

Inpatient psychiatric care for patients with dementia at four sites in the United Kingdom

1 | INTRODUCTION

Psychiatric hospital beds for people with dementia are a limited resource. The number of people with dementia requiring inpatient psychiatric care is expected to increase as the population ages, but there is a striking lack of data informing these services.^{1,2} We found almost no mention of inpatient mental health admissions in UK dementia policy or guidance. Previous literature suggests the main reasons for admission are neuropsychiatric symptoms which pose a risk of harm.³ There is frequently a resistance to accepting care, tight legal frameworks which govern treatment and high levels of physical and psychiatric morbidity. The majority of published data is from audits of single wards or localities which means variability between units is unknown.^{4,5} Our aim was to describe the clinical characteristics of patients admitted to inpatient dementia units, to establish their journey to and from the unit and describe workforce and clinical practice.

2 | METHODS

We performed a multi-centre retrospective service evaluation, using routinely collected data from four diverse sites in the United Kingdom. Participating sites provided routinely collected service data for calendar years 2018 and 2019. This study was approved as a service evaluation. All data was anonymised at the patient level.

3 | RESULTS

Results are presented in Table 1. Three of the sites had one bed for every 200–250 people with a dementia diagnosis, though site 3 had less. Admissions averaged one per week per site. Alzheimer's disease was the most common diagnosis, followed by vascular dementia. Patients were predominantly male. Bed occupancy was high between 80% and 90%. Admissions were long with a mean duration of 100 days. There is a cohort on each ward who have longer admissions, one in six patients still remained in hospital after 6 months, and 2.5% had admissions of over 1-year duration. Most admissions were made using the Mental Health Act. Source of admission was commonly from acute hospitals or the patients' homes. Admissions

often marked a transition to long-term care, with two-thirds of discharges being to a care home. Twenty-five patients across the four sites died during their admission.

Data on antipsychotic and benzodiazepine prescribing were available for 193 admissions at two sites. Risperidone was the most common antipsychotic prescribed at both sites, accounting for around half of all antipsychotic prescriptions. Lorazepam use was common.

Data for incident reports were available for three sites, showing high rates of falls and assaults on staff. There was some uniformity across the wards in available resources, though visiting geriatricians were only available in two sites. There was considerable use of bank and agency staff, especially in site 1, where less than 50% of nursing shifts were covered by established staff. This was largely accounted for by high use of 1:1 observations. 18,973 nursing shifts were planned, but 28,916 occurred, with additional shifts filled predominantly by unregistered nurses. Sickness rates were similar at both sites where data was available, with absence rates of 6.75% and 5.77%.

4 | DISCUSSION

We describe one of the largest reports of psychiatric hospital dementia inpatient care in the United Kingdom. Though all sites described come from one country, dementia is a worldwide concern and the challenges this patient group presents will be familiar to colleagues elsewhere.^{6,7} Our description of four sites covering a population of 400,000 people over the age of 65 increases the power of our data to describe patterns of practice. The specialist nature of these units was highlighted by the fact that only a small percentage of the total population with dementia require them, typically only one such bed for every 250 people with dementia. This ratio has increased as psychiatric beds for older people has reduced and the number of people living with dementia has increased.⁸ Patient complexity is likely reflected in length of stay, with typical admissions measured in months and some patients staying longer. Transfer from acute hospital care to these units was common. It is possible that patients with behavioural disturbance may be admitted first to the acute trust, with only those patients who are then unable to be managed being transferred. Some patients from all units were discharged back to their home, though admission often ended in a move

TABLE 1 Population served, demographic data, length of stay, Mental Health Act status, incidents, treatment, outcomes, diagnosis staffing and resources by site

	Site				
	Site 1	Site 2	Site 3	Site 4 male	Site 4 female
Population ≥65 years old	99,038	82,500	128,669	124,750	
Number of people with a dementia diagnosis	5,079	3,500	5,657	6,544	
Number of available beds	21	14	12	17	15
Number of dementia diagnoses per bed	242	250	471	205	
Admissions per annum	52.5	51.5	46.5	47	50
Bed occupancy,%	80.2	85.5	-	93	90.5
Gender male:female	55.2%:44.8%	65.0%:35.0%	53.8%:46.2%	48.5%:51.5%	
Mean length of stay, days	106.9	80.6	-	125.1	84.9
Proportion staying over 25 weeks (%)	17.7	7.1	18.1	21.3	10
MHA status on admission (%)					
Section 2	94.3	68.0	72.0	-	-
Section 3	1.0	9.7	4.3	-	-
Informal	4.7	20.4	18.3	-	-
Other	0.0	1.9	5.4	-	-
Reported incidents					
	The of number incidents per week				
Total Datix incidents	21.8	8.6	-	13.8	14.4
Slips/Trips/Falls	3.0	3.5	-	4.8	2.5
Assaults on staff	5.2	1.6	-	3.5	1.9
Assaults on patients	2.9	1.0	-	2.6	2.8
Antipsychotic use					
	Percentage of admissions prescribed the drug				
Risperidone	-	57.3%	-	38.9%	
Olanzapine	-	16.5%	-	10%	
Quetiapine	-	7.8%	-	22.2%	
Other oral antipsychotic	-	4.9%	-	8.9%	
Depot	-	0%	-	7.8%	
Acuphase	-	0%	-	3.3%	
Benzodiazepine use					
	Percentage of admissions prescribed the drug				
Lorazepam	-	43.7%	-	88.9%	
Diazepam	-	9.7%	-	23.3%	
Other benzodiazepine	-	0%	-	6.7%	
Source of admissions					
General hospital	23.4%	46.6%	37.6%	54.2%	38%
Residential home	21.5%	19.4%	5.4%	24.4%	14%
Home	53.3%	33%	53.8%	17%	45%
Other		1%	3.3%	4.3%	3%
Discharge destination %					
General hospital	8%	8.1%	22.1%	14.9%	10.0%
Residential home	67.2%	64.8%	19.8%	65.9%	58.0%
Home	16.8%	20.7%	50%	10.6%	26.0%
Other	8%	6.3%	3.4%	8.6%	6.0%

TABLE 1 (Continued)

	Site				
	Site 1	Site 2	Site 3	Site 4 male	Site 4 female
Death during admission n (%)	9 (8%)	4 (4%)	4 (4.7%)	4 (4.3%)	4 (4%)
Diagnoses on discharge n (%)					
Alzheimer's	49 (38.0%)	50 (45.0%)	-	43 (45.7%)	32 (32.0%)
Vascular	24 (18.6%)	9 (8.1%)	-	20 (21.2%)	7 (7.0%)
Other dementia	13 (10.1%)	8 (7.2%)	-	0 (0%)	0 (0%)
Unspecified dementia	15 (11.6%)	9 (8.1%)	-	7 (7.4%)	9 (9.0%)
Delirium	2 (1.6%)	5 (4.5%)	-	0 (0%)	0 (0%)
Functional NOS	14 (10.9%)	18 (16.2%)	-	18 (19.1%)	47 (47.0%)
No diagnosis	1 (0.8%)	0 (0.0%)	-	11 (11.7%)	20 (2.0%)
Available resources	Site 1	Site 2	Site 3	Site 4 (per ward)	
Registered psychiatric nurses, daytime	3	2	2	2	
Registered psychiatric nurses, night time	3	1	1	2	
Registered general nurses	No	Yes	No	No	
Healthcare support workers, daytime	6	4	4	3–4	
Healthcare support workers, night time	6	3	4	3	
Medical staff—consultant	7 sessions ^a per week	5 sessions ^a per week	8 sessions ^a per week	5 sessions ^a per week	
Medical staff—SAS/Trainee	2 trainees	1 trainee	1–2 trainees	1–2 trainees	
Medical staff on call	24/7 on call	24/7 on call	24/7 on call	24/7 on call	
Psychologist	No	Yes	Yes	Yes	
Physiotherapy	Visiting	Visiting	Yes	Yes	
Occupational therapy	Yes	Yes	Temporary	Yes	
Dietetics	Visiting	Visiting	Visiting	Yes	
SALT	Yes, visiting	Yes visiting	Yes visiting	Yes.	
Social worker	From local authority on referral and allocation	Yes	From local authority on referral and allocation	Yes	
Chef/catering staff	Yes	No	Yes	Yes	
Housekeeping staff	Yes	Yes	Yes	Yes	
Geriatric medicine liaison	No	Yes—weekly visit	No	Yes—weekly visit	
Palliative care	When requested, able to refer for support as required.	When requested, able to refer for support as required.	When requested, able to refer for support as required.	When requested, able to refer for support as required.	
Animal-assisted therapy	Visiting	No	Visiting	Visiting	
Music therapy	Visiting	Yes	No	No	
Other arts therapy	No	Yes	No	No	

^aOne session denotes half a day of clinical time.

to institutional care and some patients died. Medication use appears to be in line with the evidence base. Given that admission often occurs when management has been impossible elsewhere, it might be expected that prescribing rates may be even higher. It is possible that skilled nursing, good staffing ratios and appropriate environments decrease the use of medication.

Assaults on staff were common on all units, with an average of one incident for every 40 occupied bed days. Thus, in a typical 20-bed unit, an assault on a member of staff might be expected every other day. This is a rate of reported assault higher than for UK prison officers. This may be reflected in agency staff use and sickness, which was significantly higher than the average for the NHS at

levels only otherwise seen at the height of the coronavirus pandemic in the NHS.⁹ Extra shifts were mostly to cover 1:1 observations, these were mostly covered through bank and agency unqualified staff, which might provide an argument for increasing staff establishment.

In summary, we provide a study of nearly 500 admissions to psychiatric dementia inpatient beds and describe long lengths of stay, frequent placement in institutional care on discharge, high rates of falls and assaults and some heterogeneity of service provision. We found little previous literature on this topic and given the vulnerability and complexity of these patients suggest a larger and more detailed study to confirm these findings and inform the development of standards of optimal care.

KEYWORDS

Alzheimer, dementia, inpatient, treatment

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CONFLICT OF INTEREST

Benjamin R. Underwood was the clinical director for the services in Cambridgeshire at the time of data collection and his post is part funded by a donation from Gnodde Goldman Sachs giving. No other conflicts of interest are declared.

AUTHOR CONTRIBUTIONS

Benjamin R. Underwood, Gregor Russell and George Crowther had the concept for the paper. All authors assisted in gathering data, analysis and preparation of the final manuscript.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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