Audit of Psychotropic Medication Prescribing Practices for Patients with an ICD-10 Diagnosis of Dementia During Admission to Jersey General Hospital: February 2022 to February 2023

Dr , Dr and Dr

Acknowledgements

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Introduction

A Spotlight Audit on Psychotropic Medication in Dementia Care commissioned by the Royal College of Psychiatrists was published in 2019 [1]. This audited prescribing practices for inpatients that had a diagnosis of dementia. The audit was commissioned in response to growing concerns about the use of psychotropic medications within hospital settings, and specifically investigates the prescribing patterns of psychotropic medications administered to dementia patients. The audit's objective was to review the prescribing practices in Jersey General Hospital, hereafter referred to as JGH and compare these to the findings of the UK audit. The intended outcome was to review the management of behavioural and psychological symptoms in dementia, which significantly influence the hospital care experience of this vulnerable population.

National audits show a consistent decrease in antipsychotic prescriptions for dementia patients in hospitals and GP practices, supported by findings from the National Audit of Dementia and Prescribing observatory for mental health UK audits, which reported a 19% reduction [2]. This trend is linked to greater awareness of the risks and a shift towards person-centred care, reinforced by the National Dementia Action Alliance's "Right Prescription" campaign [3]. However, recent North American studies indicate that while antipsychotic prescriptions have decreased, there has been an increase in the use of other sedating psychotropic medications for dementia patients [4].

This Spotlight audit focuses on usage of psychotropic drugs, these medications influence the mind, emotions, or behaviour. Psychotropic medications are often prescribed to patients with dementia to manage behavioural and psychological symptoms associated with the disease. Behavioural and psychological symptoms of dementia refer to symptoms that often occur as dementia progresses, including:

1. **Delusions:** Persistent false beliefs
2. **Hallucinations:** Sensing things that aren't present, such as hearing voices.
3. **Agitation or Aggressive Behaviour:** Manifesting as distress, restlessness, or aggression.

These symptoms are distressing for both the individual with dementia and their caregivers, complicating care and treatment. Before using pharmacological interventions, NICE guidelines recommend a detailed assessment to explore potential causes and manage contributing clinical or environmental factors [5]. If non-pharmacological methods are ineffective at relieving symptoms and they are severe, medication may be necessary to alleviate these distressing symptoms. However, all medications come with potential side effects and benefits, and finding the appropriate type and dosage can be challenging. We focused the audit on five main classes of medications, aligning with the medications reviewed in the Spotlight audit [1]:

1. **Antipsychotics**
2. **Hypnotics and anxiolytics,** for example sleep medication and sedatives.
3. **Antidepressants**
4. **Dementia medications,** for example Donepezil or Memantine.

5. **Anticonvulsants used as mood stabilisers**

All the above medications can be used to manage the symptoms described above. Antipsychotics can be effective for managing behavioural and psychological symptoms of dementia in some patients but can cause severe side effects, including physical symptoms or exacerbation of dementia symptoms [6]. Only risperidone is officially approved by NICE for behavioural and psychological symptoms of dementia, with other antipsychotics being prescribed off-label as deemed appropriate by physicians [6]. These drugs can address aggression, distress, anxiety, and psychosis. Dementia medications are generally well-researched with minor side effects and can be beneficial for behavioural and psychological symptoms of dementia [1]. Certain antidepressants and anticonvulsants may also be effective but are not typically recommended due to their side effects. Hypnotics and anxiolytics are used for symptoms like anxiety or restlessness but carry risks of falls, cognitive impairment, and dependence [1, 7]. This audit focuses solely on psychotropic drugs, without covering other common medications in older populations, such as NSAIDs and opiates, which can also have detrimental long-term effects.

Jersey is the largest of the Channel Islands and has a population of 103,267 as of the 2021 Census [8]. Jersey has only one hospital, JGH which has 267 beds. This audit aimed to review prescription practices in JGH and allow comparison to Spotlight audit data.

The aim of this audit is to evaluate the prescribing practices of psychotropic medications for inpatients at JGH and compare them with the standards of the Spotlight Audit. To achieve this aim the audit will concentrate on the following objectives:

1. **Obtain data**
2. **Assess patient demographics**
3. **Compare prescribing practices with spotlight audit**
4. **Review the communication with community services**
5. **Provide recommendations, if appropriate**

Method

This audit was commissioned by the Dementia Steering Group to assess the prescription of psychotropic medications in patients with dementia at JGH. The audit was designed to allow comparisons with the Spotlight Audit on Psychotropic Medication in Dementia Care conducted by the Royal College of Psychiatrists, while tailoring the approach to the Jersey healthcare system.

The audit tool was developed by a multidisciplinary team consisting of one public health consultant and one medical doctor. Although the audit tool from the Royal College of Psychiatrists was requested, it was deemed unsuitable for use in this audit. Therefore, a bespoke audit tool was created that follow a similar structure to the Royal College's tool. The data collection sheet was designed to ensure comparability with the larger multi-centre study while adapting to the specific needs of the Jersey patient population.
The development process included two separate meetings for validation—one with a psychiatry consultant and one with a pharmacist, both of whom had clinical roles related to inpatient dementia care. Prior to the meetings, both validators reviewed the Spotlight Audit report. They provided feedback on the tool's relevance and appropriateness for Jersey's healthcare setting, ensuring that it was comprehensive and tailored to the local demographic.

The study population consisted of patients with an ICD10 diagnosis of dementia, in accordance with the classifications used in the Spotlight Audit. The spotlight audit had a marginally different range of ICD10 diagnoses, below are the diagnoses used in this audit:

- F00 Dementia in Alzheimer's disease
- F01 Vascular dementia
- F02 Dementia in other diseases classified elsewhere
- F03 Unspecified dementia
- F04 Organic amnesic syndrome, not induced by alcohol and other psychoactive substances
- G31 Circumscribed brain atrophy
- G30 Alzheimers second code
- I67 Progressive vascular leukoencephalopathy

The audit focused on inpatients admitted between February 2022 and February 2023. From this population, an initial randomized sample of 100 patients was selected for review. The randomized selection was confined to inpatient admissions during the specified timeframe, excluding day surgery unit admissions and acute emergency care day cases, which did not meet the inclusion criteria for the audit. Following this initial selection, a further 50 case notes were reviewed to compensate for exclusions due to patients not meeting the criteria for the audit. Randomized sampling was again employed for this additional cohort.

Before full-scale data collection commenced, a pilot was conducted to test the effectiveness of the audit tool. Following a successful review of the pilot results, data collection began. Two independent auditors collected the data using a shared Excel spreadsheet. To ensure standardization in data collection and accuracy across reviewers, both auditors initially

collected data on the same five patients and then cross-compared their findings. This comparison was repeated after half of the records had been collected. No discrepancies were found between the auditors, confirming the consistency of data collection.

All data were recorded and analysed using Microsoft Excel. Descriptive statistics were applied to the collected data to identify trends and patterns in the prescription of psychotropic medications for patients with dementia. Comparative analysis was performed to evaluate the results in the context of the Spotlight Audit findings.

Data

This report comprises of 157 prescriptions from 96 case notes of patients with a documented ICD10 diagnosis of dementia. Of the 96 case notes four had no psychotropic medications prescribed. The remaining 92 case notes had one or more psychotropic medication prescriptions associated with their admission.

Audit population demographics

Figure 1 is a population pyramid illustrating the age and gender distribution of the patients in this audit. The mean age was 84 years, with the oldest patient being [redacted] and the youngest [redacted]. The gender distribution was nearly balanced, with 49% of the patients being female. The Spotlight Audit on Psychotropic Medication in Dementia Care reported a very similar average age of 83 and a slightly higher proportion of female patients at 57%. Despite these minor differences, the populations in both audits are broadly similar in terms of age and gender distribution, allowing for meaningful comparisons between the two datasets.

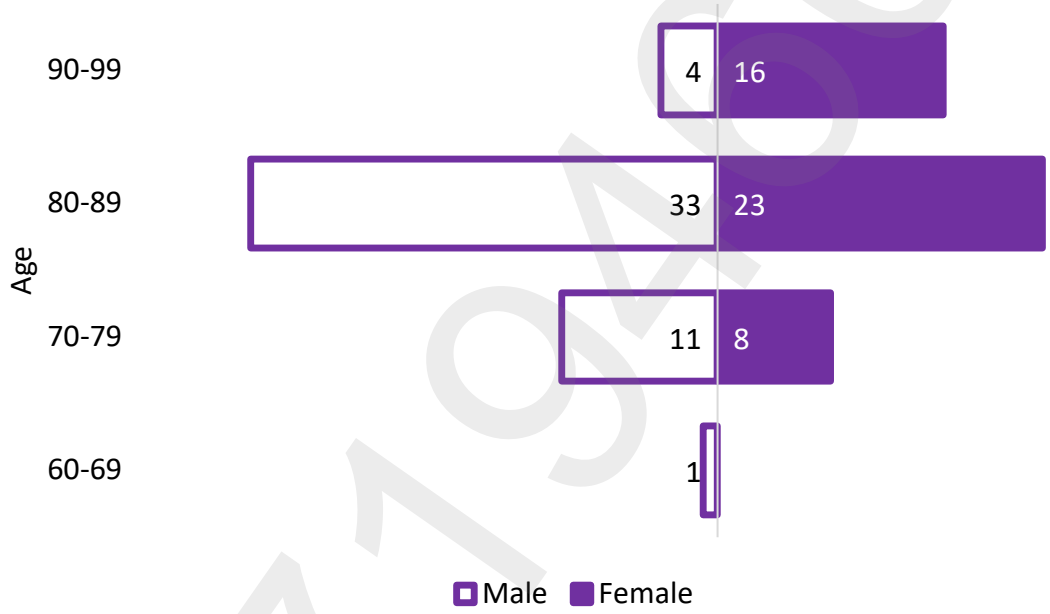

Figure 1. Age and sex of audit population

Ethnicity

The ethnicity of the patients in this audit is shown in Figure 2. Of the patients reviewed, 82% had a white background, with 49% specifically identified as White British. Ethnicity was not documented in 18% of cases, likely due to incomplete or poor record-keeping. Additionally, we were unable to collect accurate data on the languages spoken by patients due to similar issues with documentation.

According to the 2021 Jersey Census, 44% of the population described themselves as White Jersey and 30% as White British, which is comparable to the data from this audit [8]. However, the Census also recorded 9.4% of the population as White Portuguese, a figure

that was not reflected in this audit, likely due to incomplete documentation. The data showed that only 24% identified as white Jersey which is significantly less than reported in the consensus, however this is likely be due to inconsistencies of reporting data in clinical notes.

The Spotlight Audit had similar spread of ethnic backgrounds with 84% of its population were from a white background, with 80% speaking English as their first language [1].

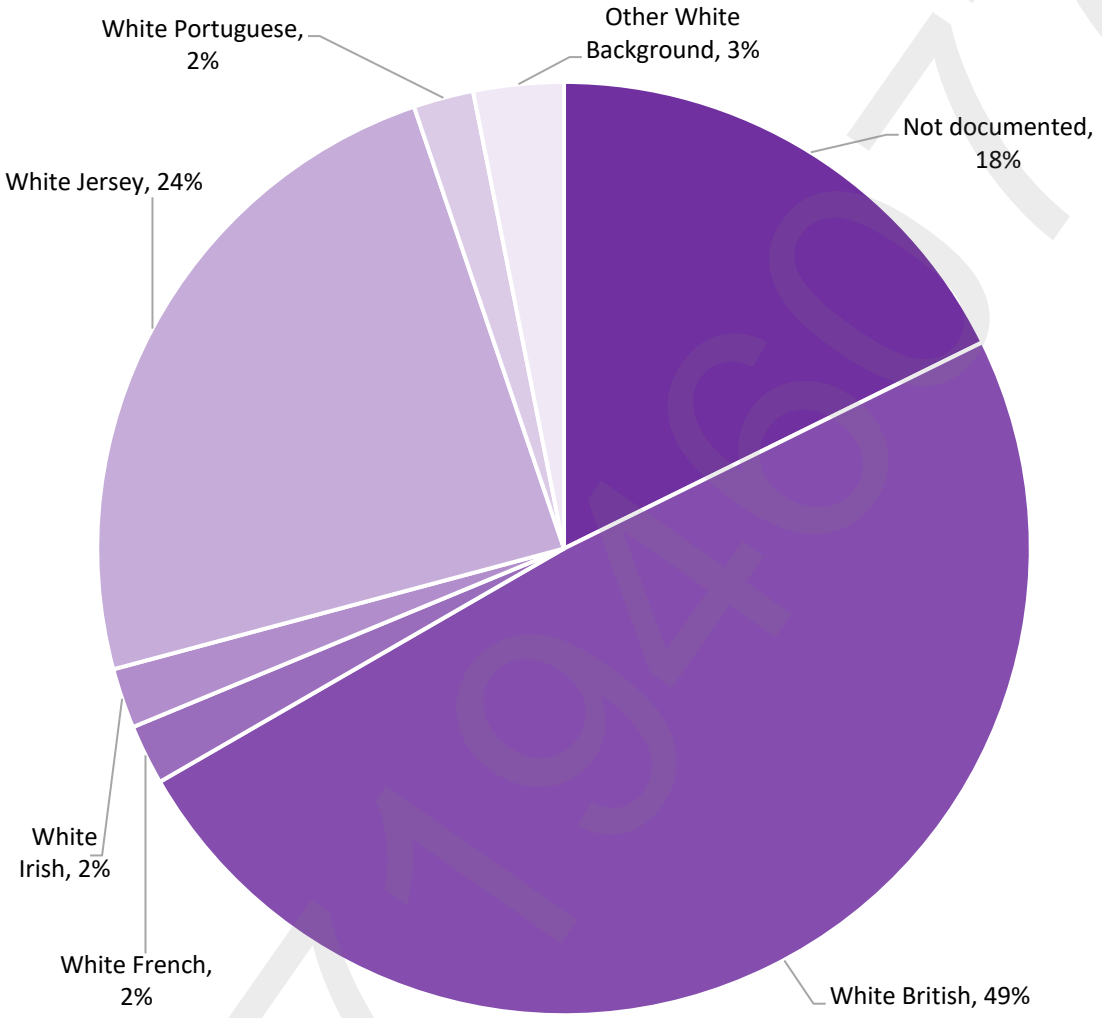

Figure 2. Ethnicity of audit population

Reason for Admission

The reason for admission is shown in Table 1. Prescribing patterns were recorded across a variety of different inpatient admission reasons. A respiratory cause was the most common, accounting for 26% of admissions, followed by 15% due to falls. Admission reasons that occurred in fewer than three patients, such as hepatology or stroke cases, were grouped under "Other".

Table 1. Reason for hospital admission

Reason for admission	Number of patients
Respiratory	25
Other	15
Fall	14
Urinary	10
Gastric	8
Cardiac	7
Fracture	
Brain	
Endocrine	
Impaired consciousness	
Surgical	

Dementia Diagnosis

Figure 3 shows the percentages of ICD10 dementia diagnoses for patients in this audit. Among the patients, 42% had a diagnosis of Alzheimer's disease, and 38% were recorded as having unspecified dementia.

In comparison, the Spotlight Audit found that most patients had either Alzheimer's disease, with 40%, or vascular dementia, with 22%. The Spotlight audit also had a similar proportion of patients classified with unspecified dementia, at 31%. While this population had a similar percentage of patients with Alzheimer's disease, the proportion with vascular dementia is lower.

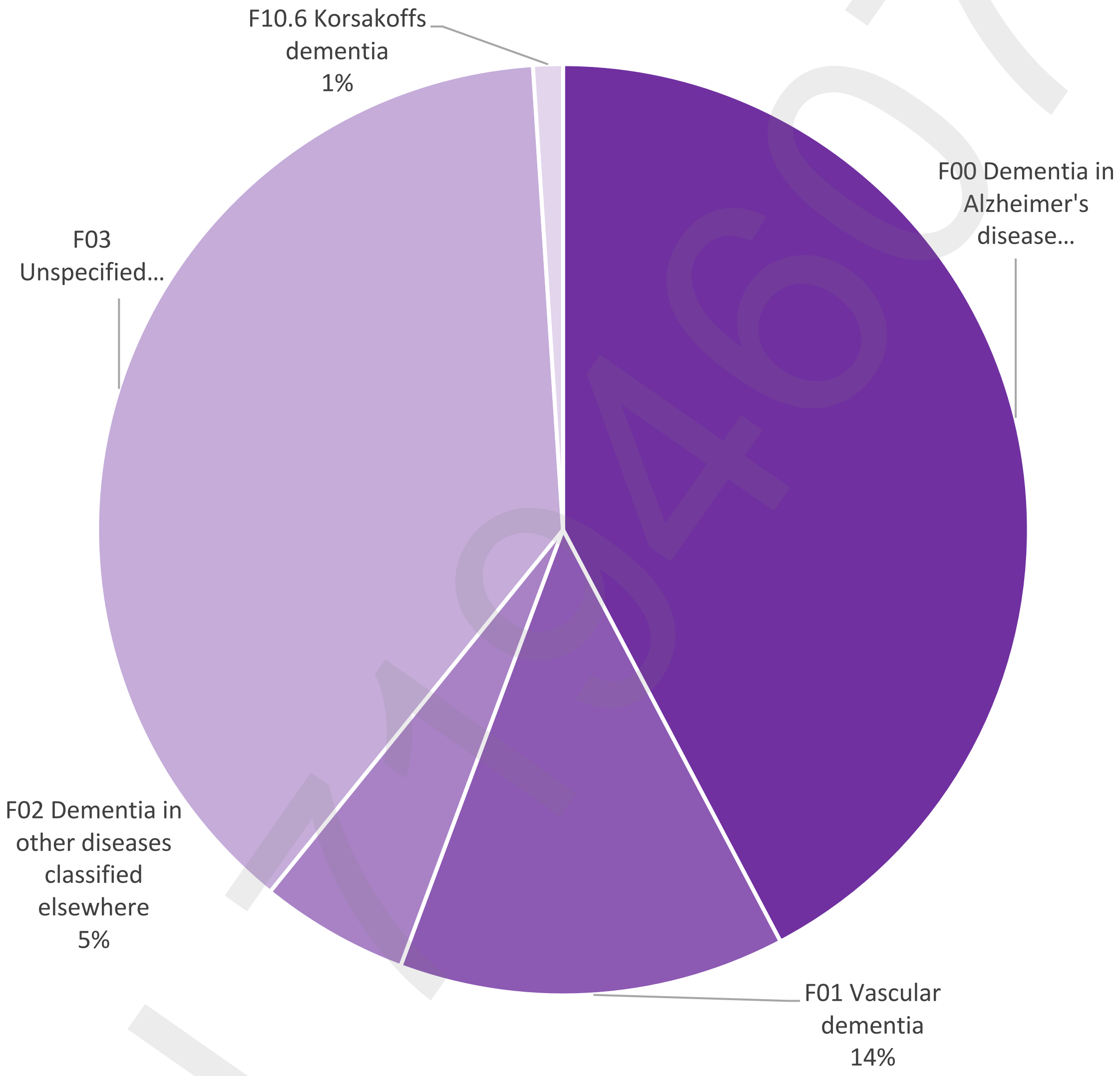

Figure 3. Dementia classification of audit population

Residence Prior to Admission

Figure 4 shows the distribution of where patients resided prior to admission. In this audit, 43% of patients were admitted from their own home. Additionally, 36% of patients were admitted from nursing homes, and 16% came from residential homes.

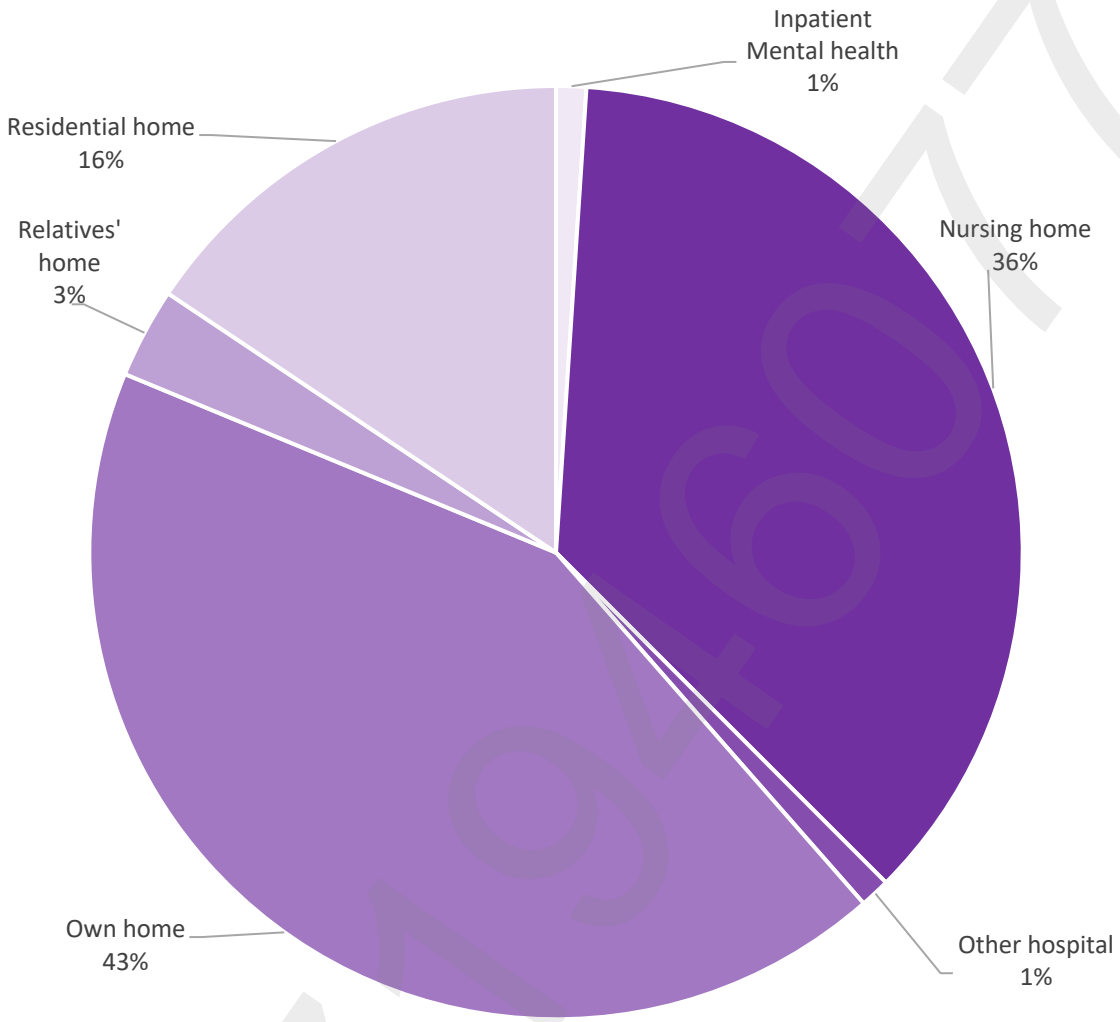

Figure 4. Patients' residence prior to hospital admission

Length of Admission

Figure 5 shows the length of patient admissions. In this audit, 55% of admissions lasted less than seven days, while 71% of patients were discharged within 14 days of admission. The mean length of stay was 13 days, with the longest admission being 121 days.

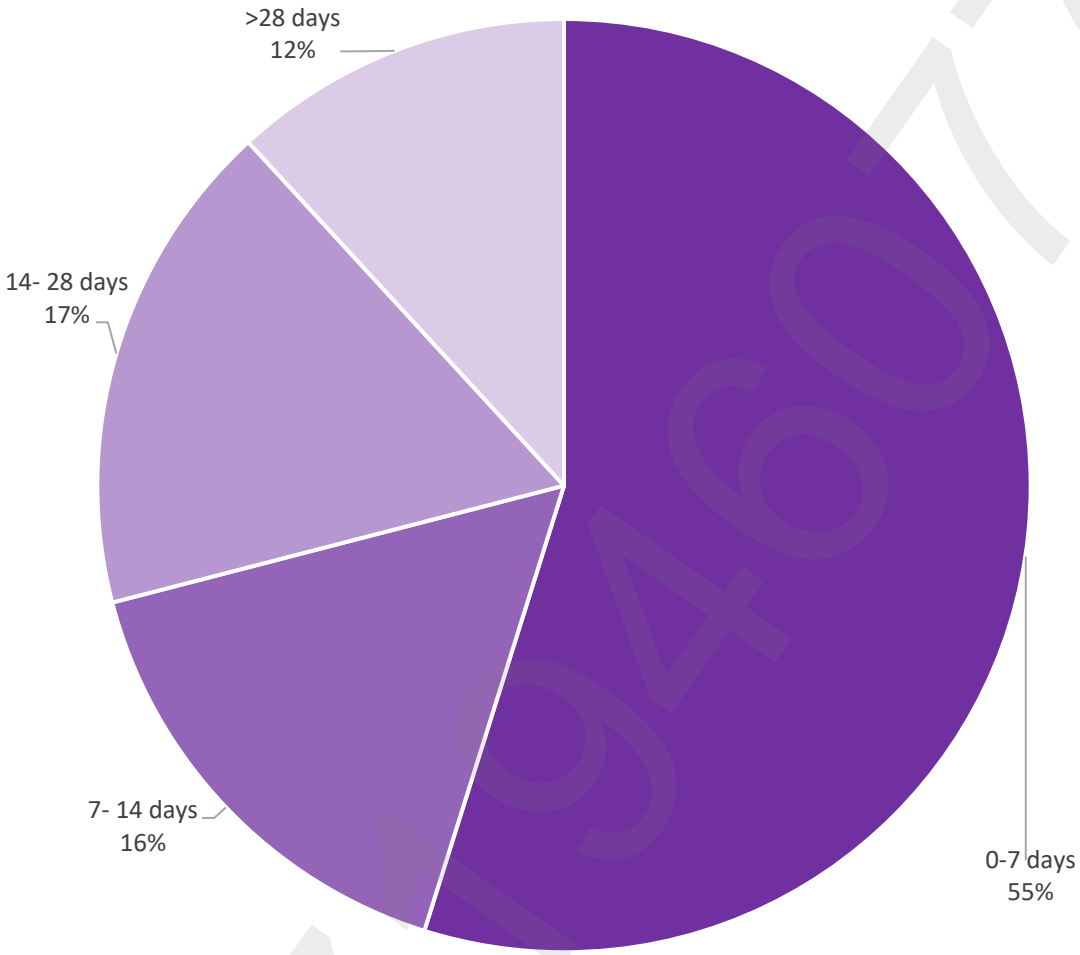

Figure 5. Length of hospital admission

Discharge

Figure 6 shows the discharge destinations of the patients following admission. In this audit, 41% of patients were discharged to a nursing home, 4% passed away during their admission, and 2% were transferred to another hospital. Of those admitted from home, 78% were discharged back home after treatment. For the remaining quarter who were unable to return home, it is likely that increased care needs, either present at the time of admission or resulting from their acute condition, prevented their discharge home.

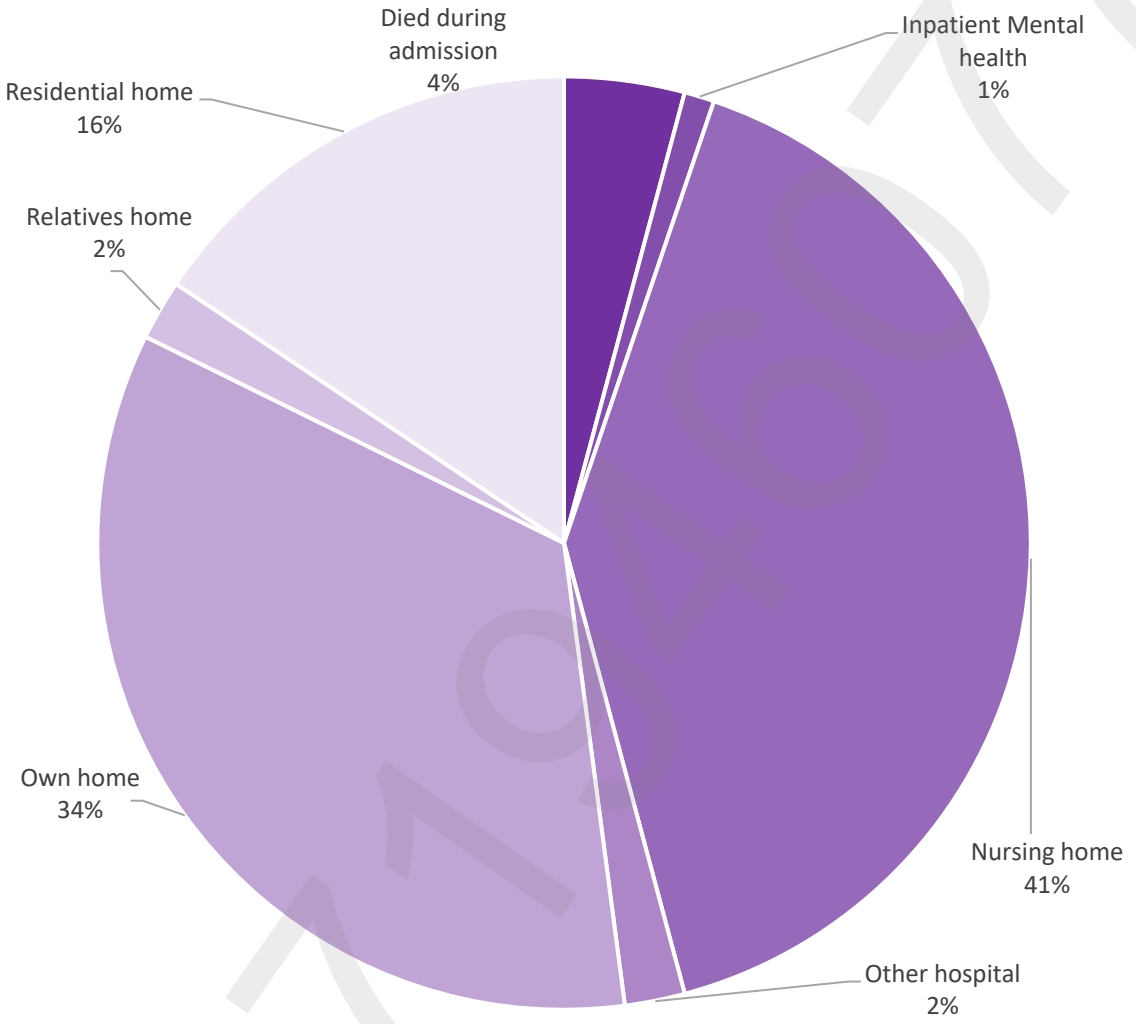

Figure 6. Discharge destination following hospital admission

Prescription

The Spotlight Audit revealed that 87% of prescriptions were already in place when patients were admitted to hospital, with 13% being prescribed during the admission [1]. Additionally, 73% of these prescriptions were maintained from admission through to discharge.

In this audit, 77% of prescriptions had been started prior to admission, with 23% being prescribed during the hospital stay. Of the medications initiated prior to admission, 86% remained unchanged at discharge, a higher percentage compared to the 73% in the Spotlight Audit [1]. Only 14% of medications started in the community were altered during the hospital stay. For medications started in the hospital, 58% were continued at discharge, compared to 42% in the Spotlight Audit [1]. Meanwhile, 48% of medications started during admission were discontinued before discharge, compared to 42% in the Spotlight Audit.

These findings suggest that many medications were left unchanged, likely because they are long-term treatments for managing dementia symptoms. Clinicians may avoid altering these medications unless there is concern, such as the potential for psychotropic drugs contributing to delirium. Long-term prescriptions, typically made by mental health teams or general practitioners familiar with the patient, are often best adjusted once the patient is back in their home environment, where changes can be closely monitored.

Table 2. Sequence of prescribing in audit population

Prescription	On admission	In hospital	On discharge	Total prescriptions (n=157)	Percentage
Prescription on admission same as discharge	Yes	Yes	Yes	104	86%
Prescription on admission but discontinued in hospital	Yes	No	No	12	10%
Prescription on admission but frequency changed during admission	Yes	Yes	Yes	5	4%
Total				**121**	
Medication started in hospital then discontinued	No	Yes	No	15	42%
Medication started in hospital and continued at discharge	No	Yes	Yes	21	58%
Total				**36**	

Prescription Regimes

Both this audit and the Spotlight Audit examined regular and "as required" (PRN) medications. Hypnotics and anxiolytics, which include sedatives and anti-anxiety medications, were most commonly prescribed on a PRN basis in the Spotlight Audit [1]. This audit showed very similar prescribing practice between both audits, however JGH has a slightly higher proportion of hypnotics/anxiolytics being used on a regular basis. Medications that were part of end-of-life pathways were excluded from this data set. Notably the Spotlight Audit data do not add up to 100% which is quoted in the write up as being a result of patients being prescribed both regular and PRN [1].

Antipsychotic medications were less frequently prescribed on a PRN basis in both audits. The Spotlight Audit also highlighted that dementia medications and anticonvulsants are not suitable for PRN prescriptions, a standard that was met in the prescribing practices at JGH [1]. Antidepressant medications are rarely prescribed PRN, as shown in both audits. The use of antidepressants as PRN was limited to amitriptyline, which was used for its pain relief properties, a licensed use of the drug.

Table 3 shows the distribution of medication use between both audits, broken down by PRN/regular prescriptions and medication type.

Table 3. Prescription type (regular/PRN)

Medication	Spotlight Audit Regular	JGH Regular	Spotlight Audit PRN	JGH PRN
Antipsychotics	84% (262/311)	75% (21/28)	20% (61/311)	25% (7/28)
Hypnotics/anxiolytics	44% (164/373)	58% (30/52)	60% (225/373)	42% (22/52)
Antidepressants	99.5% (941/946)	87% (33/38)	1% (10/946)	13% (1/38)
Dementia medication	100% (848)	100% (31/31)	N/A	N/A
Anticonvulsants as mood stabiliser	100% (97)	100% (6/6)	N/A	N/A

New Medications Started

Of the medications that were started by clinicians in the hospital the most common was hypnotics and anxiolytics with 42% of prescriptions. This was followed closely by medications prescribed in anticipation of end of life. Similarly the Spotlight audit found that hypnotics and anxiolytics were the most common new medication prescribed accounting for 46% of new medication [1].

Table 4. Medication changed in hospital

Medication	Number	Percentage
Hypnotics/anxiolytics		42%
End of life medication		36%
Antidepressants		14%
Antipsychotics		3%
Dementia medication		3%
Anticonvulsant as mood stabiliser		3%
Total		

Table 5 provides a breakdown of medications prescribed in the hospital by clinicians. Lorazepam and zopiclone were the most frequently prescribed, accounting for 30% and 20% of new medications, respectively. End-of-life medications were excluded from Table 5, as they are not prescribed for the treatment of dementia symptoms.

Table 5. Breakdown of medication started in hospital

Medication	Number	Percentage
Hypnotics/anxiolytics, Lorazepam		30%
Hypnotics/anxiolytics, Zopiclone		22%
Antidepressants, Mirtazapine		17%
Anticonvulsants as mood stabilisers, Pregabalin		4%
Antidepressants, Amitriptyline		4%
Antipsychotics, Quetiapine		4%
Dementia medication, Memantine		4%
Hypnotics/anxiolytics, Diazepam		4%
Hypnotics/anxiolytics, Loprazolam		4%
Hypnotics/anxiolytics, Melatonin		4%
Total		

The focus of this report is on new medications started in the hospital, with an emphasis on reviewing the effectiveness of communication with patients and families regarding the potential side effects and risks of starting psychotropic medications. The Spotlight Audit highlights that good clinical practice requires the recording of target symptoms when initiating a new medication [1]. This audit showed medications prescribed in anticipation of end-of-life care were generally well documented, likely due to family discussions or palliative care reviews. However, for psychotropic medications prescribed for non-end-of-life symptoms, target symptoms were documented in only 31% of prescriptions. The most common reasons for prescribing new psychotropic medication were anxiety and agitation.

Medications Stopped

The review of medications discontinued during hospital admission found that mirtazapine was the most commonly discontinued medication. Of the medications discontinued, all listed confusion as a known side effect in the British National Formulary, with the majority identifying confusion as a common side effect. It is reasonable to assume that these medications were discontinued due to concerns about worsening confusion in patients with dementia.

Table 6. Medication discontinued in hospital

Medication	Number
Antidepressants, Mirtazapine	
Antidepressants, Sertraline	
Dementia medication, Memantine	
Anticonvulsants as mood stabilisers, Pregabalin	
Antipsychotics, Quetiapine	
Hypnotics/anxiolytics, Lorazepam	
Hypnotics/anxiolytics, Zolpidem	
Total	**12**

Communication of Changes to Medication

When changes to medication are made during a hospital admission, it is crucial that these changes are communicated to the community teams involved in the ongoing care of the patient [2]. Additionally, it is important that these medications are reviewed after discharge to assess potential side effects and determine if continued use is necessary. In this audit, medication changes were documented in the discharge letter for only 10% of discharges. Furthermore, only 13% of patients had evidence of follow-up with mental health services after discharge.

The low follow-up rate is likely due to the fact that many admissions were for reasons unrelated to the patients' dementia symptoms. Not all patients with dementia who are admitted to the hospital require follow-up with mental health services upon discharge. However, poor communication of medication changes can be problematic, as community services, often responsible for initiating these medications, may be unaware of the reasons for their discontinuation. This lack of clarity can complicate the selection of appropriate medications for managing dementia symptoms if the rationale for stopping the previous medication is not clearly communicated.

Outcomes

This audit successfully achieved its aim of evaluating the prescribing practices of psychotropic medications for inpatients at JGH and comparing them with the standards set by the Spotlight Audit.

Comprehensive data was obtained on psychotropic medication prescribing patterns in JGH. The audit revealed that 77% of psychotropic prescriptions were in place prior to hospital admission, while 23% were newly prescribed during the hospital stay. These figures closely mirror those of the Spotlight Audit, however JGH had a slightly higher proportion of new prescriptions.

The demographic profile of the patients in this audit, particularly the age and gender distribution, was similar to that of the Spotlight Audit and is representative of the population of Jersey as seen in the Census. The average age of patients and the proportion of female patients were consistent across both audits.

The audit revealed prescribing patterns similar to the Spotlight Audit, with hypnotics and anxiolytics being common choices. The two most common new medications prescribed were lorazepam and zopiclone. Whilst lorazepam is often used for agitation or aggression, zopiclone is only licenced for treatment of insomnia. Zopiclone is also associated with drowsiness and falls secondary to this. It has previously been found in other reviews that zopiclone is frequently used in JGH.

The documentation of medications started in anticipation of end-of-life care was thorough in the patients reviewed. This is likely due to the robust documentation processes surrounding end-of-life decisions and the involvement of specialist teams on the ward, such as palliative care. However, the documentation of other psychotropic medications was inadequate, with only 31% of new medications having the target symptom recorded. Additionally, there was limited evidence of discussions with patients or relatives regarding the risks or potential side effects of these medications. Best practice dictates that these conversations should occur, whenever possible, before initiating new psychotropic treatments. Especially in a population of patients with dementia who are highly likely to have a nominated lasting power of attorney for health, who should be involved in decision making around changes in care.

Clear communication about medication changes in discharge letters is crucial, especially for community teams managing ongoing care. Knowing the reasons medications have been discontinued helps prevent errors and ensures continuity of care. However, a key concern identified in this audit was the low rate of such communication. Only 10% of discharge letters mentioned changes in psychotropic medications, falling short of best practice. Medications prescribed for end-of-life care were generally well documented, however only 31% of new psychotropic prescriptions included clear documentation of the target symptoms.

Communication with community services was a key challenge identified in this audit. The low rate of documented medication changes in discharge letters highlights a need for

improvement. Without clear communication, community healthcare providers, who often continue managing long-term psychotropic prescriptions, may struggle to understand the rationale for medication changes, potentially compromising patient care. Furthermore, only 13% of patients had documented follow-up with mental health services, suggesting a gap in post-discharge care for patients with dementia.

Recommendations

The audit findings highlight several areas for improvement in the prescribing practices within JGH. These recommendations are designed to enhance patient safety and improve the overall efficiency of medication management. The implementation of these changes is intended to elevate care standards and enhance adherence to best practice guidelines, ensuring alignment with best practice guidelines and continuous improvement of patient care. The following recommendations are based on the data analysed and current best practices in medication prescribing:

1. Implement a guidance-informed training programme for clinical staff focusing on the appropriate use, benefits, and potential side effects of commonly prescribed psychotropic medications in dementia care.
2. Develop and implement an improved policy that outlines clear guidelines for consulting on and prescribing psychotropic medications. This policy should include specific protocols for communicating any changes in medication to primary care teams to ensure continuity of care.
3. Consider changes within the electronic prescribing system to ensure it captures critical information, such as the target symptoms for which psychotropic medications are prescribed and the reasons for discontinuation of these medications.
4. Improve documentation of patients' ethnicity on hospital system.
5. Re-audit in twelve months to assess trends and evaluate the impact of these recommendations, especially in light of the transition to electronic documentation.

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