

NAD
NATIONAL AUDIT OF DEMENTIA



Hospital initiated prescription of psychotropic medication for behavioural and psychological symptoms of dementia

Spotlight audit 2019

Authors

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Partner Organisations

Age UK

Alzheimer's Society

British Geriatrics Society (BGS)

John's Campaign

National Dementia Action Alliance (NDAA)

Royal College of Nursing (RCN)

Royal College of Physicians (RCP)

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- The audit leads, champions, and clinical audit staff for their hard work organising the data collection in their hospitals. (For a list of participating hospitals [see our website](#)).
- All the members of the [Steering Group](#)

Artwork

Cover design features an untitled work by Anita Douch, a person living with dementia. The work was submitted for the recent Art Prize, for the concept "Living Well". All entries can be seen on our [website](#). We would like to thank all entrants for sending us their impressive work and permitting us to display it.

Who should read this report?

- Clinicians, managers and other staff who provide inpatient care to people with dementia in general hospitals in England and Wales
- People with dementia and their families/carers
- People involved in commissioning care – NHS England/NHS Improvement, Welsh Government and Clinical Commissioning Groups
- People who regulate care – including the Care Quality Commission, clinical audit and quality improvement professionals

The National Audit of Dementia (care in general hospitals) is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing, and National Voices. Its aim is to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP holds the contract to commission, manage and develop the National Clinical Audit and Patient Outcomes Programme (NCAPOP), comprising around 40 projects covering care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England/NHS Improvement, the Welsh Government and, with some with some individual projects, other devolved administrations and crown dependencies www.hqip.org.uk/national-programmes.

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Topic

New prescriptions made in hospital of psychotropic medications to people with dementia, as a proportion of all prescriptions of psychotropic medication to people with dementia admitted.

Countries covered:

England

Participation:

50/61 hospitals who confirmed that they had implemented e-prescribing.

Previous reporting

This is a one-off Spotlight module. There are no previous benchmarking results

Alignment with NHS England/ NHS improvement objectives

NHS Long Term Plan Section 1.20 – improving care provided to people with dementia and delirium.

Audit standards – national benchmarking

1. Relevant clinical information including reasons for prescribing should be recorded at the time of prescription and suitable arrangements in place for follow up and review ([General Medical Council \(GMC\) prescribing guidance](#))¹.
2. Before antipsychotics are used for Behavioural and Psychological Symptoms of Dementia, an assessment should check for any underlying causes which should be addressed ([NICE guideline 97](#))².
3. Medication review should be carried out when someone moves between care settings – e.g. is admitted into or discharged from hospital ([NICE guideline NG5, section 1.3](#))³.

Key Findings

1. 17% of people with dementia who were prescribed psychotropic medications had new prescriptions made in hospital/on discharge. All others continued medication taken before admission.
2. An estimated 6% of all inpatients with dementia are given a new prescription during their time in hospital.
3. 57% of new prescriptions had reasons for the prescriptions recorded. The most frequently recorded reasons were agitation and aggression.
4. No evidence of hazardous prescriptions regarding dosages and interactions of psychotropic medications were reported.
5. 80% of new prescriptions during admission were reviewed at discharge.

Recommendation	Underpinning evidence and report reference	Benchmarking standard	Associated NHS payment levers or incentives'
Medical and Nursing Directors should:			
1. Require that all medications newly prescribed in hospital for people with dementia have target symptoms (reasons for prescribing) fully recorded in the patient case notes. The record should include the benefit to the patient and potential risk to themselves and others.	57% new prescriptions made in hospital had target symptoms recorded Results, page 13	1	National Falls Prevention CQUIN – people over 65 should have target symptoms recorded when prescribed antipsychotics or hypnotics/ anxiolytics
2. Ensure that: a) any new prescription of psychotropic medication that is started in hospital is reviewed prior to discharge b) plans for reviewing any new prescription that is continued after discharge are communicated to primary care team with review date and clearly recorded in the discharge summary.	80% new prescriptions made in hospital were reviewed before discharge. Results, page 15	3	
3. Carry out periodic spot audits on prescriptions of antipsychotics and hypnotics/anxiolytics for people with dementia in line with these recommendations with the aim of removing any barriers to improving practice. Alignment with the aims of the Falls Prevention CQUIN (CCG7) may help drive local improvements.	Target symptoms not recorded for 37% prescriptions to patients over 65 Results, page 13		National Falls Prevention CQUIN – people over 65 should have target symptoms recorded when prescribed antipsychotics or hypnotics/ anxiolytics
Prescribing clinicians should:			
4. Ensure that other possible causes of behavioural and psychological symptoms of dementia, such as untreated pain or negative effects of the environment, have been appropriately investigated and managed before any medication is prescribed.	82% new prescriptions for antipsychotics had evidence that underlying causes had been considered before prescription Results, page 14	2	
5. Record target symptoms when initiating a prescription for behavioural and psychological symptoms of dementia.	57% newly made prescriptions had target symptoms recorded Results, page 13	1	

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Introduction

The National Audit of Dementia (NAD) is commissioned by the Healthcare Quality Improvement Partnership (HQIP) on behalf of NHS England/NHS Improvement and the Welsh government and is part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). It is managed by the Royal College of Psychiatrists College Centre for Quality Improvement (CCQI) working in close partnership with professional and service user representatives. The NAD programme looks at the quality of care received by people with dementia in general hospitals, specifically aspects relating to care delivery which are known to impact upon people with dementia while in hospital.

This report is for a spotlight audit carried out using data gathered from the casenotes of people with dementia who had been prescribed psychotropic medications at some point in their hospital admission. We report on the types of medications used to treat behavioural and psychological symptoms of dementia (BPSD) in hospital and what symptoms are most frequently targeted.

Dementia

Dementia is the term used to describe a range of symptoms that can include memory loss, difficulties with thinking, problem solving, language and changes in mood and behaviour. It is caused when the brain is damaged by diseases, such as Alzheimer's disease, or a series of strokes. Symptoms vary extensively between individuals depending on which part of the brain is damaged. People with dementia are known to experience adverse effects resulting from hospital admission, including increased confusion, long lengths of stay and delayed discharge⁴.

Behavioural and Psychological Symptoms of Dementia (BPSD)

BPSD is a collective term used to describe symptoms that often arise as dementia progresses. These can include:

- Delusions (believing things that are not true)
- Hallucinations (seeing or hearing things that aren't there, such as hearing strange voices)
- Agitation or aggressive behaviour (distress, restlessness, extreme irritability or aggression)⁵

These symptoms can be very upsetting for the person with dementia and those caring for them as well as presenting challenges to healthcare professionals providing care and treatment. They may cause a person to refuse care, become very withdrawn, require constant reassurance, or lash out verbally or physically.

NICE guidance specifies that before starting any medication (pharmacological treatment) for distress in people with dementia a structured assessment should be carried out to explore possible causes and address clinical or environmental factors².

Medication used to relieve BPSD

If symptoms are very severe, or if non-pharmacological approaches have not worked, then medication can help to relieve BPSD. All medications have side effects and risks as well as beneficial effects, and it can take time to establish the right medication and dosage for a person's individual combination of symptoms.

Many different types of medications are used for BPSD. The types of medications we have looked at in this spotlight audit are all psychotropic drugs. This definition covers any drug capable of affecting the mind, emotions or behaviour.

Five main classes of medications were examined in this audit:

- Antipsychotics
- Hypnotics/anxiolytics (sleep medications, sedatives and drugs to combat anxiety)
- Antidepressants
- Dementia medications (prescribed to reduce dementia symptoms e.g. donepezil and memantine)
- Anticonvulsants as mood stabilisers (as well as being used for conditions like epilepsy, these drugs may occasionally be used for mood disorders)

Risks and benefits of medication for BPSD

Antipsychotics can be effective for some people with dementia but can have side effects which include severe physical symptoms or worsening of dementia symptoms. Only risperidone is approved for treatment of BPSD, and other drugs may be prescribed "off-label" at the discretion of the doctor⁶. These drugs can help with aggression, distress, anxiety, and psychosis.

Dementia medications, antidepressants and anticonvulsants may also be helpful for BPSD. Dementia medications have been well studied and have minor side effects. Some antidepressants and anticonvulsants are effective for BPSD but are not recommended for this purpose due to their side effects⁷.

Hypnotics and anxiolytics may be used for specific symptoms such as anxiety or restlessness. These have recognised risks such as falls, cognitive impairment, dependence and withdrawal symptoms⁸.

There are a range of other medications that are commonly taken by older people and which can have harmful side effects, particularly when taken in the longer term. These include painkillers, such as non-steroidal anti-inflammatory drugs (NSAIDs) and opiates. This audit was limited to psychotropic drugs and no information about other medications was collected.

Prescription of antipsychotics to people with dementia

Rounds 1 and 2 of the NAD included a short section of questions about prescriptions of antipsychotics to people with dementia in hospital. Round 2 results (2013) showed that fewer people in hospital were being prescribed antipsychotics. This was in line with the findings of other audits. The Prescribing Observatory for Mental Health UK (POMH UK) audited prescriptions for people with dementia in mental health trusts in 2011, 2012 and 2016. The results showed a decrease of 19%⁹.

The National Dementia and Antipsychotic Prescribing Audit 2012¹⁰ found a decrease in the number of people with dementia prescribed antipsychotics in GP practices. These reductions were related to a growing awareness about the risks of antipsychotics in people with dementia and of the need to adopt approaches based on the person's needs (person centred care). The National Dementia Action Alliance's Right Prescription campaign (2011) worked with people with dementia, their carers, GPs, leaders in care homes and pharmacists to ensure that prescribing practices were in line with guidance and frequent reviews were undertaken, and to reduce overprescribing of these medications¹¹.

While these audits show evidence of reduction in the use of antipsychotic medication for BPSD in the UK, recent studies conducted in North America found that reduced antipsychotic prescription had been accompanied by increases in the prescription of other sedating psychotropic medications for people with dementia¹².

Results

Information in this audit

For this audit, hospitals provided information from the casenotes of people with dementia admitted to hospital who had been prescribed any psychotropic medications that may have been given to combat BPSD. The audit collected information on:

- Whether medications were present on admission or were new prescriptions
- If prescriptions made in hospitals had reasons for the prescription recorded and what they were
- Whether prescriptions were reviewed on discharge.

We also collected some further information about new antipsychotic prescriptions, to see if information was available about whether non-pharmacological approaches were attempted before antipsychotics were prescribed. See Appendix A for full methodology.

Sample

This report comprises information about 2702 prescriptions derived from the casenotes of 1575 people with dementia who were discharged from hospital between 1 February and 30 April 2019, and who had at least one prescription of a psychotropic medication. 696 people (44%) had more than one prescription.

Patients in the sample:

- Average age of 83
- 57% (890/1575) were female
- 84% (1330/1575) from a white background
- 80% (1253/1575) spoke English as a first language.
- Most patients had either Alzheimer's disease (40%, 630/1575) or vascular dementia (22%, 344/1575)
- 31% (482/1575) of patients the subtype of dementia was either unspecified or unknown
- 28% (446/1575) of casenotes had another ICD 10 psychiatric diagnosis indicated in the admitting information (see [website](#)).

Patterns of psychotropic prescriptions

People with dementia may already have medication prescribed when they enter hospital which is continued during their admission as well as having new prescriptions made in hospital, and on the point of discharge.

Sequences of prescriptions

87% (2344/2702) of prescriptions were in place on admission and 13% (358/2702) of new prescriptions were made in hospital.

Nearly three quarters of prescriptions (73%, 1962/2702) were in place at the point of admission, continued in hospital and were still in place on discharge (Table 1, sequence A).

Table 1 Prescription sequences throughout admission

Prescription sequence	On admission	In hospital	On discharge	Total prescriptions (n = 2702)
Prescriptions present on admission				
A. Same prescription on admission, in hospital and on discharge	✓	✓	✓	73% (1962)
B. Prescription stopped in hospital and resumed on discharge	✓	x	✓	5% (123)
C. Prescription stopped in hospital	✓	x	x	5% (127)
D. Same prescription on admission and in hospital, stopped on discharge	✓	✓	x	5% (132)
Total				87% (2344)
New prescriptions				
E. New prescription in hospital and continued on discharge	x	✓	✓	6% (150)
F. New prescription in hospital and stopped on discharge	x	✓	x	6% (172)
G. New prescription on discharge	x	x	✓	1% (36)
Total				13% (358)

Prescription regimens

Prescriptions may be for medication that is taken on a regular basis or 'as required' (PRN). The medication class hypnotics/anxiolytics, which includes sedative and anti-anxiety medications, were most likely to be prescribed PRN as shown in Table 2. Antipsychotic medications were less frequently prescribed PRN. PRN is not an appropriate form of prescription for dementia medications and anticonvulsants. There are very few instances of PRN prescription of antidepressants which reflects that this is not the usual method of prescribing these medications.

Table 2 Regular and PRN prescriptions*†

Medication class	Regular	PRN
Antipsychotics	84% (262/311)	20% (61/311)
Hypnotics and anxiolytics	44% (164/373)	60% (225/373)
Antidepressants	99.5% (941/946)	1% (10/946)
Dementia medications	100% (848)	N/A
Anticonvulsants as mood stabilisers	100% (97)	N/A

*Prescriptions that were present on admission and stopped in hospital were excluded from this table (Table 1, Sequence C).

†PRN and regular figures do not add up to 100% as some patients have both regular and PRN prescriptions for the same medication.

Avoidable harm: psychotropic dosages and interactions

The British National Formulary (BNF) gives information on recommended medication dosages and interactions between medications that should be avoided. Dosages for all prescriptions in this report were no higher than the recommended BNF maximum. All potential interactions that should be avoided between medications in the dataset were checked, and none were found.

New prescriptions of psychotropic medication

We estimate that around 6% of all patients with dementia admitted to hospital received a new prescription of psychotropic medication.

This estimate is based on figures provided by hospitals on the total number of casenotes of people with dementia found in Round 4, the most recent national audit period (2018).

38% of hospitals (19/50) that took part in the current spotlight audit gave figures for the number of people with dementia who were discharged from hospital during the core audit period in 2018. These hospitals reported that 1866 (range 34-221) people with dementia were discharged during this period.

Assuming that the number of people with dementia that these hospitals provide care for was similar during these two periods, the proportion of people with dementia prescribed new psychotropic medication is 6% (114/1866). Per hospital this ranges from 1-20% of these patients, with an average of 8% per hospital.

Data collected for this module was for all patients with dementia who had received any prescription of psychotropic medication. Of these patients, 17% (261/1575) were given a new prescription. New prescriptions are all those which were not continuing on from a prescription made before admission to hospital. These prescriptions reflect in-hospital prescribing practice and are the main focus of this report.

Table 3 New psychotropic prescriptions by medication class

Medication class	New prescriptions*
Antipsychotics (n = 311)	27% (84)
Hypnotics and anxiolytics (n = 373)	46% (171)
Antidepressants (n = 946)	6% (55)
Dementia medications (n = 848)	5% (40)
Anticonvulsants as mood stabilisers (n = 97)	8% (8)
Total	14% (358/2575)

*The denominator excludes prescriptions stopped on admission (sequence C in Table 1).

Were reasons for prescriptions recorded?

All prescriptions should have target symptoms recorded as a matter of good clinical practice. 57% (185/322) of new prescriptions had target symptoms recorded, a much higher proportion than prescriptions continued on admission (16%, 389/2416). Target symptoms were only asked about for prescriptions made up to the point of discharge. 36 prescriptions made at the point of discharge are not included in this section.

150 of these new prescriptions were continued on discharge, and of these 53% (80/150) had target symptoms recorded.

Table 4 New prescriptions* with target symptoms recorded

Medication class	New prescriptions with target symptoms recorded
Antipsychotics (n = 75)	69% (52)
Hypnotics and anxiolytics (n = 158)	61% (96)
Antidepressants (n = 48)	50% (24)
Dementia medications (n = 37)	32% (12)
Anticonvulsants as mood stabilisers (n = 4)	25% (1)
Total (n = 322)	57% (185)

*This excludes the 36 new prescriptions made at discharge.

For some groups of patients, guidance highlights the importance of recording target symptoms, but this does not appear to significantly improve results.

Target symptoms were not recorded for:

- 40% (72/182) of prescriptions to patients with delirium noted on or during admission
- 37% (79/213) of prescriptions of either antipsychotics or hypnotics/anxiolytics made to people over 65 (as these medications can increase the risk of falls, this recording is mandated by the Falls Prevention CQUIN, CCG7¹³).

What target symptoms were recorded?

Agitation is the most frequently recorded target symptom for new prescriptions of antipsychotics and hypnotics/anxiolytics followed by aggression. For aggression, agreement between different auditors about what had been recorded was poor, indicating that the information was not clear or difficult to find in the casenotes and/or that the interpretation of aggressive or agitated behaviour is highly subjective. This makes it difficult to comment on whether a prescription aimed at modifying these behaviours is appropriate or not.

Table 5 Target symptoms recorded for new prescriptions

Target symptoms recorded for prescribed new medication*	Antipsychotics (n = 52)	Hypnotics and anxiolytics (n = 96)	Other psychotropic medications† (n = 37)	Total target symptoms (n = 259)
Aggression	39% (20)	26% (25)	32% (12)	22% (57)
Agitation	75% (39)	50% (48)	24% (9)	37% (96)
Depression	–	1% (1)	51% (19)	8% (20)
Known Psychotic illness	–	1% (1)	–	0.4% (1)
New Psychosis	6% (3)	–	3% (1)	2% (4)
Resistance to care	10% (5)	7% (7)	11% (4)	6% (16)
Sleep disturbance	6% (3)	18% (17)	5% (2)	9% (22)
Other	15% (8)	27% (26)	24% (9)	17% (43)

N.B. More than one target symptom may be recorded per prescription.

*The target symptoms in Table 5 are short-form descriptors based on feedback from clinicians about information that would typically be found in notes. They were included in this form in the audit tool to aid hospital auditors and analysis. We do not recommend the use of short form terms which may lack requisite information or be misleading, e.g. "resistance to care" which suggests a deliberate action.

†Other medications include antidepressants, dementia medications and anticonvulsants as mood stabilisers.

New antipsychotic prescriptions and BPSD

Within this audit, we aimed to examine adherence to NICE guidance which states that before any pharmacological treatment is used for aggression or distress in dementia, an assessment should check for any underlying causes which should be addressed. This is particularly stressed for antipsychotics for which the side effects can include increased risk of stroke and death^{14,15}.

To explore this, the audit tool contained a section of questions specifically on any new prescriptions of antipsychotics, which returned only a small amount of information.

Auditors were asked to confirm whether any new prescription of antipsychotic medication was for BPSD. There were 84 new prescriptions, 28 of which were confirmed as definitely for BPSD. Of these 28, 23 (82%) had documented evidence that underlying causes such as pain, poor physical or mental illness, had been considered before prescription.

However, this finding should be interpreted with caution, as the new prescriptions not included above may also have been for BPSD – this is highly likely in those instances where there was a recorded target symptom for agitation (21) or aggression (8). Also, 14 new prescriptions had no target symptoms recorded.

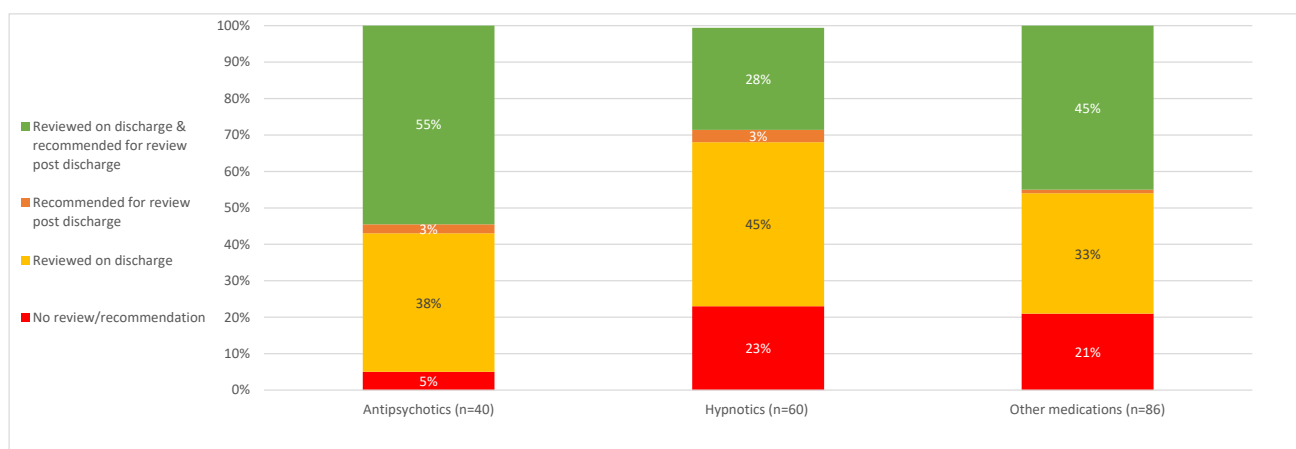
Review of newly prescribed psychotropic medication at discharge

Medicines reconciliation or review should be carried out whenever someone is moved from or to any care setting, including when they are discharged from hospital³.

80% (148/186) of new prescriptions made in hospital/on discharge were reviewed at discharge. 44% were recommended for review post discharge.

For prescriptions that were present on admission and continued throughout, a lower proportion (67%, 1313/1962) were reviewed before discharge.

Figure 1 New prescriptions reviewed on discharge and recommended for review post discharge



Of the 84 new prescriptions for antipsychotics started during the admission, 44 (52%) were stopped before discharge; 17 of 215 prescriptions made to patients prior to their admission and continued in hospital (8%) were stopped on discharge.

A proportion of new prescriptions were not reviewed or recommended for review. We should note that this audit may not have picked up all prescription reviews – e.g. a discharge summary sent to the GP may not have noted where the patient is known to a community mental health team who are expected to carry out the review.

It is important that newly prescribed medications are recommended for review post discharge. When this does not happen, the patient may continue to be prescribed these drugs for much longer than intended or is warranted. When antipsychotic medications are prescribed to people with dementia this should be for the shortest possible time². Hypnotic/anxiolytic medications also carry this recommendation due to their risks and side effects.

Appendix A: Methodology

Audit standards

- Relevant clinical information including reasons for prescribing should be recorded at the time of prescription and suitable arrangements in place for follow up and review¹.
- Before antipsychotics are used for BPSD, an assessment should check for any underlying causes which should be addressed².
- Medication review should be carried out when someone moves between care settings – e.g. is admitted into or discharged from hospital³.

Development and structure of the audit tool

Janet Darlington, Advanced Clinical Pharmacist – Elderly Medicine at St James's University Hospital provided the content of the audit tool and supervised the editing. The audit tool consisted of three sections:

- Section 1. Demographic information about the patient
- Section 2. Patient prescriptions:
 - A – Medications being taken by the patient on admission to hospital
 - B – Medications prescribed to the patient during admission to hospital
 - C – Medications prescribed on discharge
- Section 3. Considerations before prescription of antipsychotic medication

Participation

All hospitals eligible to participate in Round 4 of the NAD were invited to submit data for this spotlight audit. To participate hospitals had to have implemented e-prescribing. 39% (61/155) of hospitals that responded had e-prescribing and were eligible and of these 82% (50/61) submitted data. Electronic systems are currently being rolled out in NHS hospitals in England with the aim of improving patient safety and the quality of communication and care¹⁶. These systems often include safety checks, such as mandatory completion fields. In hospitals with paper records still in place the amount of missing or unclear information may be greater.

Sampling

We asked hospitals to submit data from a minimum of 40 casenotes. This meant that hospitals with larger potential samples could choose to submit a larger proportion of their available casenotes for a more representative sample of their data. To be included in the audit casenotes needed to meet the following eligibility criteria:

- Diagnosis of dementia (using ICD10 coding supplied by the project team)
- Admitted to hospital for 24 hours or longer
- Discharged in February 2019 (where necessary to achieve a good sample size, hospitals could include patients discharged in March and April 2019)
- Prescribed any of the specified medications in the guidance document ([Appendix B](#))

Hospitals taking part in the audit submitted information from 1575 sets of casenotes (Inter Quartile Range = 29–37) following exclusions – see below.

Only 17% of the casenotes submitted contained information about new prescriptions (made in hospital). This ranged from 0–12 casenotes across hospitals, with an average of 5 patients receiving new prescriptions per hospital.

Data handling and analysis

All data were entered using Snap 11 Professional and quantitative data were extracted and analysed in IBM SPSS Statistics 26.

Changes made to the data

During the process of quality assuring the data received, the following changes were made:

- In this report all percentages and numbers have been rounded off to the nearest whole number (0.5 has been rounded up) therefore some percentages in this report may not add up to 100%
- Duplicates identified in casenotes were removed
- Casenotes where medication was not prescribed at any timepoint were deemed ineligible and removed
- 223 patients were receiving end of life care and excluded from this analysis. Such patients may be receiving psychotropic medication for palliative care to relieve or to anticipate distressing symptoms which are common at end of life rather than for BPSD
- The following prescriptions were excluded from the analysis as they did not appear to be for BPSD:
 - Lithium prescriptions (3 patients had 3 prescriptions for lithium)
 - Promethazine prescriptions (3 patients had 3 prescriptions for promethazine)
- 89 prescriptions started before admission for non-psychiatric reasons are included in the overall figures on [pages 14–16](#). This does not affect new prescriptions made in hospital or on discharge.

Confidentiality

No patient identifiable data were collected for this audit. Within this report we considered suppressing small numbers to protect patient confidentiality as outlined in the Office for National Statistics policy¹⁷. After considering this we concluded that individuals cannot be identified in the published data and therefore did not suppress any small numbers in this report.

Inter-rater reliability

The audit asked hospitals to re-audit five casenotes from the submitted sample using a second auditor so that matching casenotes could be compared for reliability. The inter-rater reliability analysis can be found on the NAD [website](#). This analysis found that there was moderate to very good agreement across most questions between auditors (showing questions had been interpreted consistently by auditors).

Interpreting the results

Type of prescription

Prescriptions may be for medication that is taken on a regular basis or 'as required' (PRN). PRN medications may not be taken/administered if the expected symptoms they are targeting do not arise. Where a patient had both a regular and PRN prescription of the same medication, this was counted as one prescription in the analysis. This accounted for 18 patients within the sample.

New prescriptions

This refers to new medication prescribed to the patient during their admission to hospital or at the time of their discharge. For this analysis we excluded prescriptions which were started before people were admitted to hospital and existing prescriptions where the dose was changed following admission to hospital.

Appendix B: Medications found in casenotes audited

Auditors were asked to include all patients (people with dementia) in the audit period with a prescription of any from a list of medications provided (see [guidance document](#)). The table below shows all medications which were found.

Antipsychotics	Hypnotics & Anxiolytics	Antidepressants	Dementia medications	Anticonvulsants as mood stabilisers
Amisulpride	Buspirone hydrochloride	Agomelatine	Donepezil	Carbamazepine
Aripiprazole	Chlordiazepoxide	Amitriptyline	Galantamine	Lamotrigine
Chlorpromazine	*Clobazam	Citalopram	Memantine	Pregabalin
Clozapine	Clonazepam	Clomipramine	Rivastigmine	Valproate
*Droperidol	Diazepam	Dosulepin		
Flupentixol	Loprazolam	Duloxetine		
Haloperidol	Lorazepam	Escitalopram		
Levomepromazine	Melatonin	Fluoxetine		
Olanzapine	Midazolam	Imipramine		
*Prochlorperazine	Nitrazepam	Lofepramine		
Promazine	Temazepam	Mirtazapine		
Quetiapine	Zolpidem	Nortriptyline		
Risperidone	Zopiclone	Paroxetine		
Sulpiride		Sertraline		
Zuclopenthixol		Trazodone		
		Venlafaxine		
		Vortioxetine		

*These medications were not included in original list of psychotropic medications.

Glossary

A

Admission: The point at which a person enters hospital as a patient.

Antidepressants: Antidepressants are a type of medicine used to treat clinical depression. They can also be used to treat a number of other conditions, including obsessive compulsive disorder, generalised anxiety disorder, post-traumatic stress disorder, and chronic pain.

Anticonvulsants: Anticonvulsant drugs are a group of drugs normally used to treat epilepsy which are also useful in treating pain. Anticonvulsants work by changing the way nerves send messages to your brain.

Antipsychotics: Antipsychotics are psychiatric drugs which are used to treat types of mental health problems whose symptoms include psychotic experiences such as schizophrenia, some forms of bipolar disorder, severe depression, severe anxiety, and agitation and psychotic experiences in dementia. Antipsychotic drugs are effective in reducing and controlling many symptoms, including delusions and hallucinations, anxiety, serious agitation, confusion, violent behaviour, and mania.

Alzheimer's Society: Alzheimer's Society is a United Kingdom care and research charity for people with dementia and their carers.

Anxiolytics: Anxiolytics are a category of drugs used to prevent anxiety and treat anxiety related to several anxiety disorders.

Anxiolytics work by targeting key chemical messengers in the brain which is thought to help decrease abnormal excitability.

Audit: Clinical audit is a quality improvement process. It seeks to improve patient care and outcomes through a systematic review of care against specific standards or criteria. The results should act as a stimulus to implement improvements in the delivery of treatment and care.

Audit standard: A specific criterion against which current practice in a service is measured. Standards are often developed from recognised, published guidelines for provision of treatment and care.

B

Behavioural and psychological symptoms of dementia (BPSD): Behavioural and psychological symptoms of dementia include agitation, depression, apathy, repetitive questioning, psychosis, aggression, sleep problems, wandering, and a change in behaviour. One or more of these symptoms will affect nearly all people with dementia over the course of their illness. These symptoms are among the most complex and stressful, leading to a myriad of poor patient health outcomes, healthcare problems, and income loss for family care givers.

British National Formulary (BNF): A Pharmaceutical reference book that contains information and advice on prescribing and pharmacology, as well as facts and details about many medicines available in the U.K.

C

Casenotes: A written account of a patient's examination and treatment that includes the patient's medical history and complaints, the results of diagnostic tests and procedures, medications and therapeutic procedures.

Cognitive impairment: Cognitive impairment presents as a state of confusion, loss of memory or attentiveness, trouble understanding or making sense, difficulty recognising people, places or things, or changes to mood.

D

Delirium: A common clinical syndrome characterised by disturbed consciousness, cognitive function or perception, which has an acute onset and fluctuating course. It can be difficult to distinguish between delirium and dementia and some people may have both conditions.

Dementia: A condition in which there is a gradual loss of brain function. The main symptoms are usually loss of memory, confusion, problems with speech and understanding, changes in personality and behaviour and an increased reliance on others for activities of daily living.

Dementia medication: Medication which can ease symptoms associated with dementia or slow down their progression. These drugs do not slow down or stop the progression of the underlying disease in the brain.

Discharge: The point at which a person leaves hospital as a patient.

Dosage: The size or frequency of a dose of a medicine or drug.

G

General Medical Council (GMC): A public body that maintains the official register of medical practitioners within the United Kingdom.

H

Hypnotics: Hypnotics are a class of drug used in the management of insomnia and anxiety disorders. These drugs can have adverse effects on the elderly and frail, such as higher risk of falls and confusion.

I

Inter-rater reliability: The extent to which two or more raters (or observers, coders, examiners) agree. It addresses the issue of consistency of the implementation of a rating system.

M

Medication class: A set of medications that have similar chemical structures, the same mechanism of action, a related mode of action, and/or are used to treat the same disease.

N

National Dementia Action Alliance: National Dementia Action Alliance brings together leading organisations across England committed to transforming health and social care outcomes for people affected by dementia.

NICE (National Institute for Health and Clinical Excellence): An independent organisation responsible for providing national guidance on promoting good health and preventing and treating ill health.

NICE guideline: Guidelines on the treatment and care of people with a specific disease or condition in the NHS.

Non-pharmacological approaches: Management of certain behavioural and psychological symptoms without using drugs. Many behavioural and psychological symptoms are signs of distress or an attempt to communicate an unmet need, such as being in pain or feeling threatened. A non-pharmacological approach works out what the unmet need is and how it can be addressed by looking at the individual's personality, history, and likes and dislikes.

P

PRN: An abbreviation of 'Pro Re Nata' and used in medical terms for 'when necessary' or 'as needed'.

Psychotropic medication: Psychiatric medications used to treat mental health disorders and other emotional and psychological issues. Psychotropic medications adjust levels of different chemicals in the brain which impact a person's behaviour, mood and state of consciousness.

T

Target symptoms: The symptoms which a prescription of medication is aimed at.

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