potential problem related to a medicine.

In particular, we found that:

1. Care home records hold very little medical information about residents.
2. Residents took an average of 9 medicines.
3. 21 medicines with anticholinergic activity were prescribed to 83% of residents, many for no clear reason.
4. 10 of the 12 residents were prescribed medicines which act on the brain, and nine of these residents were observed exhibiting behaviour that challenges.
5. Care homes have different views towards ONS, which were prescribed more freely in one CH compared to the others.
6. A third of the 12 residents were exposed to incorrect dosing errors. Spelling errors were present in a quarter of the residents' MAR charts.
7. Regardless of the methods used to categorise problems relating to medicines use in CHs, problems are found.
8. It is crucial that residents' medicines and symptoms are reviewed, which may in turn lead to the possible discontinuation of inappropriate and unnecessary medicines and a reduction in polypharmacy in this population. This could result in better adherence to medicines by residents who are reluctant to take several medicines, an improved quality of life, a reduction in behaviour that challenges and an overall improved quality of care.

How you can use this information

Care home managers, owners and staff may find the results about medicines useful, and may want to consider their medicines review process, which might ultimately improve residents' quality of life, and reduce behavi9ur that challenges.

Relatives may find the results useful to help them think about the sorts of questions they may want to ask about the medicines their loved ones are prescribed.