

Access to End-of-Life Medicines in Care Homes: Barriers, Variability and Opportunities for Improvement

Swapnil Ghotane

sg2263@cam.ac.uk

University of Cambridge

Emyr Jones

University Hospital Llandough

Phillippa Ashcroft

Marie Curie

Julie Watson

Marie Curie

Ben Bowers

University of Cambridge

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Abstract

Background:

Care home residents may require timely access to controlled drugs (CDs) for end-of-life symptom management, particularly when symptoms escalate rapidly. Delays in access or administering CDs can increase distress for residents, families, and staff. We aimed to explore UK care home professionals' experiences of accessing and using CDs for end-of-life care, and views on the feasibility of on-site centralised CD stock.

Methods:

A UK-wide, cross-sectional online survey of care home staff was conducted between May and July 2025. Respondents were recruited through professional networks, social media and snowball sampling. Data were analysed using a multimethod approach combining quantitative analysis with Framework Method analysis of free-text responses.

Results:

Overall, 359 respondents completed the survey. Most held management roles (64.9%) and worked in care homes providing nursing care (75.8%). Among 339 respondents included in the analysis of CD access delays, 103 (30.4%) reported delays in the previous three months. Respondents reporting delays in access were more likely than those who did not to also report delays in CD administration (87.9% versus 19.5%), negative impacts on resident care (46.2% versus 5.2%), and difficulties accessing staff to administer CDs (28.6% versus 7.0%). Qualitative findings showed that rapid deterioration could expose gaps in CD access and administration pathways. Respondents perceived that timely care depended on coordinated and responsive working across care homes and external services, with delays occurring when service processes were fragmented or staffing capacity and capability were insufficient. Most respondents viewed on-site centralised stock as beneficial for resident experience (244/359, 68.0%), particularly those who had experienced delays. Qualitative responses also indicated that on-site centralised stock could improve timely access when resident-specific supply was delayed or unavailable, alongside the need for appropriate safeguards and governance.

Conclusions:

Improving timely CD access for end-of-life care requires action across the prescribing, supply and administration pathway, alongside ensuring adequate workforce capacity and external clinical support. On-site centralised CD stock may provide an additional route to timely access, particularly when individual-specific supply pathways are delayed or unavailable. However, implementation would require clear governance, prescribing and authorisation processes, accountability, staff training, secure storage, monitoring, and regulatory safeguards.

Background

Population ageing is increasing the demand for palliative and end-of-life care worldwide [1]. An estimated 56.8 million people require palliative care each year globally, including 25.7 million people in the last year of life [2]. Between 2% and 5% of older adults live in care homes or nursing homes [3], many of whom spend their final months and weeks of life in these settings [4]. In England and Wales, 568,613 deaths were registered in 2024, and around one-fifth of deaths occurred in care homes [5]. Care homes are an important setting for end-of-life care, and the proportion of deaths occurring in these settings is expected to increase substantially over the coming years [6, 7].

Although terminology and models of provision vary across countries, long-term care settings such as care homes, nursing homes and residential aged care facilities are important providers of end-of-life care [8]. Residents in these settings often live with multiple long-term conditions, with care needs shaped by prolonged, unpredictable decline and prognostic uncertainty [9]. Many residents require medicines for the management of pain, breathlessness, nausea and vomiting, agitation and other distressing symptoms near the end of life and as they are dying. Injectable medicines are often needed when oral administration is no longer suitable or when symptoms escalate rapidly [10]. Some medicines commonly used for end-of-life symptom control, including opioids, are controlled drugs (CDs), which are subject to additional legal, prescribing, storage, recording, and governance requirements [11].

Timely access to CDs is essential for effective symptom management and may help reduce avoidable distress for residents and their families [12]. However, access to these CDs in community settings can be delayed by issues with prescribing, dispensing, pharmacy stock availability, and communication between professionals and different care providers [13]. In UK care homes, anticipatory prescribing is commonly practiced so that end-of-life care medicines including CDs are available if symptoms occur [14]. While this individual specific prescribing supports personalised care and medicines governance, medicines dispensed and labelled for one resident cannot ordinarily be used for another. Previous care home evidence suggests that anticipatory medicines are not always in place before death; in one Scottish study, 54% of residents who died had anticipatory medicines prescribed, but only 15% had prescriptions for all four recommended symptom indications [15]. Consequently, when a resident deteriorates suddenly and appropriate end-of-life medicines are not already available, a new supply process is required. This can delay symptom

management, prolong distress for residents, families and staff, and contribute to avoidable emergency service use or hospital admission [13, 16]. Ensuring timely access to medicines is fundamental to the delivery of community-based end-of-life care and aligns with health system priorities internationally to reduce avoidable emergency and hospital-based care [17–20]

One potential approach to improving timely access of end-of-life care medicines, including CDs, in care homes is to hold an on-site centralised stock that is available for use by any eligible resident following appropriate clinical assessment and authorisation by a prescriber. Such a model could reduce delays associated with individual specific dispensing at the point of deterioration [21]. However, implementation in the UK is shaped by regulatory arrangements that differ between care homes with and without nursing provision, and by additional requirements associated with holding Schedule 2 CDs stock, such as morphine and diamorphine [22, 23]. Temporary medicines-reuse arrangements introduced during the COVID-19 pandemic showed that more flexible approaches to urgent access to end-of-life care medicines could be implemented with safeguards, but these emergency arrangements were time-limited and have since been withdrawn [24].

Evidence remains limited on how anticipatory prescribing operates in care homes [25], particularly how care home staff experience access to and administration of end-of-life medications in practice, and how staff view the potential role of on-site centralised CD stock. Consequently, our study explored UK care home professionals' experiences of accessing and using controlled drugs (CDs) for end-of-life care, and their views on the feasibility, benefits and barriers of holding a centralised stock of CDs within care homes.

Methods

Study design

A cross-sectional, self-completion online survey was used to collect anonymous responses from care home staff. The survey included closed-response items and free-text questions [26].

The survey instrument covered respondent and care home characteristics, CD access and administration, impacts of delays, and respondent views on on-site centralised CD stock. Care home nurses and senior carers contributed to survey design, question refinement and pilot testing. Their feedback informed revisions to improve question framing, clarity and relevance before recruitment began.

- Eligibility criteria

Participants were eligible if they were staff members working in the UK care homes providing residential and/or nursing care. Eligible roles included, but were not limited to, nurses, care staff, managers, and administrative or other staff involved in care home CD processes. There was no limit on the number of staff members who could participate from each care home.

- Recruitment

Participants were recruited through professional networks, existing contacts, organisational mailing lists, newsletters, social media, and professional forums using snowball sampling. Participation was voluntary, with eligible individuals self-selecting to complete the survey. Invitations were disseminated through professional organisations and networks including Marie Curie, the Royal College of Nursing, the Queen's Institute of Community Nursing Care Home Network, Hospice UK, NIHR Applied Research Collaboration networks, ENRICH Scotland, ENRICH England, ENRICH Cymru, National Pharmacy Care Homes Faculty, Scottish Care, Care Forum Wales, and the National Care Forum. Recipients were encouraged to share the survey invitation with other eligible care home staff.

- Data collection

Data were collected using Qualtrics between 15 May to 21 July 2025. The online, anonymous survey included multiple-choice, checkbox and open-ended questions and took around 20 minutes to complete.

Participants consented online before proceeding to the survey questions. Respondents were assigned a unique identifier by Qualtrics, and any identifiable information that were included in free-text responses were removed before analysis.

The survey collected anonymised respondent and care home characteristics, including professional role, care home type and size, ownership model, whether nursing care was provided, resident groups supported, and location (country). Questions explored recent experiences of accessing and administering end-of-life medications, including any delays in obtaining and administering CDs, and the perceived impacts on residents. Respondents were also asked about their views on the feasibility, benefits and barriers of holding a centralised stock of CDs within care homes.

- Multimethod analysis

Data were analysed using a multimethod approach [27]. The survey incorporated free-text responses alongside closed-response items, with the qualitative data analysed using the Framework Method [28]. Findings from the quantitative and qualitative analyses were subsequently considered together during interpretation, with the qualitative findings providing complementary contextual insights into the quantitative findings [29].

- Quantitative analysis

Quantitative data were analysed using IBM SPSS Statistics v.31 [30]. Descriptive statistics were used to summarise respondent and care home characteristics, reported delays in accessing CDs, perceived resident impacts, staff access difficulties, and views on centralised CD stock. Categorical variables are reported using frequencies and percentages.

Associations between reported delays in accessing CDs and other variables were examined using Chi-square tests. Multivariable binary logistic regression model was used to examine factors associated with reporting delays in accessing CDs. Variables in the model were selected a priori based on their potential relevance and included respondent role, care home provision of nursing care, UK nation, and care home size. Results are reported as adjusted odds ratios with 95% confidence intervals. Statistical significance was defined as a two-sided *p* value of < 0.05. Denominators varied across analyses because 'unsure' and 'not applicable' responses were excluded where appropriate.

- Qualitative analysis

Free-text responses were analysed using a Framework Method [28] in NVivo v.15 [31]. An initial analytical framework was developed through independent coding of a purposive subsample of 20 cases by SG (applied healthcare researcher) and EJ (clinical academic pharmacist). Eligible cases were restricted to responses containing text answering the qualitative questions, and equal numbers of cases were selected from nursing homes and residential care homes (*n* = 10 in each group). Coding was compared at the level of individual responses to explore differences in interpretation and coding decisions. Reflexive discussions between SG, EJ and BB (clinical academic community nurse), drawing on their interpretations and different research and clinical perspectives, informed the iterative refinement of codes. The coding framework was subsequently applied to the remaining dataset by SG, with ongoing refinement and discussions as the analysis progressed. Codes were grouped into broader categories and themes through repeated review and interpretation of data. Theme and domain development was interactive and reflexive, with alternative interpretations, thematic boundaries, and key analytical decisions discussed and refined collaboratively by SG, EJ and BB [28, 32, 33].

Results

- Respondent and care home characteristics

Of the 359 survey respondents (Table 1), almost two-thirds were in management roles (*n* = 233, 64.9%), followed by nursing or clinical roles (*n* = 93, 25.9%). Most worked in care homes that provided nursing care (*n* = 272, 75.8%) and in privately owned services (*n* = 281, 78.3%). Respondents were represented across all four UK nations, with just over half based in England (*n* = 184, 51.3%). The sample included care homes and organisations of varying sizes, and mainly represented services supporting older people, alongside adults with physical or sensory impairments, learning disabilities, dementia, and other complex needs.

Table 1
Characteristics of respondents and their care homes (N = 359)

Characteristic	n (%)
Respondent role (Q3)	
Management	233 (64.9)
Nursing (clinical)	93 (25.9)
Care & Support	15 (4.2)
Allied & Administrative support	7 (1.9)
Other / Unclear	11 (3.1)
Care home provides nursing care (Q4)	
Yes	272 (75.8)
No	87 (24.2)
Ownership of care home (Q6)	
Private	281 (78.3)
Voluntary / Not for profit	34 (9.5)
Local Authority	30 (8.4)
NHS organisation	3 (0.8)
Other	11 (3.1)
Nation where care home is based (Q7)	
England	184 (51.3)
Scotland	102 (28.4)
Wales	60 (16.7)
Northern Ireland	13 (3.6)
Care home location (Q8)	
Urban	201 (56.0)
Larger rural settlement	101 (28.1)
Smaller rural settlement	49 (13.6)
Unsure	8 (2.2)
Care home size – total occupancy (Q9)	
Less than 20 people	25 (7.0)
20–39 people	135 (37.6)
40–59 people	98 (27.3)
More than 60 people	101 (28.1)
Organisation size (Q10)	
Single care home	104 (29.0)
2–10 care homes	134 (37.3)
11–20 care homes	40 (11.1)
21–50 care homes	29 (8.1)
51–100 care homes	15 (4.2)
Note: Percentages are based on valid responses; †Q5 allowed multiple responses.	
Reported delays in obtaining controlled drugs (CDs)	

Characteristic	n (%)
Respondent role (Q3)	
101 + care homes	28 (7.8)
Unsure	9 (2.5)
Populations supported by care homes† (Q5)	
Older people	349 (97.2)
Adults with physical and/or sensory impairments	256 (71.3)
Adults with learning disabilities	129 (35.9)
Adults with alcohol and drug misuse issues	87 (24.2)
Other	75 (20.9)
• Adults with Dementia	• 50 (66.7)
• Adults with Mental health conditions	• 10 (13.3)
• Adults with complex physical/neurological/ palliative/end-of-life care/other conditions	• 15 (20)
Note: Percentages are based on valid responses; †Q5 allowed multiple responses.	
Reported delays in obtaining controlled drugs (CDs)	

Overall, 30.4% (103/339) of respondents reported delays in obtaining CDs for palliative and end-of-life care in the previous three months. In bivariate analyses, reported delays were associated with UK nation and care home size, but not with respondent role, care home type, ownership, urban–rural location, or organisational size (Table 2). Delays were most commonly reported in Wales (48.3%) and least frequently in England (23.5%) ($\chi^2 = 12.63$, $df = 3$, $p = 0.006$). The proportion of respondents reporting delays increased with care home size, from 19% in homes with fewer than 20 residents to 42.7% in homes with 60 or more residents ($\chi^2 = 10.19$, $df = 3$, $p = 0.017$).

Table 2
Respondent and care home characteristics associated with reported delays in obtaining controlled drugs

Characteristic	Category	Delays in obtaining CDs (Q11)		Total (n)	χ^2 (df) p-value
		Yes n (%)	No n (%)		
Overall (Q11)		103 (30.4)	236 (69.6)	339	
Respondent role (Q3)	Management	68 (30.6)	154 (69.4)	222	2.31 (4)
	Nursing	26 (29.5)	62 (70.5)	88	0.679
	Care & Support	2 (16.7)	10 (83.3)	12	
	Allied & Admin support	2 (33.3)	4 (66.7)	6	
	Other / Unclear	5 (45.5)	6 (54.5)	11	
Care home provides nursing care (Q4)	Yes	85 (32.4)	177 (67.6)	262	2.31 (1)
	No	18 (23.4)	59 (76.6)	77	0.128
Ownership of care home (Q6)	Private	87 (32.7)	179 (67.3)	266	4.16 (4)
	Voluntary / Not for profit	8 (25.0)	24 (75.0)	32	0.385
	Local Authority	6 (21.4)	22 (78.6)	28	
	NHS organisation	1 (33.3)	2 (66.7)	3	
	Other	1 (10.0)	9 (90.0)	10	
Nation where care home is based (Q7)	England	40 (23.5)	130 (76.5)	170	12.63 (3)
	Scotland	31 (31.6)	67 (68.4)	98	0.006*
	Wales	28 (48.3)	30 (51.7)	58	
	Northern Ireland	4 (30.8)	9 (69.2)	13	
Care home location (Q8)	Urban	60 (31.9)	128 (68.1)	188	0.65 (3)
	Larger rural settlement	29 (29.6)	69 (70.4)	98	0.885
	Smaller rural settlement	12 (26.1)	34 (73.9)	46	
	Unsure	2 (28.6)	5 (71.4)	7	
Care home size – total occupancy (Q9)	< 20 residents	4 (19.0)	17 (81.0)	21	10.19 (3)
	20–39 residents	32 (25.2)	95 (74.8)	127	0.017*
	40–59 residents	26 (27.4)	69 (72.6)	95	
	≥ 60 residents	41 (42.7)	55 (57.3)	96	
Organisation size (Q10)	Single care home	30 (30.9)	67 (69.1)	97	6.29 (6)
	2–10 homes	35 (26.9)	95 (73.1)	130	0.391
	11–20 homes	15 (39.5)	23 (60.5)	38	
	21–50 homes	6 (23.1)	20 (76.9)	26	
	51–100 homes	4 (28.6)	10 (71.4)	14	
	≥ 101 homes	12 (44.4)	15 (55.6)	27	
	Unsure	1 (14.3)	6 (85.7)	7	
Note: Pearson's chi-square tests were used. Some categories include small cell counts and p-values should be interpreted with caution. *Significant associations are shown in bold. "Unsure" and "Not applicable" responses (n = 20) from Q11 were excluded.					

In the multivariable logistic regression model (Table 3), nation remained independently associated with reported delays. Compared with respondents in England, those in Wales had higher odds of reporting delays in obtaining CDs (adjusted OR 3.05, 95% CI 1.60–5.82; $p < 0.001$). Care home size was also associated with reported delays overall ($p = 0.044$), although individual size categories did not reach statistical significance. The pattern was consistent with higher odds of delay in larger homes, particularly those with 60 or more residents (adjusted OR 2.82, 95% CI 0.81–

9.81; $p = 0.104$). Respondent role and whether the care home provided nursing care were not independently associated with reported delays after adjustment.

Table 3
Multivariable logistic regression of factors associated with reported delays in obtaining controlled drugs

Predictor	Reference category	Adjusted OR	95% CI	p-value
Respondent role (Q3)	Management			0.614
Nursing (clinical)		0.77	0.43–1.40	0.398
Care & Support		0.42	0.09–2.09	0.290
Allied & Admin support		1.03	0.17–6.20	0.971
Other / Unclear		1.72	0.47–6.26	0.414
Care home type (Q4)	Non-nursing	0.89	0.45–1.78	0.742
Nursing care home				
Nation where care home is based (Q7)	England			0.009
Scotland		1.52	0.84–2.72	0.163
Wales		3.05	1.60–5.82	< 0.001
Northern Ireland		1.78	0.50–6.39	0.376
Care home size – total occupancy (Q9)	< 20 residents			0.044
20–39 residents		1.24	0.37–4.13	0.730
40–59 residents		1.46	0.42–5.10	0.556
≥60 residents		2.82	0.81–9.81	0.104
Note: Model fit: Omnibus $\chi^2(11) = 24.51$, $p = 0.011$; Nagelkerke $R^2 = 0.099$. “Unsure” and “Not applicable” responses were excluded.				
CD access delays and difficulties administering CDs				

Among respondents who reported delays in obtaining CDs, 87.9% (87/99) also reported delays in CD administration, compared with 19.5% (44/226) of those who did not report delays in obtaining CDs ($\chi^2 = 144.14$, $df = 2$, $p < 0.001$) (Table 4). Respondents reporting delays in obtaining CDs were also more likely to report at least one negative impact on resident care (46.2% vs 5.2%; $\chi^2 = 74.03$, $df = 1$, $p < 0.001$) and difficulties accessing staff to administer CDs (28.6% vs 7.0%; $\chi^2 = 27.09$, $df = 1$, $p < 0.001$).

Table 4
Administration delays, reported negative impacts, and staff-access difficulties by reported delays in obtaining controlled drugs

Administration delays, reported negative impacts, and staff access difficulties by reported delays in obtaining controlled drugs					
Characteristic	Categories	Delays in obtaining CDs (Q11)		Total (n)	χ^2 (df)
		Yes	No		p-value
		n (%)	n (%)		
Delays in the administration of CDs (Q12)	Occasional / Frequent (≥ 3 times)	40 (40.4)	8 (3.5)	48	144.14 (2) 0.001
	Rare (1–2 times)	47 (47.5)	36 (15.9)	83	
	Never	12 (12.1)	182 (80.5)	194	
	Total	99 (100)	226 (100)	325	
Reported negative impacts on resident care (Q13)	No negative impact	49 (53.8)	201 (94.8)	250	74.03 (1) 0.001
	At least one negative impact reported	42 (46.2)	11 (5.2)	53	
	Total	91 (100)	212 (100)	303	
Difficulties in accessing staff to administer CDs (Q14)	Yes	28 (28.6)	16 (7.0)	44	27.09 (1) 0.001
	No	70 (71.4)	211 (93.0)	281	
	Total	98 (100)	227 (100)	325	
Note: Pearson's chi-square tests were used. "Unsure" and "not applicable" responses were excluded. Q12 & Q13 categories were collapsed to meet chi-square assumptions.					
Perceptions of on-site centralised CD stock					

Among all respondents, 68% (244/359) indicated that centralised CD stock would be beneficial for patient experience, whereas 14.8% (53/359) perceived it would make 'no difference' and 7.5% (27/359) anticipated a negative impact. When views on centralised CD stock were compared by reported delays in obtaining CDs, respondents who had reported delays in obtaining CDs were more likely to view centralised stock as beneficial (89.7%, 87/97) than those who had not reported such delays (69%, 145/210) ($\chi^2 = 15.44$, df = 2, $p < 0.001$) (Table 5).

Table 5
Perceived impact of on-site centralised CD stock by reported delays in obtaining CDs

Perceived impact of on-site centralised CD stock by reported delays in obtaining CDs					
Characteristic	Category	Delays in obtaining CDs (Q11)		Total (n)	χ ² (df) p-value
		Yes	No		
		n (%)	n (%)		
Perceived impact of on-site centralised CD stock on patient experience (Q19)	Beneficial	87 (89.7)	145 (69.0)	232	15.44 (2) 0.001
	No difference	6 (6.2)	44 (21.0)	50	
	Negative impact	4 (4.1)	21 (10.0)	25	
	Total	97 (100)	210 (100)	307	
Note: “Unsure” & “Not applicable” responses in Q11 and “I don’t know” & “Not applicable” responses in Q19 were excluded.					

The most frequently reported anticipated benefits of an onsite centralised CD stock were reduced waste of unused end-of-life medicines, more timely symptom management, reduced distress for residents and families, and time saved for staff when obtaining medicines (Fig. 1). However, respondents also highlighted implementation barriers. Uncertainty about whether their care home was eligible or permitted to hold CDs as central stock was the most common barrier, followed by medicine administration errors and resident safety concerns, staff education and training needs, increased workload related to recording and CD checks, medicine misuse risk, and storage concerns (Fig. 1).

A. Perceived benefits

Figure 1 Perceived benefits and barriers of holding CDs as an on-site centralised stock

Note

Respondents could select multiple options

- Qualitative findings

Framework analysis of free-text responses identified nine interrelated themes. These are presented in three domains in the subsequent sections: current systems for CD access and administration, challenges to timely CD access and administration, and views on on-site centralised CD stock (Fig. 2).

- Current systems for CD access and administration

Respondents described a spectrum of experiences regarding access to CDs and their subsequent administration, helping to contextualise the quantitative findings. Timely access and administration were perceived to be achievable where supportive conditions were in place, but vulnerable when these conditions were absent. Features supporting timely and safe care included proactive anticipatory care planning, continuity of information, timely prescribing, in-house syringe driver availability, access to staff with the skills and authority to administer CDs, clear documentation and audit processes, collaborative cross-organisational working, and responsive pharmacy or external clinical support (Additional file 1). Respondents described existing systems for accessing and administering CDs were effective when these supporting conditions were in place:

Within the care home I find the process we have at present for the administration of controlled drugs effective

Respondent: care & support role, residential home, Scotland

Respondents also reported limitations within the current system. The system was characterised as variable, with one respondent describing it as *“too hit and miss at the moment”* (respondent: staff, residential home, Wales). Other responses highlighted difficulties in adapting when residents deteriorated rapidly or when medicines were not already available, as well as concerns about wastage and the inflexibility associated with individual-specific prescribing.

Current process of ACP [advance care planning] for individuals is costly, often contributes to waste and is not flexible as can only be used for individual. If someone goes off acutely this process is not responsive enough.

Respondent: allied & administrative support role, nursing home, Scotland

- Challenges for timely access and administration of CDs

Respondents described a range of challenges affecting both access to CDs and their administration. GP-related barriers included delays in responsiveness, triage and prescribing decisions, prescription quality, medication authorisation paperwork, limited anticipatory prescribing, and insufficient CD quantities when residents' needs escalated unexpectedly.

We often have difficulty in obtaining scripts [prescriptions] from GP in timely manner.

Respondent: management role, nursing home, Wales

“In my experience GP's are reluctant to prescribe more than 5–10 ampules which can be used quite quickly when trying to ensure patients remain comfortable.”

Respondent: nursing role, nursing home, England

Within care homes, operational barriers included limited on-site stock, difficulties responding to rapidly changing resident need, syringe driver availability issues, alongside the staff time, travel and workload involved in sourcing and managing CDs.

If we run out of stock (not rarely) it can take between 2–4 hours to get more. Meanwhile we have the right medication for someone else, but we can't administer it. The person on EOL [end-of-life] then may be symptomatic and there's nothing you can do if you don't have the stock. It can be hard.

Respondent: nursing role, nursing home, Scotland

Wider health system barriers included delays in accessing out-of-hours urgent care services and clinical support, suboptimal hospital discharge processes, and inadequate electronic prescribing or authorisation systems. Care home staff experienced that there could be limited pharmacy stock availability and delays in dispensing.

Pharmacy's not having enough stock to fill prescriptions.

Respondent: management role, residential home, England

At times when it is Friday evening, night, or Saturday or Sunday there will be significant delay, 5–6 hours.

Respondent: nursing role, nursing home, Wales

Workforce and coordination factors within care homes also influenced timely CD administration. Respondents highlighted variable staff training, confidence and experience, including with using syringe drivers to deliver medication. Several respondents reported there were policy or eligibility restrictions on which staff could administer CDs or set up syringe drivers:

Nursing staff in my home are not able to set up and replenish syringe drivers as trust policy is they have to be done by District Nurses or ART [Acute Response Team] even for nursing residents.

Respondent: management role, nursing home, Wales

Care home staffing pressures, requirements for a second staff member to check or witness CD administration, variable in-house nursing capacity, and difficulties coordinating with external providers were also reported. These included instances where care home staff felt their insights and clinical judgement was not fully recognised by community nurses or GPs:

Nursing staff feel they have to "fight" with GP's at times to have them listen to clinical judgement of nurses when patients can be coming to end of life.

Respondent: management role, nursing home, Scotland

Regularly we have issues with DN's [district nurse's] attending and them believing that the resident is not in distress or pain despite staff that know the resident well and have seen multiple ongoing markers feeling otherwise.

Respondent: management role, nursing home, Scotland

Delays in CD access or administration were linked to consequences for residents, families, and staff. Respondents' reported consequences for residents and their families included prolonged symptoms, distress, and concerns about comfort at the end of life and as they were dying. Care home staff reported spending considerable time trying to coordinate external support, including obtaining medication prescriptions and sourcing medicines. Delays in care and negative outcomes for patients and families resulted in frustration and moral distress for some respondents:

It can take hours for a service user to be seen, this is not dignified for the service user, this can also create increased anxiety for family members.

Respondent: nursing role, nursing home, Scotland

Very challenging to have a distressed person who is at end of life with their family and we are helpless as no meds that can be used to alleviate. Getting through for support out of hours can take a long time understandably.

Management role, nursing home, Scotland

- Views on on-site centralised CD stock

Building on the quantitative findings, free-text responses helped explain why many respondents viewed on-site centralised CD stock as potentially beneficial. Respondents frequently reported that having a centralised CD stock could improve access to medicines and support faster symptom management, particularly when the logistics involved in navigating external prescribing pathways and then sourcing supplies from pharmacies caused cumulative delays. Perceived benefits also included reducing staff burden associated with sourcing prescriptions and medicines, improved stock oversight, greater staff confidence, and reduced distress for residents and families. Respondents with experience of similar arrangements during the Covid-19 pandemic described these benefits in practice:

I advocate for this as I have seen the benefits. We also do not want our elderly dying on hospital trolleys or in ambulances just because we struggle to get medication especially out of GP [general practitioner] hours.

Respondent: management role, nursing home, Northern Ireland

In contrast, some participants raised concerns about on-site centralised CD stock, particularly regarding the safe governance and management of medicines. These included risks related to medication errors, misuse, security, storage, and stock oversight, alongside concerns about potential costs. Some respondents questioned whether centralised stock would add value where current systems worked well. Others highlighted it could increase administrative responsibilities for care home staff and undermine person-centred approaches to end-of-life planning:

As they would still need administering [prescribing] by the prescriber and it would then be down to the Care Home to ensure all paperwork were in order, when as a health issue, we require support not more work being handed over to us.

Respondent: management role, residential home, England

Respondents also identified conditions that would need to be addressed for centralised stock to be workable in practice. These included clarity regarding prescribing and eligibility, governance and accountability arrangements, storage, handling and monitoring requirements, and regulatory, licensing, insurance, and organisational barriers. Role-boundary concerns were also raised, particularly where responsibility for holding and managing CDs was viewed as sitting with health services rather than care homes. Respondents emphasised the need for clear protocols, robust governance processes and appropriate clinical support:

...I also recognise there would need to be very clear protocols, robust governance, and appropriate clinical support in place to ensure safe and compliant use. So while I am not fully certain of the wider implications I believe it could be beneficial in the right circumstances.

Respondent: management role, residential home, England

Some respondents proposed alternative approaches to improve timely access to CDs. These included community nursing and pharmacy-based models, such as a pharmacy hub operating across extended opening hours:

...a central hub pharmacy to cover all hours.

Respondent: Management role, residential home, England

It would be a good idea for the district nurses to have emergency supplies available for "anybody" requiring these drugs.

Respondent: management role, residential home, England

Discussion

This study shows that nearly one-third of respondents reported delays in obtaining CDs for end-of-life care in care homes. These delays were strongly associated with subsequent delays in CD administration, reported negative impacts on resident care, and difficulties accessing staff to administer medicines. The qualitative findings provided explanatory context, indicating that delays did not arise from a single point of failure, but from vulnerabilities across the CD supply-and-administration pathway. These included sourcing external clinical assessments, prescriptions and pharmacy supplies (in-hours and out-of-hours), then navigating care-home processes and external clinical support to administer medications.

On-site centralised CD stock was viewed positively by most respondents, particularly those who had experienced access delays. The findings suggest that on-site centralised CD stock may provide a helpful, additional governed route to ensure timely access to medicines, but its effectiveness depends on wider workforce, governance and service-delivery arrangements.

Although this study was conducted in the UK, the findings have wider health-system relevance where long-term care settings are important sites of end-of-life care. While medication regulation and supply arrangements differ internationally, timely symptom control depends on coordinated prescribing and authorisation, supply and administration across organisational boundaries [34–37].

- CD access and administration as a pathway-level problem

The findings do not suggest that individual-specific CD supply-and-administration pathways in care homes are uniformly ineffective. Many respondents did not report delays and qualitative responses identified conditions that supported timely and safe care particularly where care homes appeared to be effectively integrated with wider healthcare services and where staff reported having the authority, skills and confidence to administer CDs. These findings correspond with previous studies highlighting the importance of having anticipatory care planning [38], clear protocols [39], responsive pharmacy and external clinical support [40, 41], and adequate in-house clinical capacity and equipment [42]. However, our study also found that residents can deteriorate rapidly, and medicines may well be unavailable, highlighting ongoing vulnerabilities within the wider CD supply-and-administration pathways.

Previous care home research has described anticipatory medicine use at the end of life as a sequence of linked processes, including identifying need, prescribing, dispensing, storage and monitoring, administration and disposal of medicines [43, 15]. These processes depend on timely coordination between GPs, pharmacies, nurses, and care home staff [15, 43, 44]. The findings from our study align with this pathway-based understanding, with issues reported in hospital discharges, accessing GPs assessments, including prescriptions and authorisation paperwork, dispensing from pharmacies, and care home operational processes, all of which shaped whether CDs are available when needed. [45–47].

Nurses must make complex clinical and professional judgements when deciding whether to administer anticipatory medication, including assessing dying, symptom irreversibility, and the risks of under- or over-medication [44, 48]. This resonates with our present qualitative findings, in which administration depended not only on stock availability, but also on staff confidence, syringe driver competence, staffing capacity and external clinical responsiveness. In addition, delays were more frequently reported by respondents in Wales than in England, and by respondents from larger care homes. Interventions focused only on improving medicine supply may reduce one source of delay but are unlikely to be sufficient unless the workforce and coordination conditions for timely administration are also addressed.

- The potential role of on-site centralised CD stock

Most respondents viewed on-site centralised stock as beneficial for patient experience, and support was particularly strong among those who had experienced delays in obtaining CDs. This suggests that centralised stock was seen as a practical response to weaknesses in individual-specific CD supply pathways. The perceived benefits centred on more timely access to symptom-control medicines, faster symptom relief, and reduced distress for residents and families. These views align with previous work suggesting that additional options to anticipatory prescribing are warranted [46, 49], including models where nursing homes could hold end-of-life medicines ‘as stock’ rather than relying solely on medicines prescribed and dispensed for individual residents [50].

Respondents in our study reported potential reductions in medicine waste and staff time spent sourcing urgent medicines. Previous work has identified that end-of-life drugs are amongst the most costly categories of medicines waste in care homes [51]. Future evaluations of centralised CD stock should therefore consider medicine waste, staff workload, pharmacy activity and pathway efficiency, alongside timeliness and safety.

However, holding a centralised stock of CDs would address only some aspects of the supply-and-administration pathway. For centralised stock to be feasible and safe, implementation would need to address the range of concerns identified by respondents in our study. These included uncertainty about eligibility and legal permissions, accountability for stock management, storage and security, record-keeping, stock monitoring and disposal. Respondents also raised concerns about training, medicine misuse risk and regulatory compliance. These concerns are consistent with wider evidence on governance challenges associated with CD use in care homes [43].

- Implications for practice and policy

These findings suggest that delays in CD access should be viewed as a system-level challenge rather than a problem attributable and resolvable by any single organisation or professional group. Across health and care systems, timely symptom control in care homes depends on coordinated prescribing and authorisation, medication supply, administration and monitoring, supported by an appropriately trained and resourced workforce.

In the UK, local pathways should clearly define and agree arrangements for urgent prescribing in-hours and out of-hours, pharmacy access, and support with CD administration. [41]. This aligns with current UK policy priorities around shifting care closer to home, strengthening out-of-hours palliative care and care around dying, improving anticipatory planning, and reducing avoidable hospital use [52–55]. However, unless these ambitions explicitly address CD supply, authorisation, dispensing, storage, and administration, practical barriers to timely symptom control in care homes are likely to persist. More broadly, the findings have international relevance as care homes in many countries face similar challenges in coordinating timely access to end-of-life medicines across organisational boundaries.

The broadly positive views expressed by participants in our study regarding holding a centralised CD stock suggest that this model of medicine management warrants further evaluation. Rather than replacing individualised anticipatory prescribing, centralised stock may complement existing approaches within a wider system that supports safe and timely end-of-life care.

- Strengths and limitations

This study has several strengths. It provides UK-wide evidence on an under-examined aspect of end-of-life care in care homes. The sample included respondents from all four UK nations and from a range of provider types and sizes. The multimethod design enabled quantitative findings to be interpreted alongside qualitative accounts of how delays arise in practice and perspectives of holding a centralised stock of CDs.

However, the survey study methods have some key limitations. The non-probability sample introduces the possibility of participation bias and limits representativeness [56]. Most respondents were in management roles and most worked in care homes providing nursing care, which may limit the transferability of findings to residential care homes. In addition, the cross-sectional, self-reported nature of the data precludes causal inference and may have been affected by recall bias [57].

- Future research

Future research should evaluate governed models of on-site centralised CD stock, including timeliness of access, symptom control, safety, medicine waste, staff workload and resident and family experience and the quality of dying. Evaluations should also examine implementation requirements such as pharmacy oversight, accountability across care providers, staff competencies and governance arrangements.

Conclusion

Nearly one-third of respondents reported delays in obtaining CDs for end-of-life care in care homes. Although many residents appear to receive timely care, the findings suggest that CD access remains vulnerable to delays across prescribing, pharmacy supply, workforce capacity and care coordination. On-site centralised CD stock could complement individual-specific anticipatory prescribing by providing an additional governed route to ensure timely access at the point of need. However, improving symptom management in care homes will require coordinated attention to wider end-of-life care and supply-and-administration pathways, supported by appropriate governance, workforce capacity and clinical support.

Abbreviations

ACP
Advance Care Planning
CD
Controlled Drugs
GP
General Practitioner
JIC
Just-In-Case
PRN
As needed (pro re nata)

Declarations

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Helsinki. Ethical approval was obtained from the Research Ethics Committee of the Department of Engineering, University of Cambridge on 11/04/25, reference [2025 – 700]. Participants provided informed consent electronically before accessing and completing the anonymous survey.

Consent for publication

Written, informed consent provided by participants.

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Author Contribution

EJ and BB conceived the study and developed the study design. PA and JW contributed to survey development and supported BB and EJ in data collection. SG conducted the quantitative and qualitative analyses with input throughout from EJ and BB. SG led interpretation of the findings and drafted the manuscript. All authors contributed to interpretation of the findings, critically reviewed and revised the manuscript, and approved the final version.

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Data Availability

The anonymised data may be made available to researchers on reasonable request to author BB, subject to completion of a data use agreement.

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Figures

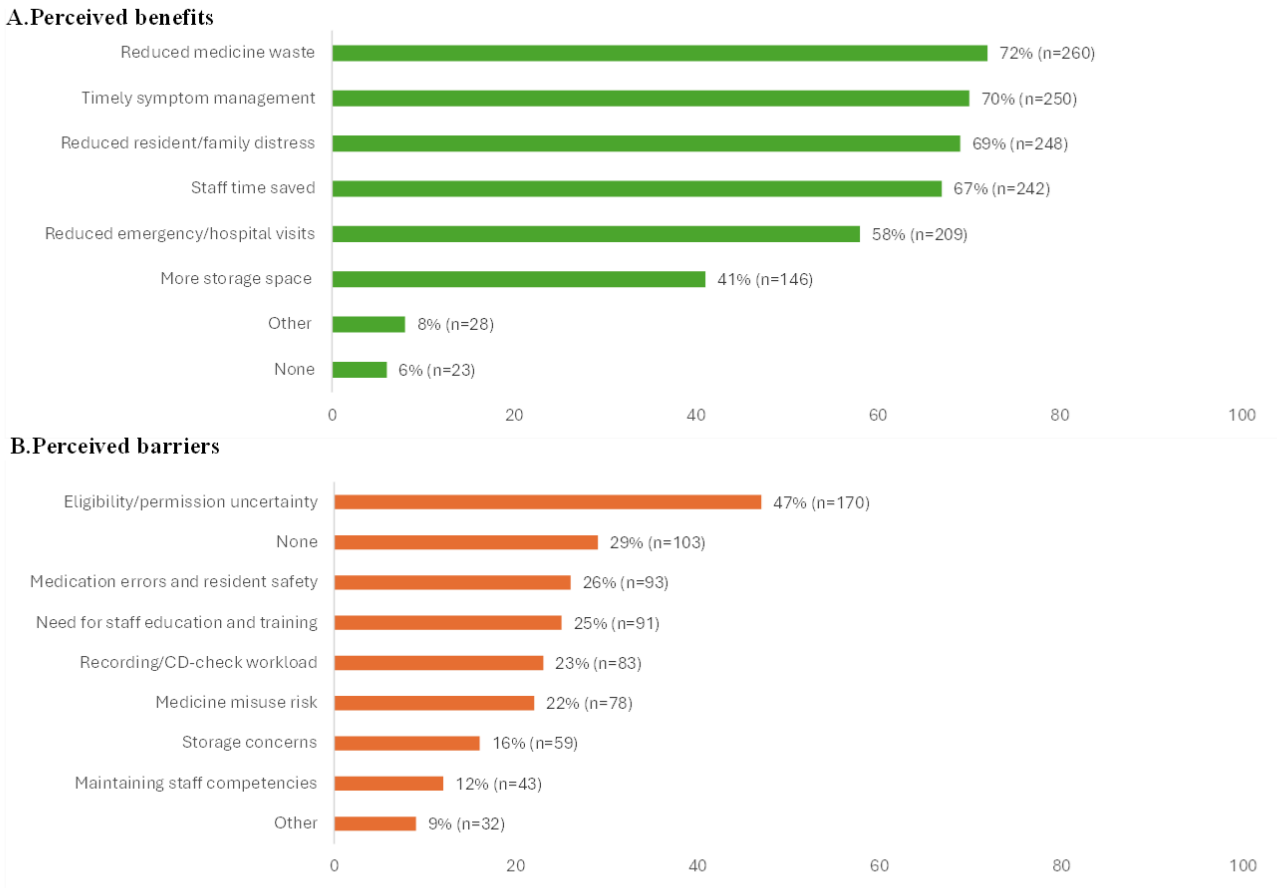


Figure 1

Perceived benefits and barriers of holding CDs as an on-site centralised stock

Note: Respondents could select multiple options

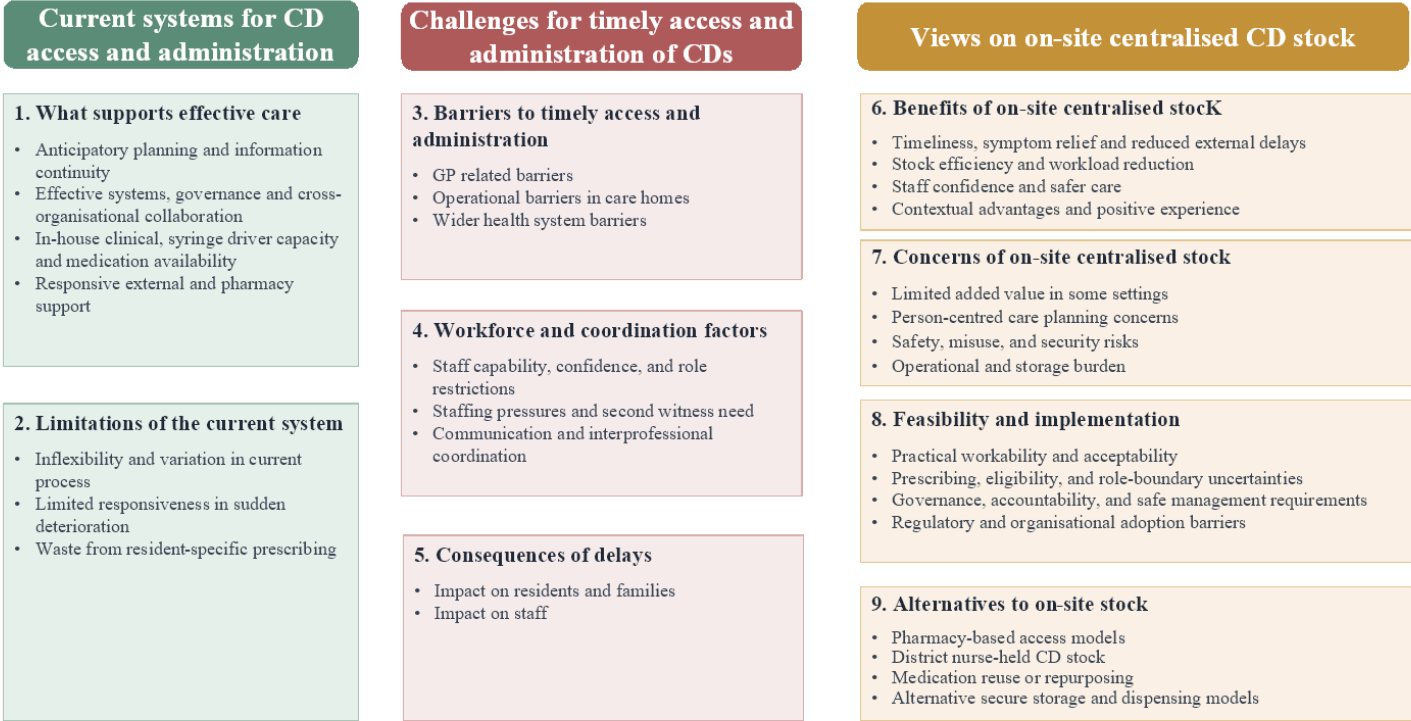


Figure 2

Thematic framework of qualitative responses

Supplementary Files

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