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In Partnership with The Centre for Medicines Optimisation at Keele University

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Dementia: No reduction in antipsychotic prescribing in care homes 4 years after introduction of the National Dementia Strategy

A UK study has investigated the impact of the National Dementia Strategy on antipsychotic prescribing within care homes, finding no sustained improvement in prescribing levels, or the type of antipsychotic prescribed. Off-label prescribing remained high, with treatment frequently exceeding the recommended 6-12 weeks' duration. Several characteristics were identified that were associated with care homes who were higher (or lower) prescribers of antipsychotics. Substantial geographical variation in the use of antipsychotics was also observed.

Reference: Szczepura A, Wild D, Khan AJ *et al.* Antipsychotic prescribing in care homes before and after launch of a national dementia strategy: an observational study in English institutions over a 4-year period. BMJ Open 2016; 6:9 e009882 doi:10.1136/bmjopen-2015-009882.

What do we know already?

- In 2009 the 'Banerjee Report' was published. This was an independent review commissioned into the use of antipsychotics in people with dementia. The report was prompted by concerns about the overprescribing of antipsychotics, which have limited benefits in improving behaviour disturbances in people with dementia, but which are associated with significant harm, including increased mortality and incidence of cerebrovascular events, including stroke. The report concluded that the use of antipsychotics was unacceptably high, causing an additional 1,800 deaths per year, and 1,620 cerebrovascular adverse events per year, around half of which may be severe. The report also suggested that if support was available to provide alternative methods for managing behavioural problems, the prescribing of antipsychotics could be reduced by two-thirds, a target that was considered to be realistic over a 3-year period. The report also concluded that 2nd-generation antipsychotics should be prescribed in preference to 1st-generation agents, as the former have a better adverse event profile. Also, the lowest dose should be used for the shortest period (ideally < 12 weeks), with prescribing reviewed at least monthly and with consideration being given to reducing or stopping treatment. These recommendations were incorporated in the National Dementia Strategy that was launched in 2009.
- Reducing the inappropriate use of antipsychotics in dementia continues to be an important medicines optimisation issue. It is one of NICE's Key Therapeutic Topics, and was also an 'aspiration' in a 2015 government policy paper, which targeted a two-thirds reduction in inappropriate prescribing by 2019.
- Guidance on the use of antipsychotics in dementia is covered in the 2006 NICE guideline 'Dementia: supporting people with dementia and their carers in health and social care'.

What does this evidence add?

- This is the first larger-scale study to examine the long-term impact of the National Dementia Strategy on antipsychotic prescribing within care homes. Disappointingly, rates of prescribing were found to be unchanged between the first analysis which was carried out in early 2009 (*before the launch of the initiative*) and the second analysis performed in late 2012 (*about 4 years after the National Dementia Strategy was launched*).
- The study also found no shift towards the greater use of 2nd-generation antipsychotics.
- The vast majority of antipsychotics were used within acceptable dose ranges; however, duration of prescribing was excessive (> 12 weeks) in nearly 78% of cases 4 years after the launch of the Dementia Strategy.
- The reasons for the lack of progress within this setting are unclear, and require further study. However, the authors investigated whether there were any factors that were associated with higher prescribing care homes. Higher prescribers were more likely to be located in a deprived area, registered for dementia and served by

multiple (> 4) GPs. Those in the lowest quartile of prescribing were more likely to be served by a single GP. The authors speculate whether single practices provide more consistent messages to care homes, with requests to continue the use of antipsychotics addressed more appropriately.

- Large regional variation was found in a number of measures.
- The authors argue that to achieve sustained improvements, standards specifying recommended agents, doses and length of treatment would be helpful, as would the routine monitoring and reporting of prescribing patterns for care homes - data which is not currently open to public scrutiny nor routinely reported by regulatory inspection.
- Limitations of this study are the lack of comparable care home data at a national level to demonstrate the representativeness of the homes that were included in this study. Also, care homes' clinical and staffing data were not available.

Study details

Participants:

- The study analysed medicines data from 616 long term care institutions in the UK, analysing the records of 31, 619 residents. All the institutions included in this study had implemented an electronic medicines management system designed for use in care homes.

Intervention and comparison:

- The authors carried out a retrospective analysis of antipsychotic prescribing patterns using data from the care homes' electronic medicines management systems at two times points:
    - 1st January 2009 (baseline data; prior to the launch of the National Dementia Strategy), and
    - 31st December 2012 (4 years following the National Dementia Strategy).

  Records from all residents were examined, with no exclusions.
- For each prescription, dosage was converted to an equivalent daily dose, and dosages compared with an 'indicative' maximum daily dosage. All non-risperidone prescribing was categorised as 'off-label'. (*Risperidone is the only antipsychotic licensed for use in dementia, and is indicated for the short-term treatment [up to 6 weeks] of persistent aggression in patients with moderate to severe Alzheimer's dementia unresponsive to non-pharmacological approaches and when there is a risk of harm to self or others*).

Outcomes and results:

- No statistically significant difference was seen in overall prescribing rates (measured as point prevalence [PP] rates) between baseline (PP rate = 18%) and 4 years later (PP rate = 19%) (Kolmogorov-Smirnov [KS] test p = 0.60).
- Nursing and residential homes had similar rates of prescribing (PP rates of 17.3% and 18.6% respectively at baseline, and 21.0% and 19.2% after 4 years)
- 2nd-generation antipsychotics were the most frequently used agents (around two thirds of all antipsychotic prescriptions), but analysis showed there had been no significant shift either away from 1st-generation antipsychotics (KS test p = 0.26) or towards the newer 2nd-generation agents (KS test p = 0.32) between 2009 and 2012.
- Regarding characteristics of care homes, size and type of institution (nursing or residential) showed no clear differences in use of antipsychotics. Higher prescribing was more likely to be associated with:
    - Location of the care home in a deprived neighbourhood (i.e. in the top 10% of Index of Multiple Deprivation scores)(rate ratio [RR] 5.89, 95% CI 4.35 to 7.99)
    - Registered for dementia (RR 3.38, 95% CI 3.06 to 3.73)
    - Served by 4 or more GP practices (RR 1.38, 95% CI 1.30 to 1.46).
- In terms of residents' characteristics, older residents (≥ 85 years) were less likely to be in highest prescribing quintile (RR 0.63, 95% CI 0.58 to 0.68) and younger residents (65–74 years) more likely (RR 1.75, 95% CI 1.41 to 2.17).
- The care homes included in the analysis covered 26 geographical Primary Care Trust (PCT) areas. There was a six-fold variation in prescribing rates across these areas, with PP rates in 2012 ranging from 5.7% to 37.5%. The proportional use of 2nd-generation antipsychotics also varied markedly (from 11.1% to 89.5%). Rates of off-label (non-risperidone) prescribing varied six-fold between areas (from 5.4% to 31.3%).
- Risperidone was the first-line treatment in most cases (75.2%), but this figure varied between 0% and 100% across different geographical areas.

Level of evidence: Level 3 (other evidence) according to the SORT criteria

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