Reducing antipsychotic use in patients with dementia

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Abstract

Title
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Introduction
In response to the Banerjee report published in 2009, Bedfordshire Clinical Commissioning Group (CCG) recognised that work needed to be done within GP practices to reduce the level of inappropriate prescribing of antipsychotics for the behavioural and psychological symptoms of dementia.

Methods
Following a baseline audit in 2013 conducted by the medicines management team a practice based audit was devised and incentivised as part of the 2014-15 Prescribing Incentive Scheme.

GP practices searched their patient records for patients with dementia who were prescribed an antipsychotic drug on current repeat and collected data for these patients on a standardised data collection form. These were submitted to the medicines management team for collation along with an individualised action plan for the practice identifying prescribing issues and solutions. This was followed by a re-audit seven months later which was also submitted to the medicines management team.

Results
Approximately 80% of initiations were made by secondary care and almost half of antipsychotics had been prescribed for more than two years. Between baseline and phase two of the audit prescribing of antipsychotics in patients with dementia and no mental health co-morbidity reduced by 32%. The frequency of three monthly reviews between phase one and phase two of the audit increased by 43%. Those with a documented risk/benefit discussion of antipsychotic use increased by 83%.

Conclusion
Following the audit results and suggestions made by practices in the action plans, the secondary care providers have been approached requesting that at discharge to primary care GPs are provided with patient action plans that include the antipsychotic indication and guidance for review. GP computer system templates have also been devised, accessible to all practices, to aid as an evidence based tool for initiation, review, and cessation of antipsychotic drugs for dementia.

Keywords: dementia, BPSD.

Introduction

In 2009, Professor Sube Banerjee published a report investigating the use of antipsychotics in dementia.[1] The report identified that antipsychotics are used too frequently in dementia and that in many patients the potential benefits are likely to be outweighed by the increased risks of cerebrovascular events and all-cause mortality. In conclusion, it was estimated that the level of prescribing nationally should be reduced by two thirds over a period of three years. This reduction should be supported by introducing alternative non-pharmacological strategies as detailed in National Institute for Health and Care Excellence (NICE) guidance.[2]

In 2012, a primary care audit was commissioned by the Department of Health (DH) to determine the level of prescribing of antipsychotics in dementia patients.[3] This showed that Bedfordshire was the highest prescriber in the East of England region with a 10.2% prevalence of antipsychotic prescribing in patients with dementia in 2011, reduced from 19.8% in 2006. This was significantly higher than other CCGs within the region whose prevalence was 0-8% in 2011, reduced from 5-18% in 2006. The CCG with zero prevalence in 2011 brought into question the overall results, and it was noted that the data collected by the DH was part of a data extraction relying on accurate coding by practices. Therefore, the poor comparative results may partially reflect higher levels of accurate read coding in Bedfordshire. There were also low levels of participation from

each CCG. Bedfordshire practice participation was 22% and the lowest in the region was only 12%. Bedfordshire Clinical Commissioning Group (BCCG) Medicines Management Team (MMT) recognised that further work needed to be done and conducted an internal baseline audit in July 2013. This audit showed that 8.1% of dementia patients without mental health co-morbidities were being prescribed antipsychotics.

It was decided that, to achieve reductions in prescribing, there was a need to raise GP awareness of the level of prescribing in their own practices and identify reasons why excessive prescribing was occurring. To this end an audit was developed for GPs to conduct in practice. This was incentivised as part of the BCCG 2014-15 Prescribing Incentive Scheme (PIS). Practices had to complete the audit and submit it to the MMT with an action plan, then submit a re-audit seven months later. As BCCG were asking 55 practices to do this individually, a clear audit process was written to ensure consistency in methodology and reproducibility of the results.

In addition to collating data on prescribing from all practices, the aims were to improve the prescribing practice of antipsychotics for patients with dementia, reduce inappropriate use of antipsychotics in managing Behavioural and Psychological Symptoms of Dementia (BPSD), and increase monitoring and review when these were prescribed.

Method

Practices were provided with a written audit process, including a search strategy, and a standardised data collection sheet. The data collection in phase one was to be completed and submitted over the four month period April-July 2014 with an action plan based on the results. The action plan was not based around a fixed structure to give individual practices the opportunity to identify different issues and different solutions. The action plan was submitted at this point to allow the practices time to put actions into practice before phase two. The second phase comprised a repeat data collection over January-February 2015 to show evidence of change.

Between the two audit phases the MMT prepared a report based on the findings of phase one to distribute to the practices. This shared the overall results and highlighted key issues for action. The action plans were also collated and summarised to share ideas for implementation and improvement between the practices for action before the re-audit. The audit was designed to be practice led so that prescribers could identify prescribing issues as they collected the data and devised the action plans and thereby recognise the need for improvement that they would then action. To encourage engagement for the entire process monies were only allocated by the PIS if data collection for both audit phases and an action plan were received by the deadlines.

The patient search criteria included all patients over 60 years of age prescribed an antipsychotic on current active repeat. This was to ensure that those patients with dementia but who had not been recorded on the register were not inadvertently excluded. Antipsychotics commonly prescribed for other indications (e.g. prochlorperazine) were excluded from the search. Patients under 60 years of age who were on the dementia register were also screened for prescribing of antipsychotics. As all GP practices used the same computer system the search was created and shared with all practices so that a unified process was followed.

The data collection form was completed for all eligible patients i.e. patients with dementia prescribed an antipsychotic. Those who were taking the antipsychotic for a mental health diagnosis but with no history of dementia were screened out and no further data collected.

Data collection at a practice level included the practice list size, the dementia list size and the total number of patients with dementia taking antipsychotics. At a patient level the drug details were recorded with information on initiation, indications, coding, residence, risk factors and review.

Results

Across the five localities in BCCG there was a 100% response rate and 55 practices completed the data collection for phase one, representing a total population of nearly 445,000 patients. Phase two was completed by 50 of the practices. Of those who did not complete the audit four practices allowed MMT access to their clinical system to extract the data. This resulted in data for 98% of the BCCG practices and 99% of the population.

Overall

Of the total CCG population 2544 (0.6%) were registered with dementia. At phase one 9% of patients with dementia were prescribed antipsychotics, reducing to 7.7% once concomitant psychoses were excluded. This reduced at phase two to 7% and 5.5% respectively, demonstrating a 21% reduction in antipsychotic prescribing in patients with dementia and a 32% reduction from baseline.

The majority of the patients were living in a Care Home (73%), but almost a quarter (24%) were still living in their own homes, with a small minority in sheltered accommodation. This remained the same for both phases of the audit.

Diagnosis

72% of the patients with dementia who were prescribed antipsychotics were taking it solely for their BPSD. The remaining 28% also had co-morbidities of psychosis. This was constant for both phases of the audit.

In phase one, 6% of patients were taking antipsychotics for BPSD in dementia without being recorded on the dementia register. In phase two, those with a Read Coded diagnosis of dementia rose to 96%.

Drugs

In phase one nearly a third of patients prescribed antipsychotics were prescribed quetiapine. Only a quarter were prescribed risperidone, the only antipsychotic licensed for use in dementia. Haloperidol and olanzapine were prescribed in 15% and 13% of patients respectively. The remainder of the drugs were prescribed infrequently. By phase two the proportion of quetiapine prescribed had reduced to 29% and risperidone had risen to 28% (Graph 1), however the numbers involved are very small.

Of those prescribed antipsychotics in phase one, 90% were prescribed the drug to be taken regularly, with 10% taking it

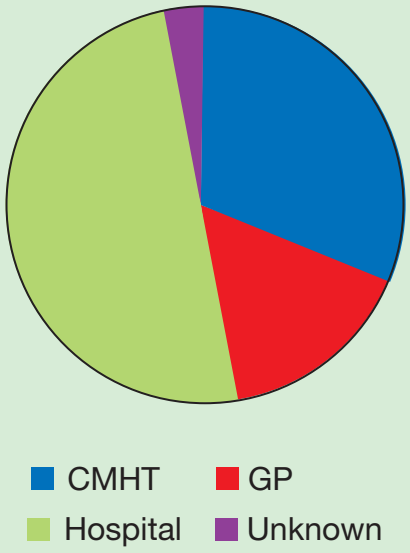
when required. Of the 'when required' dosages, 21% had not requested an issue within the last three months. By phase two the 'when required' prescriptions had reduced to 6% of the total, but the proportion who had not requested an issue in the last 3 months had doubled to 42%.

Initiation

The majority of antipsychotics were started by a hospital (47-53%) and 79-83% of initiations were made between secondary care and the Community Mental Health Trust (CMHT). GPs only initiated antipsychotics in 14-18% of cases (Graph 2).

Only just over half (54-55%) of patients in each phase of the audit had a documented treatment plan at initiation.

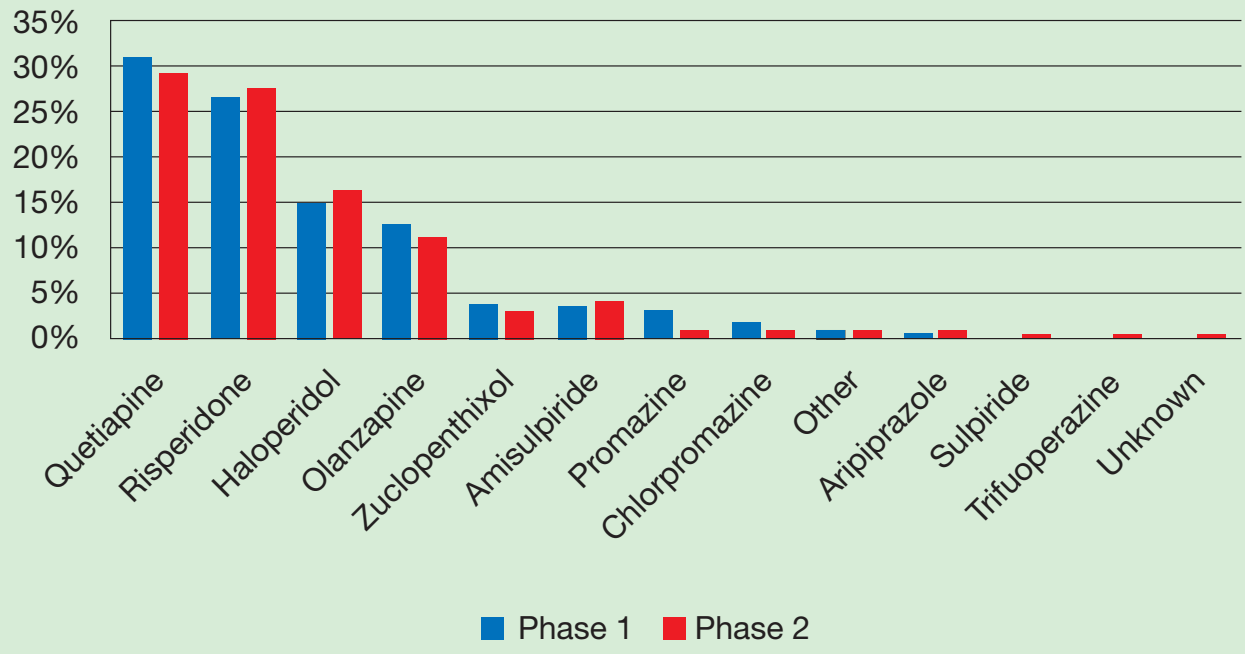
More than half of the patients prescribed antipsychotics had cardiovascular co-morbidities or risk factors. At phase one, three quarters of these had no documentation of a benefit/risk discussion in their records. The re-audit at phase two showed an 83% increase in patients with a documentation of risk/benefit discussions, but over half still did not have this documented (Table 1).



Graph 2: The location of the clinician initiating the antipsychotic (phase 1)

CV comorbidity/ risk factors	Count (Phase 1)	Count (Phase 2)	Documentation of risk/ benefit discussion	Count (Phase 1)	Count (Phase 2)
Yes	138 (58%)	115 (56%)	Yes	33 (24%)	51 (44%)
No	92 (39%)	85 (41%)	No	104 (75%)	61 (53%)
Unknown	6 (3%)	7 (3%)	Unknown	1 (1%)	3 (3%)

Table 1: Number of patients with a cardiovascular comorbidity/risk factor and of those the number with a documented risk/benefit discussion



Graph 1: The antipsychotic drugs prescribed to treat BPSD at Phase 1 and Phase 2 of the audit

The greatest improvement in documentation of risk/benefit discussions was in the GP initiations. These had the lowest recorded documentation at phase one, but the proportion had almost tripled by phase two (Table 2).

Review

Of those who answered the question, only half had had a review of their medication within the last three months in phase one of the audit. This increased by 43% at phase two, but almost a third of patients were still not receiving three monthly reviews as recommended by NICE.[2]

Duration

Almost half of the patients prescribed antipsychotics had been taking them for more than two years (Graph 3). The duration of prescribing did not change considerably between the two phases. An increase in the proportion of longer durations was seen in phase two, with a concomitant reduction in shorter durations of less than three months, however the numbers involved are small.

Longer durations of therapy were seen for patients who had their treatment initiated in secondary care (Table 3). The majority of patients initiated on antipsychotics by CMHT had been treated for more than 2 years (65%), as had those initiated by a hospital (47%). Conversely, the majority of those initiated by their GP had been treated for less than a year (43%).

Overall

The overall results across the baseline audit and two phases of the PIS audit show a reduction in prescribing, and an increase in diagnosis and review. However, the duration of therapy has increased over the two year period. The direct comparison between the three audits can be seen in table 4.

Action Plans

The quality of the Action Plans received from practices was variable. Some made some very cognisant points for the practice to act on and suggestions at a CCG level that have been taken forward.

Discussion

Within the CCG there is no shared care agreement for prescribing antipsychotics. GPs often make referrals to the mental health service for management of difficult patients, however those GPs who choose to prescribe themselves can do so. Once an antipsychotic has been initiated by secondary care, patients are often discharged back to GPs for continuation of care. Therefore, although antipsychotics can be initiated by either primary or secondary care, the ongoing management is usually the responsibility of the registered GP.

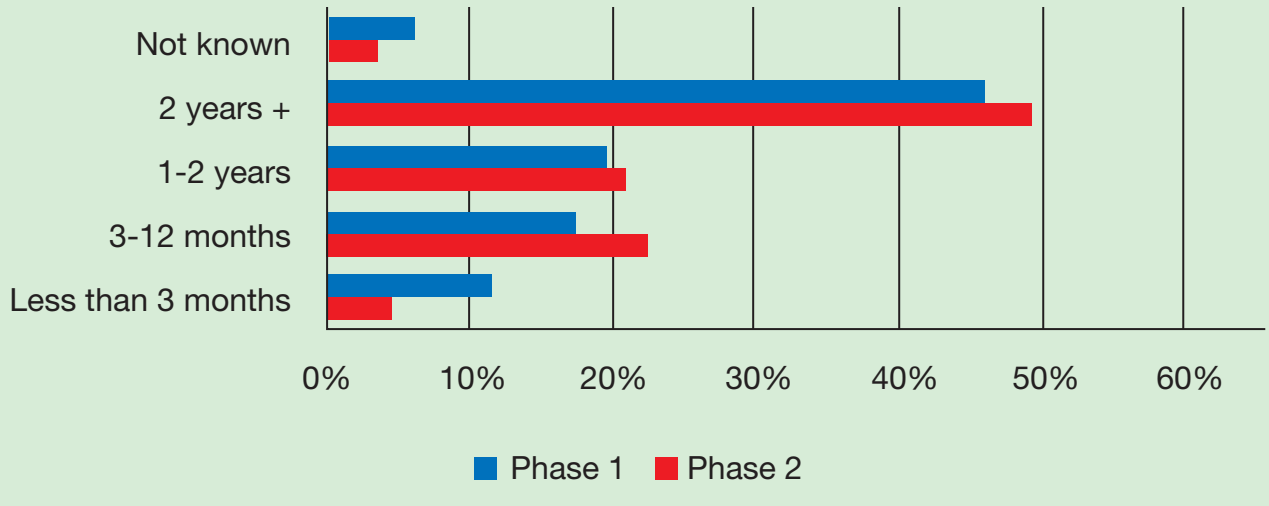
The 100% response rate for phase one of the audit showed a strong engagement from the practices. Unfortunately, this dropped marginally for the second phase but the MMT were able to access practices to obtain the majority of the data. As 55 practices individually collected their own data this may have led to variability in the results, however the audit and data

	Phase 1	Phase 2
CMHT	21%	34%
GP	17%	50%
Hospital	28%	52%

Table 2: Documentation of risk/benefit discussion by location of initiating clinician

	CMHT	Hospital	GP
< 3 months	5%	3%	8%
3-12 months	12%	24%	35%
1-2 years	14%	23%	30%
2 years +	65%	47%	27%
Unknown	5%	2%	0%
	100%	100%	100%

Table 3: The duration of therapy of antipsychotics by where they were initiated



Graph 3: The duration of antipsychotic prescribing at Phase 1 and Phase 2

Outcome	2013 (baseline)	2014 (Phase 1)	2015 (Phase 2)	Improvement?
Response rate	67%	100%	98%	✓
Patients on dementia register prescribed antipsychotic	11.2%	9.3%	7.7%	✓
Patients on dementia register prescribed an antipsychotic, without psychosis diagnosis	8.1%	7%	5.5%	✓
Dementia Read Coded	85%	94%	96%	✓
Residence				
Care Home	70%	73%	73%	
Own Home	29%	24%	23%	
Sheltered	0.6%	2%	3%	
Drugs used				
Quetiapine	36%	31%	29%	✓
Risperidone	22%	26%	28%	✓
Haloperidol	12%	15%	16%	
Olanzapine	9%	13%	12%	
Other	21%	15%	15%	
Drug details				
Regular dosage	94%	90%	94%	
When required dosage	6%	10%	6%	
Initiations by primary care	18%	14%	18%	
Initiations by secondary care	68%	84%	79%	
Documented treatment plan at initiation	-	55%	54%	
Cardiovascular co-morbidity	39%	58%	56%	
Risk / benefit discussion documented	-	24%	44%	✓
3-monthly review	59%*	47%	67%	✓
Duration of therapy				
Less than 3 months	9.3%	11%	4%	
3-12 months	24.7%	17%	22%	
1-2 years	17.6%	19%	21%	✘
2 years +	37.4%	46%	49%	✘
Not known	11%	6%	3%	

*includes patients who have had contact with secondary care assumed reviewed

Table 4: A comparison of results across the audit phases

collection form were designed to minimise this risk. The search parameters were clearly written and distributed to the practices with the audit process, although it cannot be guaranteed how rigorously these were followed. The data collection sheet was an Excel spreadsheet with drop down menus in the boxes to ensure consistency in data collection across all practices.

There was a reduction in antipsychotic prescribing of 32% from the 2013 baseline audit to phase two of the PIS audit. This is a substantial reduction and demonstrates the ongoing work that has been done in reducing the inappropriate initiation and increasing the review and cessation. However, not all prescriptions will continue to be appropriate long-term and ongoing vigilance is needed to review and assess all patients prescribed these drugs. There needs to be more consideration of alternative non-pharmacological strategies and closer links with services which provide support, in line with NICE Guidance,[2] to continue this reduction in prescribing.

Although 28% of patients with dementia were taking the antipsychotic with concomitant mental health problems, the majority were prescribed the drug for BPSD only. The proportion of those without their dementia Read Coded reduced from 15% at the baseline audit to 4% at phase two. This is a positive increase in recording of diagnosis and needs to be maintained to ensure patients are able to access all care provision and support for dementia. The future aim would be to achieve 100% recording of diagnosis and practices need to ensure accurate Read Coding, especially following secondary care communications.

Almost three quarters of patients identified were living in a care home. Antipsychotics have been recognised as over-prescribed in this setting.[1] Although those patients with greater needs are more likely to be living in a care home, which would increase the prescribing rate, it is not known whether the frequency of prescribing is due to clinical indication or pressure from care staff as a means of responding to difficult to manage patients. It is therefore important for prescribers to ensure that they make a full assessment of symptoms before initiating, especially as up to half of all episodes may resolve without intervention.[1] It is also important to regularly review antipsychotics prescribed in the care home setting for ongoing appropriateness and discuss alternative strategies with patients and carers. Long term use must be challenged and justified, particularly as 70% of patients do not experience deterioration of symptoms with cessation of these drugs.[4]

The only antipsychotic licensed for use in dementia is risperidone, for a maximum of six weeks,[5] as the evidence for the benefits versus risks of other antipsychotics in BPSD are not substantiated. However, the most frequently prescribed antipsychotic across all phases was quetiapine. By phase two of the audit this balance was beginning to be redressed with quetiapine and risperidone prescribing rates almost equal, showing an increased tendency towards prescribing to license. However, 72% of antipsychotic drugs were being used outside of license. Prescribers need to ensure that they practice in line with licensed indications and the evidence base where possible.

Only just over half of patients had a documented treatment plan at initiation. As the majority of initiations were by secondary care or CMHT, who usually then discharge patients to GP care, the lack of an action plan would mean that GPs would be unaware of treatment targets and review options. When antipsychotics were initiated by secondary care clinicians it was found that following discharge GPs are less likely to review, reduce or stop the antipsychotics. Improvement cannot be assessed without a record of symptoms and treatment targets at initiation. Furthermore, when patients are discharged GPs cannot review in line with consultant treatment aims if these are not recorded, leading to a decrease in reviews and an increase in extensive durations of treatment.

Between the two phases of the audit the MMT discussed this with the CMHT provider and both of the main secondary care providers. A one page summary of relevant results were presented at the Medicines Management meeting and Drugs and Therapeutics Committees respectively. These were presented with recommendation to prescribers that at the point of discharge a brief action plan should be communicated to the patient's GP in writing. This should include symptoms, treatment aims, potential points for dose reduction and cessation of therapy, and also document whether a cardiovascular risk discussion has occurred. This recommendation was well received by prescribers at the meetings. There was no movement in this target between the two audit phases as the majority of prescribing is historic; this will need to be reassessed specifically for new initiations.

Although more than half of the patients prescribed antipsychotics had cardiovascular co-morbidities or cerebrovascular risk factors, at phase one only a quarter of these had documentation of a benefit/risk discussion in their records. It is not known whether this represents a lack of risk assessment or an omission to document it. As the data was obtained by review of primary care records if this had been undertaken in secondary care but not recorded in any of the communications it would not have been identified. Documentation of risks and evidence of adequate discussion with patient and carer at the point of initiation was recommended by the MHRA in 2009.[6] The re-audit at phase two showed an improved assessment of risk/benefit discussions, but over half still did not have this documented. The greatest improvement in documentation was in those initiated by the GPs themselves showing that their practice was improving as a result of the audit. This is an area for ongoing improvement.

Only half of patients received a three monthly review at phase one, and although this improved at phase two a third were still not receiving the necessary reviews of therapy. Of the few patients prescribed the antipsychotics 'when required', the high proportion of these not issued in the last three months indicates missed opportunities for review and cessation, which are likely to extend across all prescriptions. The lack of reviews would contribute to the long durations of therapy seen. Almost half of the patients prescribed antipsychotics had been prescribed them for more than two years. This was the case regardless of whether or not there was a concomitant psychosis indication. The earliest initiation, without a psychosis co-morbidity, was 2001. It is important for GPs to review the ongoing need for antipsychotics as dementia and the behavioural and psychological symptoms do change over time.

The duration of prescribing did not change considerably between the two phases. An increase in the proportion of

longer durations was seen in phase two, with a concomitant reduction in shorter durations of less than three months. This gives the impression that GPs were more confident reviewing and stopping antipsychotics after short periods of time than in patients who have been taking them for considerably longer. However, the numbers involved are small and indicate that long durations of prescribing were problematic and reviews need to be undertaken. The only antipsychotic licensed for use in dementia is licensed for six weeks. The increase in duration of prescribing is concerning and could result in an increase in overall antipsychotic prescribing. GPs should work with carers to reduce reliance on antipsychotics and recognise that their use should be challenged. Regular reviews are essential when the ongoing risk/benefit, treatment plan, need and dosage should all be reviewed. A written action plan at initiation should assist with this.

As a result of the suggestions from GP practices in the action plans, MMT have produced 'Antipsychotic in dementia' templates for the SystmOne GP computer system to be used at both initiation and review. These are evidence-based and include support with initiation, review, reduction and cessation. These can be accessed by all BCCG practices. They are designed to support GPs in their decision making and empower them to review and stop the antipsychotics where appropriate.

Conclusion

Work has been done across BCCG to successfully reduce the frequency of antipsychotic prescribing in dementia patients in line with recommendations. Prescribing for patients with dementia with no concomitant psychoses has now reduced by 32% from baseline. The proportion of reviews increased by 43% between audit phases one and two. Patients with dementia are less likely to have antipsychotics initiated and, when this is done, they are more likely to have them reviewed and stopped. This will potentially lead to reduced strokes and other adverse events, thereby improving quality of life and potentially reduce all-cause mortality.

However, a lack of reviews and increasing durations of therapy are putting this work at risk. The ongoing durations of treatment without cessation will inevitably lead to an increase in overall prescribing. Having achieved the 5.5% prevalence of antipsychotic prescribing in dementia patients, vigilance needs to be maintained to review patients and ensure that ongoing prescribing is appropriate. Treatment should be challenged at each review to assess ongoing need.

Declaration of interests

The authors have nothing to disclose.

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