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Quality improvement in action

Antipsychotic prescribing in nursing homes: an audit report

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ABSTRACT

Background In recent years there have been concerns regarding the prescribing of antipsychotic drugs to patients with dementia in nursing homes, due to adverse effects, inappropriate indications and insufficient review. Our practice decided to look at this difficult area more closely.

Aim The aim of this audit was to assess whether our prescribing of antipsychotic drugs in nursing homes was appropriate.

Method Our audit criteria for *appropriate prescribing* were based on National Institute for Health and Clinical Excellence (NICE) recommendations:

1 there is a clear recorded indication or target symptom (standard 100%)
2 there is a documented review of the prescription in the past six months by a GP or psychiatrist (standard 100%).

Patients in nursing homes receiving antipsychotic drugs were identified from electronic case notes, using a specific nursing home Read code and *British National Formulary* chapter.

Results The first data collection (July 2008) revealed we had 81 patients in nursing homes and 22 (27%) were prescribed antipsychotic drugs. There was a clear recorded indication or target symptom in only 11 patients (50%) and a documented review of the prescription in the past six months by a general practitioner (GP) or psychiatrist in only 14 patients (64%). We discussed the results with our practice team and decided to introduce a review checklist for antipsychotic prescribing in nursing homes.

The second data collection (December 2008) showed that the number of patients prescribed antipsychotic drugs had fallen to 15 (19% of total 80) and both audit criteria were met in 100% of cases.

Conclusion The introduction of the checklist and six-monthly review led to an improvement in the recording of a clear indication for the antipsychotic drug and of documented review. As a practice we were pleased with the modest reduction in the prescribing of antipsychotic drugs in nursing home patients. We were satisfied that the patients who remain on these drugs are being reviewed appropriately and that the benefit of prescribing outweighs the risk.

Keywords: antipsychotic drugs, clinical audit, dementia, nursing home, safety

How this fits in with quality in primary care

What do we know?

The behavioural and psychological symptoms of dementia (BPSD), such as agitation and aggression, are present in a large proportion of patients with dementia in residential care. Around 20–50% of patients in institutional care receive antipsychotic drugs. The adverse effects of such drugs are considerable and include a doubling of stroke risk. National guidelines (SIGN 86 and NICE 42) give clear advice that the initial approach to BPSD should be with non-pharmacological interventions unless distress is severe or there is immediate risk of harm to the person or others.

What does this paper add?

Current guidance (NICE 42) defines 'appropriate' prescribing of antipsychotic drugs in patients with dementia in nursing homes. Our practice decided to compare our prescribing behaviour to the criteria listed by NICE. The introduction of a checklist and six-monthly review led to a reduction in our prescribing rates of antipsychotics in nursing homes, regular reviews and satisfaction that the benefit of the drug outweighs risk.

Introduction

In recent years there have been considerable professional and media concerns about the over-prescribing of antipsychotic drugs for nursing home patients who have dementia.[1,2] The behavioural and psychological symptoms of dementia (BPSD), such as agitation and aggression, are present in a large proportion of patients with dementia in nursing homes. Around 20–50% of patients in institutional care receive antipsychotic drugs.[3,4] The adverse effects of these drugs include an increased risk of stroke, confusion, sedation, postural hypotension, extra-pyramidal effects and anti-muscarinic effects.[5] Patients with Lewy body dementia (10–15% of all patients with dementia) are particularly susceptible to severe sensitivity reactions to antipsychotic drugs, which may be life threatening.[6]

In 2004, the Committee on Safety of Medicines advised that risperidone and olanzapine should not be used in the treatment of BPSD, due to a threefold increase in stroke risk with these drugs. Many patients were switched to other atypical antipsychotic or conventional antipsychotic drugs but stroke risk is at least doubled in these drugs.[5]

Both the Scottish Intercollegiate Guidelines Network (SIGN) and the National Institute for Health and Clinical Excellence (NICE) have produced guidelines for clinicians who manage dementia.[7,8] Their recommendations include a thorough assessment to consider factors that may aggravate or improve behaviour: physical health, physical environmental factors, psychosocial factors, side-effects of medication, undetected pain, individual beliefs and cultural identity. Non-pharmacological interventions such as environmental and psychological management should be used initially.

NICE advises:

> Patients with dementia who develop non-cognitive symptoms or behaviour that challenges should be offered a pharmacological intervention in the first instance only if they are severely distressed or there is an immediate risk of harm to the person or others.[8]

Nursing home staff are important in the decision about whether to prescribe antipsychotic drugs in dementia. Their ability to offer alternatives to drugs in the management of BPSD varies, and depends on their training and experience. Fossey *et al* showed that training and support of nursing home staff reduced antipsychotic prescribing in patients, without worsening behavioural symptoms.[3]

This paper describes a simple intervention for patients prescribed antipsychotic medication in three nursing homes registered within one general practice in East Ayrshire, Scotland. The practice was smaller than average, rural and in a deprived area; 48.7% of the practice population were living in the 15% most deprived datazone according to the Scottish Index of Multiple Deprivation 2006.[9] The nursing homes covered by the practice specialise to a certain degree in taking patients with functional psychoses and with more challenging forms of dementia.

Method

Audit criteria for appropriate prescribing of antipsychotic drugs were developed based on NICE recommendations:[8]

1 there is a clearly recorded indication or target symptom (standard 100%)
2 there is a documented review of the prescription in the past six months by either a general practitioner (GP) or psychiatrist (standard 100%).

When prescribing a drug with many possible adverse effects, it is especially important to have a clearly defined reason for prescribing. Regular review is required to monitor response and look for development of adverse effects. Reduction or withdrawal of the drug may be appropriate in some cases.

The consensus view of the practice was that 100% standard was reasonable, given the small number of patients and the clinical situation.

Registered patients in nursing homes were identified and then had a specific Read code added to their electronic record. A computerised search was undertaken by the practice information technology coordinator, to identify those patients who were prescribed antipsychotic drugs as determined by the relevant chapter in the *British National Formulary*.[10] Following the first data collection, the results were discussed at our multidisciplinary primary healthcare team meeting and also with care home nursing staff during one of our regular visits. Clinicians were keen to improve the quality of antipsychotic prescribing, and a checklist was drawn up based on NICE guidance covering the following points:

- psychiatric diagnosis
- drug name, dose and date commenced
- clearly recorded indication/target symptom
- consideration of stroke risk and adverse effects
- dose reduction/withdrawal appropriate?

Some nursing home patients who were prescribed antipsychotic drugs had diagnoses other than dementia. In these cases and in previously detained patients, a psychiatrist was consulted before considering changes to antipsychotic medication.

The checklist was completed and scanned into each patient's electronic health record. It was updated every six months. The antipsychotic review was performed during a regular nursing home prescribing review meeting or at a twice-monthly visit to the nursing home. A specific Read code for these reviews ensured they were kept up to date. The 'nursing home antipsychotic review' was entered every six months into the practice's audit calendar.

A second data collection of the original two criteria took place six months later.

Results

Results are summarised in Table 1.

Over the six months of the audit the number of patients prescribed an antipsychotic drug in a nursing home fell from 22 (27%) to 15 (19%). The changes were:

- patients died: 2
- patients moved away: 1
- prescription stopped by GP: 4
- prescription stopped by psychiatrist: 1.

In the study period, one new patient was started on an antipsychotic drug for BPSD.

Discussion

It was reassuring that the prescribing rates of antipsychotic drugs for nursing home patients in this study were similar to previously reported rates.[3,4]

The first data collection revealed low rates of recording a clear indication for the antipsychotic drug and low rates of documented review. This implied less than optimal practice and raised the possibility that patients may have been commenced on antipsychotic drugs with insufficient balancing of risks and benefits. Also patients may remain on antipsychotic drugs unnecessarily as they enter a more passive phase of the dementia process.

The introduction of the checklist and six-monthly review led to an improvement in this situation.

We are a small cohesive practice team and are able to discuss and implement changes rapidly. Our system of regular nursing home surgeries makes planned review of nursing home patients easy to organise, leading to only one or two extra reviews each month.

The audit is straightforward to sustain in the long term. Our practice administrator runs a search each month to identify patients in nursing homes prescribed antipsychotic drugs, and the date of the last antipsychotic review. Overdue patients (over six months) are booked into the next nursing home surgery. All patients on antipsychotic drugs in our nursing home population were audited. However, this included a few patients with diagnoses other than dementia. Overall, the number of patients audited was small.

Despite the limitations of this audit, it is relevant to any practice interested in improving the care of its nursing home patients and is feasible to sustain in the longer term. The extra workload generated was modest.

The group of patients studied are medically complex, with both physical and mental health needs, making this a challenging area of general practice.

Following the introduction of the checklist, our practice is satisfied that patients who remain on antipsychotic drugs are being reviewed appropriately and that the benefit of prescribing outweighs the risk.

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Table 1

	First data collection	Second data collection
Date	July 2008	December 2008
Number of nursing home patients	81	80
Number of patients prescribed antipsychotic drugs	22 (27%)	15 (19%)
Audit criterion 1: There is a clearly recorded indication or target symptom; standard 100%	11 patients (50%)	15 patients (100%)
Audit criterion 2: There is a documented review of the prescription in the past 6 months by a GP or psychiatrist; standard 100%	14 patients (64%)	15 patients (100%)

REFERENCES

1 O'Brien J. Antipsychotics for people with dementia. *BMJ* 2008;337:a602.
2 Panorama: *Please Look after Dad.* http://news.bbc.co.uk/1/hi/programmes/panorama/7104212.stm (accessed 4 September 2009).
3 Fossey J, Ballard C, Juszczak E *et al.* Effect of enhanced social care on antipsychotic use in nursing home residents with severe dementia: cluster randomised trial. *BMJ* 2006;332:756–61.
4 McGrath AM and Jackson GA. Survey of neuroleptic prescribing in residents of nursing homes in Glasgow. *BMJ* 1996;312:611–12.
5 BMJ Group. How safe are antipsychotics in dementia? *Drug and Therapeutics Bulletin* 2007;45:81–5.
6 McGeith IG, Dickson DW, Lowe J *et al.* Diagnosis and management of dementia with Lewy bodies: third report of the Lewy body consortium. *Neurology* 2005; 65:1863–72.
7 Scottish Intercollegiate Guidelines Network. *Management of Patients with Dementia: a national clinical guideline.* Edinburgh: Scottish Intercollegiate Guidelines Network, 2006. www.sign.ac.uk/pdf/sign86.pdf (accessed 4 September 2009).
8 National Institute for Health and Clinical Excellence, Social Care Institute for Excellence. *Dementia: supporting people with dementia and their carers in health and social care.* London: National Institute for Health and Clinical Excellence, 2006. www.nice.org.uk/Guidance/CG42 (accessed 4 September 2009).
9 NHS National Services Scotland. Scottish general practice characteristics as at 30 September 2008. www.isdscotland.org/GPpracs&pops (accessed 4 September 2009).
10 *British National Formulary 57.* London: BMJ Publishing Group and RPS Publishing, 2009.

ETHICAL APPROVAL

This study was considered to be an audit, and as such did not need ethical approval.

PEER REVIEW

Not commissioned; not externally peer reviewed.

CONFLICTS OF INTEREST

None.

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