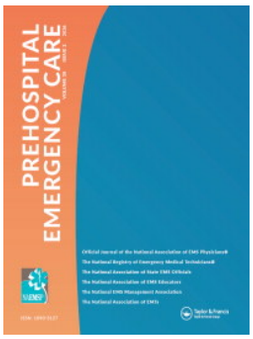

Prehospital Emergency Care

ISSN: 1090-3127 (Print) 1545-0066 (Online) Journal homepage: www.tandfonline.com/journals/ipec20

Ambulance Staff Experiences and Perceptions of Medical Emergencies in Care Homes in the East Midlands, United Kingdom: A Qualitative Interview Study

Despina Laparidou, Viet-Hai Phung, Maria Kordowicz, Gregory A. Whitley, Ffion Curtis, Nicoya Palastanga, Lissie Wilkins, Robert Spaight, Elizabeth Miller, Adam L. Gordon & Aloysius Niroshan Siriwardena

To cite this article: Despina Laparidou, Viet-Hai Phung, Maria Kordowicz, Gregory A. Whitley, Ffion Curtis, Nicoya Palastanga, Lissie Wilkins, Robert Spaight, Elizabeth Miller, Adam L. Gordon & Aloysius Niroshan Siriwardena (2026) Ambulance Staff Experiences and Perceptions of Medical Emergencies in Care Homes in the East Midlands, United Kingdom: A Qualitative Interview Study, Prehospital Emergency Care, 30:2, 296-308, DOI: 10.1080/10903127.2025.2490810

To link to this article: https://doi.org/10.1080/10903127.2025.2490810

PREHOSPITAL EMERGENCY CARE
2026, VOL. 30, NO. 2, 296–308
https://doi.org/10.1080/10903127.2025.2490810

Taylor & Francis
Taylor & Francis Group

FOCUS ON RESEARCH

OPEN ACCESS Check for updates

Ambulance Staff Experiences and Perceptions of Medical Emergencies in Care Homes in the East Midlands, United Kingdom: A Qualitative Interview Study

Despina Laparidou[a], Viet-Hai Phung[a], Maria Kordowicz[a], Gregory A. Whitley[a], Ffion Curtis[b], Nicoya Palastanga[c], Lissie Wilkins[c], Robert Spaight[d], Elizabeth Miller[d], Adam L. Gordon[e] and Aloysius Niroshan Siriwardena[a]

[a]Community and Health Research Unit, School of Health and Social Care, University of Lincoln, Ross Lucas Medical Sciences Building, Lincoln, UK; [b]Liverpool Reviews & Implementation Group (LRiG), University of Liverpool, Liverpool, UK; [c]Healthier Aging Patient and Public Involvement Group, University of Lincoln, Lincoln, UK; [d]East Midlands Ambulance Service NHS Trust, Cross O'Cliff Court, Bracebridge Heath, Lincoln, UK; [e]Academic Centre for Healthy Ageing, Barts Health NHS Trust, Queen Mary University of London, London, UK

ABSTRACT

Objectives: Care home residents often experience medical emergencies requiring ambulance attendance that may lead to potentially avoidable hospitalization. We aimed to explore ambulance staff experiences of medical emergencies in care homes.

Methods: We used a qualitative design and purposive sampling to recruit frontline ambulance staff who had attended medical emergencies in care homes in England, United Kingdom. Data were collected using semi-structured interviews (conducted by telephone or online) and were analyzed using thematic analysis.

Results: We interviewed 15 ambulance staff members and developed four analytical themes, capturing what ambulance staff perceived facilitated or impeded high-quality care being provided during emergencies in care homes. Participants felt that effective communication was important to ensure a good care experience and discussed barriers to communications, such as language difficulties or disagreements during decision-making. They highlighted the need for better ongoing care in care homes, further training for ambulance and care staff, and that the current service pressures were a barrier to providing high-quality emergency care.

Conclusions: This study highlights the main challenges and facilitators that ambulance staff are faced with when dealing with emergencies in care homes. The findings will help inform the development and evaluation of interventions to improve outcomes and experiences of emergencies in care homes.

ARTICLE HISTORY
Received 11 December 2024
Revised 13 March 2025
Accepted 18 March 2025

Introduction

Care homes provide accommodation and personal care (with or without nursing) for older people with dependency or disability (1). Care home residents often experience medical emergencies requiring ambulance attendance that may lead to potentially avoidable hospitalization (2). Past studies found that nursing home residents accounted for 6.5% of Emergency Department (ED) attendances for people aged 65 years and older in England, United Kingdom (UK) in 2016–2017 (3) and 1.9% of all United States ED visits over a 4-year period (4). An Australian study (5) found that people living in residential aged care facilities experienced up to four times higher rates of emergency ambulance attendance than age- and sex-matched people living in the community.

Many researchers have focused their efforts on studying care home and emergency care processes. For example, past studies have often focused on patterns of emergency ambulance use (5) and demand, (6) predictors of transport to hospital after emergency ambulance attendance for care home residents, (7) or care home staff and service user experiences (8). In addition, one systematic review (8) reported that nurses found the transfer process challenging, requiring appropriate clinical knowledge, skills and resources to improve communication and collaboration between stakeholders. Another qualitative review (9) highlighted the need for better long-term care, knowledge of residents, better communication, and trusting relationships, especially for decisions on treatment or ED transfer. Another review found tensions between ambulance and care home staff, residents and their families when making treatment decisions and identified the need for more qualitative studies exploring the experiences of different stakeholders (10).

Studies investigating emergency medical services (EMS) staff experiences have explored personnel perceptions of aging in the care home context (11) or staff experiences in

CONTACT Aloysius Niroshan Siriwardena nsiriwardena@lincoln.ac.uk
Supplemental data for this article can be accessed online at https://doi.org/10.1080/10903127.2025.2490810.

ethical decision-making (12). In addition, one study (13) from Austria, where emergency physicians can be asked to attend care homes, found that although patients, nurses and physicians were happy with the quality of emergency care, they acknowledged problems with communication and cooperation between nurses and physicians.

Despite such interest in studying emergencies and/or care homes, no studies have explored the experiences of ambulance staff providing emergency care to care home residents. Furthermore, service models for care home residents experiencing medical emergencies differ substantially between countries, with uncertainties about how best to configure EMS to respond to calls from care home staff (10). We aimed to explore ambulance staff experiences of emergencies in care homes.

Methods

Study Design

We used a qualitative design with semi-structured interviews of ambulance staff, following consolidated criteria for reporting qualitative research (COREQ).

Settings and Participants

We used purposive sampling to recruit frontline East Midlands Ambulance Service NHS Trust (EMAS) staff who had attended recently medical emergencies in care homes. East Midlands Ambulance Service NHS Trust provides emergency 999 care and telephone clinical assessment services for a population of 4.9 million people (14) across the urban and rural East Midlands region covering 15,600 km^2 (6% of the total area) of the UK (15).

We defined a care home medical emergency as any event resulting in an emergency call to the ambulance service. Care homes, in this study, included both nursing (employing nursing staff) and residential (employing non-nursing staff) facilities.

We recruited frontline EMAS ambulance staff by email. Those expressing an interest were emailed participant information sheets and consent forms. Written consent for interview was received from all participants. Ethical approval was obtained from the UK Health Research Authority (Reference 21/WM/0229).

Data Collection

Data were collected between February and March 2022 by one female researcher (DL) using semi-structured interviews conducted by telephone or online (*via* Microsoft Teams), depending on participant preference. The interviewer had no prior contact or knowledge of the participants. Data collection continued until data saturation was reached.

The interview guide (Supplemental File), developed by the study team, included open-ended questions designed to explore ambulance staff's thoughts and experiences around responding to an emergency in a care home, assessing and making treatment decisions, transferring residents to the ED. Field notes were made during or after the interviews. Transcripts were not returned to participants for comment and/or correction, nor did participants provide feedback on the findings.

Data Processing and Analysis

Audio-recorded data were transcribed verbatim and entered into NVivo 12 to facilitate data analysis. We used thematic analysis, following the Braun & Clarke framework (16), to analyze and synthesize our findings. Two researchers (DL, VHP) read, re-read and inductively coded transcripts independently, which were then discussed with other members of the research team to iteratively organize codes, develop descriptive themes, and identify analytic themes.

Reflexive Statement

Lead author DL is a health services researcher, with a background in psychology, trained and experienced in qualitative studies. She has worked previously in studies exploring stakeholders' experiences and perceptions of emergency care in care homes. Coauthor VHP is an experienced qualitative researcher. Coauthor MK, a Chartered Psychologist, has worked as a health and social care senior manager, and conducted research in health and social care research, focusing on service organization. Coauthor GAW is a UK registered paramedic and postdoctoral researcher with 13 years of clinical experience. FC is a lecturer in evidence synthesis, researching health and social care topics. Coauthor ANS is a clinical academic, and general practitioner by background, with previous experience as an ambulance service medical director.

Patient and Public Involvement

Two members of the Healthier Aging Patient and Public Involvement (HAPPI) Group (NP, LW) were involved in study design, materials, data analysis and dissemination.

Results

Participant Characteristics

We interviewed 15 ambulance staff (5 paramedics; 4 emergency medical technicians (EMTs); 2 student paramedics ex-EMTs; and one each of a paramedic/clinical tutor, specialist practitioner who was a pharmacist prescriber and paramedic, urgent care assistant, and a manager who was a paramedic. Participants, aged between 21 to 64 years, were employed by the ambulance service between 1 and 23 years. Most (8/15) self-identified as male (one participant self-identified as non-binary) and White British (13/15) with one self-identifying as English or British, and another as mixed ethnicity. Interviews lasted between 33 min and 2 h.

Main Findings

We developed four analytic themes (Figure 1), describing facilitators or barriers of high-quality care for emergencies in

care homes. Table 1 presents the complete coding tree, including the main four analytic themes, descriptive themes, initial codes and corresponding quotations in detail.

The Complexity of Shared Decision-Making for Person-Centered Care

Most participants felt that the best outcome for residents often meant treating residents on site and enabling them, if safe and appropriate, to remain there. Participants reported consulting with those involved, including care home staff, other ambulance staff or health care professionals, residents and their relatives, whenever possible and depending on their availability, before deciding on treatment and transfer to the ED.

Treatment decisions depended on factors, such as the resident/ family wishes, medical history, Recommended Summary Plan for Emergency Care and Treatment (ReSPECT) forms (17), alternatives to hospital, policies and protocols, and professional opinions about appropriate courses of action. ReSPECT is a personal emergency care plan summary that documents the wishes of adults and children regarding possible treatments and emergency care that they would (or would not) like to receive during an emergency.

Alternatives to ED (alternative pathways) included support from a geriatrician, specialist paramedics and other practitioners able to perform minor treatments (e.g., suturing), or rapid response teams providing intravenous (IV) antibiotics in the care home. Some expressed that alternative pathways were not always accessible, due to hospital staff not wanting to accept patients, lack of financial resources and low staffing levels. Participants felt that ReSPECT forms and advance directives needed to be available, up-to-date, complete, and comprehensive.

Despite the complexity of emergency care conversations, participants said they always involved both the resident (if they had mental capacity) and their next of kin or appropriate consultee (if available), to gather information for an informed decision on care, even when discussing end-of-life care. Where there were disagreements between staff, residents, and relatives, staff described the process of negotiating satisfactory treatment decisions or, in some cases, approached more senior professionals (e.g., geriatricians) to make a final decision.

Need for Effective Communication

Participants felt that effective communication was important to ensure a good experience for everyone involved, and this was facilitated by the length of experience of ambulance staff. Participants stressed the importance of having access to comprehensive medical information about the resident when they first arrived at the care home and how there were often delays in being able to speak with care home staff who knew the resident or what had happened. This complicated the situation for attending ambulance staff. Ambulance staff found it helpful when they had access to grab sheets (i.e., accident & emergency information sheets with details about residents) or the Red Bag scheme (18) was being operated in a care home. The Red Bag scheme is a 'Hospital Transfer Pathway' that consists of a dedicated Red Bag that contains standardized information about the resident's general health, any existing medical conditions they have, medication they are taking, and highlighting their current health concerns. Once the resident is ready to be transferred back to the care home, a copy of their discharge summary is placed in the Red Bag and taken back with them to the care home.

Overall, it was felt there were few problems communicating with care home staff, but quality of communication

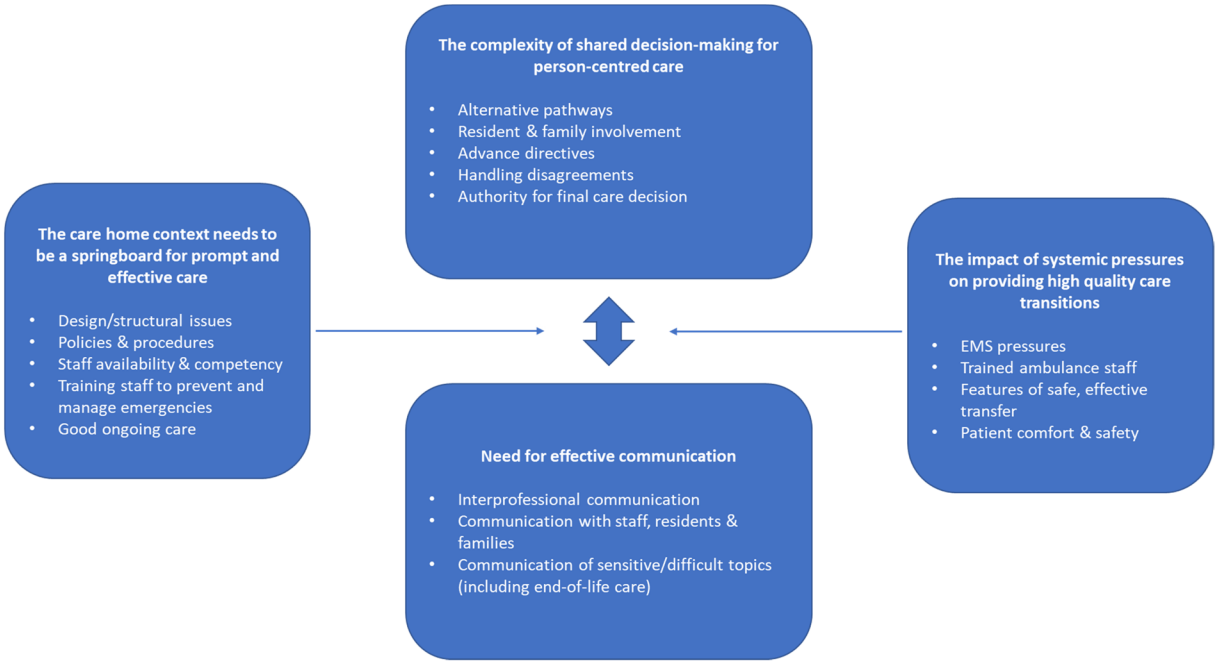

Figure 1. Summary of main analytic & descriptive themes.

could vary when care home staff had insufficient information to provide a proper handover or there were language difficulties in care home staff or residents and their families.

Ambulance staff said that their main concern when communicating with residents was putting them at ease and addressing their concerns. Participants described using specific communication programs and/or mobile applications for language or hearing difficulties, such as Makaton (19) or Language Line (20), but sometimes encountered difficulties using these. Makaton (19) is a communication tool that uses speech, signs, and symbols to support people with disabilities to communicate with others, whereas Language Line (20) provides translation and interpretation services, free of charge, when verbal translation is required.

There were challenges trying to communicate with people who had a head injury, dementia, lacked capacity for other reasons, had sensory impairment, or were struggling to understand explanations of their condition/treatments and care home staff or relatives were asked to help with communication. Ambulance staff felt that communicating with

Table 1. Themes and supporting quotations.

Analytic theme: the complexity of shared decision-making for person-centred care		
Initial codes	Descriptive themes	Example supporting quotations
Doing what's best for the resident in that situation	Important outcomes-good quality of care of emergencies in care homes	"…it's about doing the right thing for that patient at that time, within the specific care plan and to meet their specific needs." (AS6)
Treat & leave in care home, if safe to do so		"…it's usually my aim to try to ensure they're able to remain there [the care home] if it's safe to do so." (AS3)
Who they consult with	The decision-making process for transferring patients	"… the decision would involve those attending from the ambulance service, whether that be in a pair, solely or a team of people; the patient, provided they can make a decision (i.e., whether they have capacity); the care staff; and also the resident's relatives if appropriate." (AS7)
Deciding whether to transfer patients depends on various factors		"So, there are a lot of different decision-making factors, and it's also about risk versus benefit. […] We also take into account frailty." (AS9)
Policies & protocols		"…so we have a conveyance-type procedure… That process does make it harder to do what you think is best, because sometimes you have to be led by the policies more than the patient's needs if that makes sense." (AS8)
Sometimes transfer to hospital is preferable or unavoidable		"Obviously, if the patient's got a heart condition, or if it's a stroke or a fractured hip, they're going to go in." (AS11)
Having a geriatrician has been beneficial	Alternative pathways	"If we then feel like they need to receive extra treatment, we'll phone the geriatrician […] they're just brilliant. […] nine times out of ten they're always kept in the community" (AS15)
Specialist paramedics can suture in the care home		"We have got lots of things in place now where we do have specialist paramedics who can suture in the home." (AS4)
Rapid response team can go into care homes and do IV antibiotics		"There's a rapid response team that work in office hours and will do IV antibiotics if requested by the GP." (AS13)
Alternative pathways don't always work		"It just seems to us like they're making excuses not to accept patients […] Another issue is staffing levels, which boils down to finances and qualifying people. […] I just don't think they work." (AS2)
People's decisions need to be recorded when entering a care home	ReSPECT forms/ advance directives	"[…] when somebody enters a residential or a nursing home, their decisions need to be recorded at that time regarding any treatments […]Are they for aggressive treatment? Would they prefer to be treated at home wherever possible?" (AS13)
ReSPECT forms are very helpful to paramedics		"ReSPECT forms are so helpful to us. Literally, if a patient's unconscious, we go to that patient and we haven't got a ReSPECT form, we pick them up and take them into hospital. They then come round in the hospital and say, "I didn't want to go to hospital," but we didn't know that." (AS2)
ReSPECT forms are beneficial for residents		"ReSPECT forms are extremely helpful to us[…] they're beneficial for residents." (AS2)
Not everybody has a ReSPECT form		"… is a really big issue, not everybody has a ReSPECT form" (AS2)
Often ReSPECT forms are not complete or comprehensive enough		"…quite old or not completed correctly […] It's quite common that you go to someone whose ReSPECT form is blank, apart from the DNACPR one." AS3; "Sometimes forms aren't very comprehensive […] they should be reviewed on a more regular basis" (AS10)
End of life discussions are difficult & complicated		"Quite difficult to be honest. Nobody likes them. […] So yes, you're telling a relative over the phone that their family member's going to die, which isn't ideal." AS4
Always involve residents & their families	Resident & family involvement	"If the patient has capacity, then we give them the options, what we'd recommend, or what the geriatrician or the GP recommends, and they'd then make a decision." (AS15)
		"…making sure that I'm making an informed decision with the help of the family. And if the family is involved, then they tend to feel happier anyway." (AS1)
Residents with capacity have the final say in the decision-making process	Authority for final care decision	"Ultimately, if the resident has capacity, it's their decision." (AS13)
Most senior person makes final decisions (if resident lacks capacity)		"Ultimately, as the registered professional on scene, the final decision is mine. […] And if the patient lacks capacity, we'd then start to look at things like advanced planning or respect forms to see what the patient actually desires." (AS10)
Disagreement over transfers can happen	Handling disagreements	"It can happen [referring to disagreements]. I wouldn't say it happens regularly, but it does happen." (AS11)
Negotiation & diplomacy		"When there are disagreements, normally we're the first diplomacy kind of people […] we'll then request the consultant geriatrician […] they normally make a final decision, but if there is conflict, we need to get all parties to agree." (AS14)

(*Continued*)

Table 1. Continued.

Analytic theme: Need for effective communication		
Initial codes	Descriptive themes	Example supporting quotations
You need good communication skills	General facilitators of good communication	"So, you have to judge, and I think that's a life experience thing where you judge what that particular person wants." (AS2)
Having experience facilitates communication		"I think that's an experience thing. Thirteen years in, you can judge your audience and you know how to talk to people." (AS12)
Importance of good quality information about the event & the resident	Interprofessional communication	"….there are some things that would be useful for the care staff to have ready before we arrive. So, it's things like having information about that patient, any next of kin, their medical history and their MARs chart (e.g., their medication chart) available. [….] they should know to have XYZ ready because that's what the ambulance crew will want." (AS7)
Handover of medical history/clinical handover		"Sometimes, there's quite a delay for someone to take us to the patient. Sometimes, there's a delay in getting any form of useful handover from someone who knows the patient or knows what happened." (AS14)
Grab sheets are very useful for communications		"….they have a lot of grab sheets, which is quite handy for us because we can get all the patient's details that way. [….]If we're going to someone who's woken up and is a bit aggressive, is that normal for them because it's 3 am in the morning or is it because they've got a raging UTI?" (AS12)
The red bag scheme is really good		"In North East Lincolnshire, they have something called the red bag scheme, which basically means if the patient goes to hospital, all the paperwork and their medications are in the red bag, so you literally pick the bag up and go. It is a really, really good scheme. The only downside of it is they don't always get the red bag back, which is a bit of an issue. [….] Everything's actually in the bag and ready." (AS2)
Communicating with care home staff is fine		"Normally, they're spot on. I've never had an issue with them. [….] generally speaking, I have good communication with the carers." (AS4)
Some care homes don't communicate well		"Some care homes don't communicate particularly well with the ambulance service. It's the individual. It's not the actual care home but the actual carers." (AS11)
Information sometimes can be incomplete		"…. if the care home staff don't know what happened because it was unwitnessed [….] It's an unknown factor that we can't get over. [….] that's the only barrier." (AS5)
Language difficulties make communication harder		"….there can sometimes be communication difficulties with people where English isn't their first language." (AS2)
Putting residents at ease & addressing their concerns	Communicating with residents & their relatives	"Just reassurance. As much as we can, we try to become their friend so that they trust us. We become their carer and they're quite happy to come with us." (AS4)
		"….a lot of the time, you just have to explain it in normal language for them, and then they're quite happy because they understand what you're talking about or what's been said previously." (AS12)
Apps used for language or hearing problems		"…. there's basic gesture, signing and stuff like that. We can normally get through the basics that way. There is something called LanguageLine that we can use where we can ring up and there's a translator on the other end of the phone. However, in practice, I've only used that a couple of times because the reception is poor, the volume is poor, it's a slow service, they can't see what's happening and it's not a practical solution really." (AS14)
		"We can use Makaton, sometimes there are people that can use sign language, and a lot of the time they can lip-read because they've gone deaf over time, or you just shout. [….] If you've got a good member of care home staff, they'll know how to communicate with that particular patient, and you use them." AS9
Difficulties with communicating with residents		"Sometimes, some dementia patients can be quite difficult, but that's due to their condition. [….] The other thing is head injuries[….] They can prove challenging." (AS9)
		"With residents, again, it depends on their level of capacity. [….] So, sometimes that's when we'd use the patient advocate obviously. Sometimes it's very difficult, especially with the patients that have got capacity but sometimes don't quite understand what it is you're telling them or asking of them." (AS6)
Care home workers or relatives are often asked to facilitate communication with residents		"… you find a way. Normally we'd speak to the care home staff and ask how they'd normally communicate with them and how they'd know if they were in pain. [….] then we'd speak to their relatives (AS15)
Easy to communicate with relatives		"Relatives I've always found fairly easy to communicate with. [….] they're usually very hands-on…." (AS15)
Difficulties communicating with families		"….some relatives can be quite dogmatic [….] Sometimes people just won't listen to what we're trying to say to them or trying to suggest to them." (AS5)
		"…there's often a bit of hesitancy to disturb a family member who might have to get up for work the next morning." (AS10)
		"….we then sometimes try to communicate with family and relatives, and we decide whether they actually have got lasting power of attorney or not. Sometimes that's really difficult." (AS6)
End-of-life discussions are challenging		"I think it is challenging, but at the same time, it is part of the job." (AS8)
		"….normally they've already come to terms with it, so the communication isn't too difficult. It's when they aren't in a position to be able to understand what you're telling them or be able to connect the dots themselves or work out for themselves what's happening, then it can become quite tricky." (AS3)
No issues with handovers to A&E staff	Communicating with A&E staff	"And then when you get into the hospital, handing over to the staff is fine. There aren't any complications there." (AS12)
Difficulties communicating with A&E staff		"… it's normally quite a complex handover, and in a busy scenario, it's quite easy for things to get missed or overlooked. Even if you hand over to a particularly good member of staff [….] there's chance of unfortunate information going missing." (AS14)
		"That can be frustrating when we have disagreements. If our recommendation isn't something they want to consider, that can be frustrating." (AS3)

(*Continued*)

Table 1. Continued.

Analytic theme: The care home context needs to be a springboard for prompt and effective care		
Initial codes	Descriptive themes	Example supporting quotations
No way of completely avoiding emergencies	Impossible to avoid or prevent emergencies in care homes	"There's definitely no way of completely avoiding them [i.e., emergencies in care homes], and in a way, I wouldn't want them to because sometimes it gets too risk averse to the point that actually patients' welfare is impacted." (AS14)
Care home quality of care varies	Good ongoing care	"Some care homes are absolutely amazing. They know all the residents personally and they have very much a kind of welfare-based practice. [….] They'll just be proactive. [….] compared to some others where they are poorly trained or scared of being sued or don't know the patients or whatever. [….] So, it's very varied." (AS14)
Need for better and regular provision of care		"I wonder whether the background continuity of good care checkups and regularity of doctor and EMP visits would reduce emergency conveyance. [….] Do we need to be taking better care of these patients sooner?" (AS6)
Often called to care homes, when in fact they're not needed		"I think people call us when they want us to access primary care for them. [….] I get the impression that care home staff sometimes feel that we're so good at referring people elsewhere or taking on responsibility for looking after someone and making those decisions, they'll call us because then it saves them making those decisions." (AS3)
		"… and by the time we arrive, it's no longer an emergency. [….] Because of litigation, the worry is that they'll miss something." (AS6)
Not enough care home staff	Staff availability & competency	"They haven't got enough staff, and I know that's because the owners are obviously trying to keep the costs down. More staff would be beneficial for the other staff as well because obviously, they're not going to be running around like headless chickens.." (AS11)
Care home staff are helpful		"….generally they're really helpful, especially the care assistants, because they treat them like their own family or their own grandparents, so they do know them really well." (AS12)
		"… the carers who've looked after the patients for a long time are usually the best sources of information because they tend to know how the patient is." (AS10)
Training needed re basic assessments & skills	Better training needed for care home staff	"I do feel there needs to be quite a lot of improvement made in care homes and nursing homes around basic assessment of a non-injured fall patient, which doesn't necessarily require an ambulance attendance." (AS10)
		"If there was more staff and more training on manual handling and first aid, that could prevent a lot of emergencies happening, with more staff monitoring residents, understanding when to call an ambulance and when not to [….] staffing and extra training for care home staff would be good." (AS15)
Training to help care home staff know when or if they need to call for an ambulance (or other pathways)		"I think perhaps the other thing is the education of the care home staff so that if a patient is ill, they know what the appropriate pathway to get treatment is. For instance, it could actually be that the out-of-hours doctors service is more appropriate…" (AS10)
Better training for care home staff to understand what ambulance staff need to know		"Maybe better training for them so that they understand what we need to know or having a better standard across all care homes. A lot of them have emergency grab sheets, which I do find quite beneficial, but not everyone has them." (AS8)
Staff need to know residents well		"More education around the residents would help [….] and when emergencies do happen, they're able to give an adequate history so that we can determine what's normal and not normal for the patient, because obviously that's what determines whether or not they're conveyed to hospital." (AS15)
Should have consistent procedures across all care homes	Policies & procedures	"….it's more about pre-planning, communication and having set procedures to ensure all care homes are regimented in what they do." (AS7)
Care homes need to be proactive and intervene early		"….care homes need to be proactive, recognize when patients have got small complaints and deal with them quickly, speaking to GPs and nurses and using alternative care providers to help understand what constitutes an emergency." (AS7)
Policies like having to call 999 when a nurse is in the care home should be challenged		"This is especially the case in head injuries where I'm often told by nurses that their policy is that they have to be checked out by a paramedic. [….] I think policies like that should be challenged by the Ambulance Service." (AS10)
CH access & egress issues	Care home design and structural issues	"A lot of the older care homes just have stairs, and some of them don't even have a stair lift. [….] But the problem is that if that patient's unconscious or unresponsive, a stairlift isn't going to work because they're not able to sit up. And then obviously we can't get chairs past a stairlift to carry them down the stairs, so it is really a bit of an issue. [….] But with the older care homes, we have a real access and egress issue." (AS2)
When extraction due to design issues is difficult, you need to think outside the box & take risks		"I've strapped patients to scoop stretchers, and we've taken them downstairs in the past by lifting them upright and moving them down. [….] Sometimes you've got to think outside the box and take some risks." (AS1)
Car park issues		"Just keep things in good order, keep the ambulance bay clear, and make sure you've got double doors to get out of if you can. [….] Sometimes we're not even able to park close by to the care home because it's on a roadside." (AS2)

(*Continued*)

Table 1. Continued.

Analytic theme: The impact of systemic pressures on providing high quality care transitions		
Initial codes	Descriptive themes	Example supporting quotations
Pressures on the service make things harder (not enough ambulances & staff)	EMS pressures	"And there are pressures on the service; we haven't got as many ambulances and staff as people think we have." (AS2)
GPs calling ambulances too often		"And the GPs need to be pulled up on this as well because if somebody rings, the GPs tend to call an ambulance. But it's like, 'Well, no, come out and see your patient. Give them an appointment!'" (AS11)
How emergency calls are allocated-helping out in other areas nearby		"…there's a thing now within control called auto-allocation [….] that identifies the nearest ambulance to that job, so if we're called to a job in South Derbyshire, if we're less busy, then we can get called to help out in another area nearby." (AS7)
No real challenges in resident transfer	Features of safe, effective transfers	"I've done it many times over the years. I don't really ever have a major issue with it if I think that it's going to be for the patient's benefit obviously." (AS5)
Residents being comfortable & feeling safe		"… what me and my crewmate try to do is reassure them and [….] try to make it not seem such a daunting process." (AS5)
		"Once we get them into the ambulance, I think sometimes it's just about talking to them all the way and making sure you focus on your patient [….] because they're probably going to be a little bit frightened or a little bit scared, and maybe they hadn't been too keen on going in the first place [….] making sure they understand what you're doing and [….] fully explain to them what's going to happen between us arriving at the hospital and us handing over to the nursing staff." (AS1)
Ambulances are not comfortable		"….obviously driving in the back of an ambulance is like a converted van, so they are extremely bumpy, loud places to be. For someone who's quite frightened or frail, it's not ideal." (AS15)
		"I suppose comfort can be a big one [….] we have vehicles that aren't built for comfort; they're built essentially to treat and save lives. So, we won't be coming out with a really comfy stretcher." (AS7)
Main issue is waiting outside hospitals for too long		"I feel sorry for the patients because there's nothing more infuriating than being rushed to hospital and then being sat outside for three, four or five hours." (AS2)
Resident concerns of being transferred		"I think one of their main fears is the possibility that once we've taken them to hospital, they won't be coming home, especially the more elderly they are. If they think they're getting near to their end of life and they want to die where they are, that's a big fear." (AS1)
		"I think most of the times I've transported a patient from a care home, it's not been a positive experience for them just because of the unfamiliarity of it." (AS6)
Transferring residents with dementia can be challenging		"With Alzheimer's patients, they're very scared, they don't want to be there, and they can get quite aggressive and quite upset. [….] They've not got that capacity anymore to understand that we're trying to help them." (AS4)
Training is always beneficial	Training	"I think probably any training is always beneficial, and even people who have been in the job 20 or 30 years would benefit from training because there's always something to be learned. You don't ever know it all." (AS2)
No need for training re emergencies in care homes		"But obviously, an emergency is an emergency to us. We deal with the patient and not the setting." (AS4)
Training re emergencies in care homes would be beneficial		"Maybe more specific training for this sort of situation. [….] All the questions you've given me, putting it all together in some sort of training, that would be handy: how to manage conflicts with family and healthcare, end-of-life, that sort of thing." (AS3)
Need more training on manual handling (especially in confined spaces)		"…. obviously lifting people downstairs is part of the job, but then hoisting people and moving people from confined spaces is difficult. [….] we could probably do with a little bit more training on manual handling in extraordinary circumstances." AS2
Training on working with elderly people		"So, some training for newly qualified paramedics at university or for those perhaps going into care homes [….] they should be going onto geriatric wards and spending time with a geriatrician, because the majority of our patients are old and they should probably spend a week in a nursing or care home as part of their course assisting as a carer. [….] And it'll give them a better understanding of what goes on." (AS13)
		"….we don't do enough when it comes to hoists and things like that." (AS12)
Would have liked training re management of dementia		"Better understanding of the disease so that we're better equipped to respond [….] if we're able to understand more about what causes the aggression—because sometimes we are met with aggression from dementia patients—we can learn how best to diffuse it." (AS13)
Would like training on end-of-life care & do not attempt resuscitation orders (DNARs)		"It would've been nice to know more information about frailty and more information around DNARs and end-of-life care. All of that we've sort of learned as we've gone along. We don't have any specific training before we come out to patients in care homes. We just get on with it." (AS9)
Suggestions for improvement		
Initial codes	Descriptive themes	Example supporting quotations
Care homes should be better prepared to deal with emergencies	Need for improving quality of care	"Every time I deal with an emergency in a care home, I feel like the care home isn't prepared for it, even though the likelihood it's going to happen is quite high." (AS6)
Care homes can use app to deal with falls		"… there is an app. [….] it tells you what to do: you either get them up or leave them and wait for us. Something like that would be very helpful, to avoid all of these long-lie patients." (AS12)
GPs visiting care homes more regularly would be helpful	GP involvement	"….it'd be good if a GP or a nurse practitioner did a ward round at least every Monday, Wednesday or Friday because there's always somebody in a nursing home or a residential home that needs some form of assistance." (AS13)
Better involvement of GPs in advance directives & respect forms is needed		"Better involvement of GPs. GPs should know that these people are clearly very frail and often clearly end of life—well, not necessarily end of life, but palliative care—and yet, a lot of them don't have any advanced care plan documents [….] but a bit of forward planning could save us a vast amount of time on scene." (A14)

(*Continued*)

Table 1. Continued.

Having a geriatrician would be brilliant	Alternative pathways	"Having the geriatrician 24 h a day, 7 days a week, would be absolutely brilliant." (AS15)
A falls team would alleviate a lot of pressure on 999		"We could also do with a falls team. [….] That would alleviate a lot of the pressure on 999, which would then mean we'd be able to get to patients quicker that need us in the care home, like those with poor breathing or chest pain." (AS12)
A direct number for care homes to ring for triage (instead of 999)		"…perhaps it would be worth setting up in each of the 11 ambulance trusts a direct number for care homes and residential homes that they can ring rather than ringing 999." (AS13)
Triaging calls better could prevent taking people into A&E		"… if we triaged the calls a little bit better, we could prevent people from going into hospital." (AS2)
Need to be more comprehensive in coverage	How to improve ReSPECT forms	"More self-explanatory information, maybe covering more conditions [….] to give them more options to choose from in terms of what they don't want to go into hospital for, or if they refuse treatment, I think the form needs to cover a broader range of aspects." (AS11)
Standardise forms & overall process of setting up ReSPECT forms		"I think it would be good if there was a standardized form or standardized setup on the computer for every patient.'" (AS5)
Update ReSPECT forms regularly		"… one of the frustrations with the ReSPECT forms is that perhaps they should be reviewed on a more regular basis because if a ReSPECT form's been written let's say a year ago for ward-based care, that might not be applicable when I attend the patient maybe six, seven or eight months later." (AS10)
Only way to improve end-of-life discussions is to be prepared	Improving end-of-life discussions	"Again, it's preparation. [….] Death will come to us all, so let's have our wishes felt [….] it should be something that's broached at the earliest opportunity. Let's put a plan in place!" (AS4)
Purpose built buildings with better accessibility	Designing care homes	"….so more purpose-built buildings would be better so that we can actually get stretchers up to whichever floor the resident is on [….] with wide doorways, lifts and big bedrooms." (AS11)
Accommodate residents who need EMS often or have mobility issues on the ground floor		"So, we could look at planning where we put residents based on their medical history or needs. For example, if their mobility is poor, why put them on the second floor? Put them on the ground floor. Particularly if there isn't a lift." (AS2)
One database for each patient & patient record (accessible to all organizations)	Care home processes & procedures	"…that leads to the fact that there really should be just one IT database spine for every patient, one patient record that everyone adds to. But there you go, that's pie in the sky, isn't it?" (AS13)
Correct & up-to-date paperwork, resident medical histories, etc.		"… having clear, updated grab documents for each resident would be great […] So, documentation, accessibility of the documentation and making sure it's up to date etc. are all really key to helping us, especially in emergencies." (AS14)
Make sure everything is ready for ambulance staff to take with them		"I'd like to see the paperwork available for the patient as soon as I arrive on scene, i.e., I want a basic minimum of a drug history, drug allergies and a past medical history available to me, and ideally some observations as well so I've got a comparison." (AS10)
		"…it's important that various things including paperwork are ready before we arrive in case we do end up going to hospital." (AS7)
Standardise the info EMS want to receive from care homes		"… it'd be good to have a checklist of what the care home needs to have ready for us; filling in a checklist of what we leave with; and maybe taking an A4 piece of paper of what we've taken to hospital in terms of items pertaining to that patient." (AS7)
Grab sheets are beneficial		"A lot of them have emergency grab sheets, which I do find quite beneficial, but not everyone has them." (AS8)
Keep the 'Red Bag' scheme going		"When we took residents to hospital previously, they knew that we were taking in this red bag and that red bag would stay with that patient. So, […] they could identify that they were from a care home." AS7
Have a dedicated member of staff to work with ambulance staff for the duration of their visit		"I think the staff need to be made aware that we need a dedicated member of staff to work with us when we get there." (AS10)
Having someone accompany the residents to A&E		"It's nice when a next of kin or carer accompanies the patient because that means you feel reassured there's someone to stay with them and be their advocate." (AS14)
Transporting residents to A&E		"It would be easier in some respects if carers were able to transport patients to hospital. That would also save […] not only ambulance time, but a lot of waiting time and distress on the patient's behalf." (AS14)
Having more & better trained staff in care homes	Training	"I think if you had better education or better-educated people working within care homes, then the standard of care would improve. […] They're always understaffed and they'll take on anybody." (AS9)
Training needed		"If there was more staff and more training on manual handling and first aid, that could prevent a lot of emergencies happening, with more staff monitoring residents, understanding when to call an ambulance and when not to." (AS15)
Having multidisciplinary teams in care homes		"…having some sort of clinically trained person within a care home who's able to administer or oversee the documentation and administration of that type of drug would be brilliant." (AS14)
		"…I think there should be specialist dementia nurses in nursing homes, but that would be in an ideal world." (AS13)
		"… maybe it would be good to have a multidisciplinary team coming in […], the appropriate professional could come in early and see if anything's going downhill or getting worse." (AS7)
Prioritising residents so they can reach them earlier	Prioritising care home residents	"…what would make it better is if they weren't the people at the bottom of the list waiting for twelve hours, because sometimes they do need an ambulance quicker, but since they're in a place of safety, they're probably not prioritized as much as people out in the community." (AS8)
Raise awareness in control rooms		"… maybe it'd be good to raise awareness in our control rooms about the fact that leaving these patients there for a considerable amount of time could worsen their condition, whereas getting there a bit quicker would benefit them more." (AS15)

(*Continued*)

Table 1. Continued.

Adapt vehicles and equipment to make frail patients more comfortable	Making ambulances more friendly & comfortable	"….they've started looking at how we can adapt our vehicles and equipment to be more friendly to people who might be really frail or who might not understand what's going on, dementia patients particularly. They've changed the color of the ambulance floor to make it less disorientating and there are pictures on the inside of the windows that we can use. There are things that people can fiddle with." (AS3)
Older ambulances need to be changed more often		"I do think the vehicles probably need to be changed." (AS2)
Dementia-friendly ambulances		"On the window, it looks like there's a field with animals, foxes and birds to stimulate conversation in order to distract people with dementia. We've also got USB sticks with different eras of music to play in the back of the ambulance, and twiddle muffs as well. [….] We can dim lighting so it's not as clinical …" (AS15)
Give residents personalized belongings while being transferred	Being comfortable while being transferred	"Maybe it'd also be good to have a packed lunchbox that they could take with them in the ambulance, or their own blanket or pillow that won't get lost in the hospital. Just some more personalized things for them." (AS9)

Note: A&E: accident & emergency; DNACPR: do not attempt cardiopulmonary resuscitation; DNAR: do not attempt resuscitation; EMP: emergency medical practitioner; GP: general practitioner; IT: information technology; MARs: medication administration records; ReSPECT: Recommended Summary Plan for Emergency Care and Treatment; UTI: urinary tract infection.

Table 2. Suggestions for improvement made by ambulance staff.

Suggestions for improvement made by ambulance staff	
The complexity of shared decision-making for person-centered care	• More GP involvement in everyday care to prevent emergencies, complete ReSPECT forms and put end-of-life plans in place for care home residents. • Having alternative pathways, such as access to a geriatrician, dedicated falls team, direct number for care homes to ring for triage, or better triage in general would help avoid ambulances being called unnecessarily and transfers to the hospital.
Need for effective communication	• Having a unified care record for each resident, accessible to all organizations, in order to facilitate communication and safe inter-organisational clinical handover. • Need for standardized, correct, and up-to-date resident records, medical histories and information available to ambulance staff as soon as they arrive at the care home, together with anything else the resident should have with them in case they need to be transferred (e.g., medication, clothing, etc.). • Having grab sheets and/or implementing the 'Red Bag' scheme more widely.
The care home context needs to be a springboard for prompt and effective care	• Need for care homes to be better prepared to deal with emergencies and to be able to handle some (e.g., falls), when the resident is not injured, without ambulance service input. • ReSPECT forms should be routinely completed, updated and stored in patient records in all care homes to cover a broad range of conditions and treatments. • End-of-life/palliative care plans should be in place from the moment a resident enters a care home. • Designing new care homes having in mind the possibility of having to call for an ambulance ensuring that rooms, staircases, and lifts allowed safe manual handling, access and transfer by ambulance staff of residents. • Where practicable, allocating (ground floor) rooms to residents depending on their mobility or frequent EMS use. • Having a dedicated member of care home staff stay with the ambulance staff for the duration of their visit and, ideally, have them or a relative accompany the resident if being transported to ED. • In cases of non-emergencies, care homes having their own means of transport and transferring the residents to the ED would be preferable to having an ambulance transferring them, especially for residents living with dementia. • More and better trained staff were needed in care homes, especially trained in first aid, manual handling (for falls, etc.), and basic assessment skills including recognition of injuries. • Having multidisciplinary teams in care homes to help avoid or prevent emergencies, especially if these teams included a clinically trained person who could administer or oversee drugs, specialist dementia nurses or specialists, such as physiotherapists.
The impact of systemic pressures on providing high-quality care transitions	• Prioritizing care home residents for earlier dispatch, raising awareness in control rooms of the risk of their condition worsening if ambulance assessment was delayed. • Ambulances should be more comfortable for residents and older vehicles should be replaced with newer vehicles. • Adapt ambulances and equipment to enhance comfort for frail older patients, operate more dementia-friendly ambulances (21), bring personal items with residents, such as their own pillow and blanket, or a packed meal in case of long waits in the ED. Dementia-friendly ambulances are emergency vehicles tailored toward giving better care for people living with dementia. Some of the modifications include window blinds that are covered in relaxing scenes that contain key points to talk and reminisce about; providing music from specific decades that patients are most likely to have memories from; and 'twiddlemuffs', a knitted hand muff that has been decorated with buttons and ribbons to give patients something to keep them busy and distracted during their transfer to the hospital.

Note: ED: emergency department; EMS: emergency medical services; GP: general practitioner; ReSPECT: Recommended Summary Plan for Emergency Care and Treatment.

relatives while generally easy, could be challenging, particularly for end-of-life discussions.

Finally, although participants felt comfortable communicating with ED staff, they reported experiencing difficulties, due to EDs being busy, the complexity of residents' conditions or when disagreements arose between ambulance and ED staff over the resident's clinical needs. Participants sometimes found the attitude of ED staff toward them disheartening and frustrating, when they were questioned as to why they had brought a patient to the ED.

The Care Home Context Needs to Be a Springboard for Prompt and Effective Care

Although participants felt that emergencies could not always be prevented or avoided, they did feel that provision of care and how they managed emergencies varied, with need for better, ongoing care in care homes, including regular care checkups and doctor visits. They also felt they were often called to care homes when their expertise was not needed, due to lack of care home staff, varying competence of care home staff or they being reluctant to take

responsibility for treatment decisions and risking litigation in case of error, or as a means of accessing primary care or being referred to alternative pathways.

Participants also added that care home staff who knew residents well, especially those lacking capacity, were helpful to ambulance crews. They felt that better training was needed for care home staff, especially on basic assessment skills, first aid and manual handling, knowing when to call an ambulance or access alternative pathways, and the information ambulance staff needed on arrival.

Ambulance staff felt that care home policies and procedures should be consistent across care homes, and that homes needed to be proactive to avoid urgent situations becoming emergencies.

Participants complained about care homes having no lift or one of adequate size, very narrow staircases or small rooms, which made accessing, treating, and transferring the residents difficult or unsafe. Inadequate vehicle access and car parking difficulties were also mentioned.

The Impact of Systemic Pressures on Providing High Quality Care Transitions

Interviewees felt current pressures on the service, with excessive workload, lack of ambulances and staff, were barriers to providing high-quality emergency care. Participants felt pressures were exacerbated by General Practitioners (GPs) advising care homes to call for an ambulance, instead of visiting the resident themselves, and ambulance staff being allocated to attend emergencies outside of their catchment area.

Some participants felt there were no real challenges in transferring residents to hospitals and that transferring them involved similar duties as transferring any other type of patient. More specifically, ambulance staff's main concern during transfers was ensuring residents felt informed, comfortable, safe and reassured. Participants expressed problems of ambulances being uncomfortable, long waits outside hospitals, residents' concerns about being transferred and people with dementia becoming scared, agitated or upset during transfers.

Finally, participants felt that better training was needed for ambulance staff, including on handling emergencies specifically in care homes, manual handling including use of hoists (especially in confined spaces), working with people living with dementia, Do Not Attempt Resuscitation orders (DNARs) and end-of-life care.

Suggestions for Improvement

Participants offered ideas on how to improve care quality for care home emergencies (Table 2).

Discussion

Ambulance staff felt high-quality care, providing the best outcomes, often meant treating the resident at the care home rather than transferring them to the hospital. These findings are supported by past studies, which found that participants preferred to manage residents within care homes and avoid transfers, unless felt to be in the interests of the resident (22). In contrast, a systematic review (9) found that the emergency department (ED) was often considered the safest option for residents, especially when alternative pathways were unavailable.

Our results show that ambulance staff consulted those involved before making decisions on how to treat the resident and whether to transfer them to an ED and often used their diplomacy and negotiation skills to help resolve disagreements between them. Past studies have also documented how conflicts can arise in these situations (9,10, 23,24). Relatives can be supportive of care home staff in managing emergencies, for instance, by making known the residents' preferences and being their advocates, but in other instances can be disruptive, influencing the decision-making process to override residents' wishes (23). We also found that when needed, ambulance staff consulted residents' ReSPECT forms, although these were often missing, incomplete or outdated. Our results echo those of other studies that have also shown that advance care planning is often poorly documented and is an area for quality improvement (2,24).

We found that effective communication was important to ensure a good experience for everyone involved, but the quality of communication varied, with staff facing difficulties when trying to communicate with other organizations, residents or their families. Previous studies have also shown that good communication with stakeholders is considered vital by staff and service users alike (2,8, 9,13).

Our findings on sharing clinical records and data accord with ongoing studies to develop a UK minimum dataset for care homes (25). The governance and implementation of sharing records and data across multiple agencies, with a mixture of private and public providers based in health and social care, should not be underestimated (26).

Our findings echo previous research that sufficient numbers of trained care home staff are required to be able to provide better, ongoing, basic and emergency care (9,27,28), including safe management of resident deterioration, where possible, to avoid it becoming an emergency (2,9,24). In the UK, care home staff include nurses, who are registered professionals, and care assistants who are not professionally registered, but do operate within guidelines for staff training issued by the UK regulator, the Care Quality Commission (29). Care staff undergo a range of training, including mandatory and optional training, which can include basic life support and training in clinical areas, depending on their experience and supervision which can facilitate integration of care with EMS (29,30).

Ambulance staff also highlighted the need for more GP involvement in the everyday care of residents, putting in place end-of-life plans and completing ReSPECT forms. These beliefs were also expressed in other studies, showing the importance of access to timely and appropriate care, from both care home staff and GPs, to effectively deal with emergencies and avoid emergency transfers (2,9, 24,31). To

an extent, the issues identified reflect those raised by both care home staff and GPs in previous studies (32). In keeping with these studies, there was a tension between the recognition that decision-making about medical emergencies in care homes is, by definition, multiagency, and the tendency to place the focus of control and need for change with other agencies, in this case care home staff and GPs.

Finally, our results showed EMS-related barriers, such as the current pressures on the service, uncomfortable ambulances, long waits outside hospitals, and residents' concerns about being transferred, and suggested benefits of further training. Past studies have highlighted the importance of staff training, because of the special skills, knowledge, and resources required, which are often lacking (8,9,27).

These views provide an important perspective on multiple aspects of complex system design described elsewhere in the literature through the lens of EMS.

Implications for Policy and Clinical Practice

Our results highlight the need for better ongoing care at care homes, access to alternative pathways and specialist advice, and better standardization of processes and procedures across care homes. Care homes need to be better prepared to deal with emergencies and to handle some themselves, with further training or primary care involvement in everyday care to prevent emergencies. Ensuring care home staff know their residents and their health conditions well with a robust system for information recording and handover (such as grab sheets, the 'Red Bag' scheme, and shared clinical records accessible to all organizations) would also be beneficial, as would having better access to alternative pathways, such as geriatricians, and a direct number for care homes to call for triage.

Our results also highlighted the need for standardized, regularly updated, advance care plans and ReSPECT forms with input from primary care, early enough to benefit the resident and have a meaningful impact on their care.

Better care home design that allows sufficient space to facilitate safe handling, access and transfer of residents, and better room allocation of residents for easier access would also be beneficial. Additionally, ambulance design needs to ensure comfort and include dementia-friendly vehicles in order to make residents feel comfortable and safe during transfers.

Finally, better training, on managing emergencies in care homes, manual handling especially in confined spaces, dementia, and end-of-life care were welcomed by ambulance staff.

Further research could explore other stakeholders', such as care home staff, residents, and their families, experiences and perceptions of emergency care in care homes.

Limitations

Despite efforts to recruit a variety of participants, all but two ambulance staff members interviewed self-identified as White British. Further research with a more diverse staff population should be conducted to explore these findings in more detail. Caution should also be exercised when attempting to generalize these results to non-English settings, as English EMS and care home settings may vary significantly from other international settings.

Conclusions

In summary, communication was crucial for ensuring a good care experience and language difficulties or disagreements during the decision-making process were considered its main barriers. Ambulance staff highlighted the need for better, ongoing care in care homes and felt that the current pressures on the service were barriers to providing high-quality emergency care. This study highlights challenges and facilitators that ambulance staff face when dealing with emergencies in care homes and provides recommendations on interventions to improve the experience of and outcomes of care for those involved.

Acknowledgments

The authors would like to acknowledge the East Midlands Ambulance Service (EMAS) for providing the data and CaHRU members for their comments. We are also very grateful to Vanessa Botan, Joseph Akanuwe, Elise Rowan, Rachael Fothergill, Susan Bowler, and Graham Law for their significant contribution throughout the conduct of the REACH study. The authors would also like to acknowledge that this work has been previously presented as a poster in the 999 EMS Research Forum Annual Conference 2023, Manchester, UK, and an oral presentation at the 51st Annual Scientific Meeting of the Society for Academic Primary Care (SAPC) 2023, Brighton, UK.

Author Contributions

ANS, DL, LW, NP, RS, FC, GAW, EM and ALG conceived the study, and obtained research funding. ANS supervised the conduct of the study and data collection. DL and GAW undertook recruitment of participants. DL managed the data, including quality control. DL, VHP, MK, GAW, FC, and ANS analyzed the data. DL drafted the manuscript, and all authors contributed substantially to its revision. ANS takes responsibility for the paper as a whole.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Declaration of Generative AI in Scientific Writing

The authors did not use a generative artificial intelligence (AI) tool or service to assist with preparation or editing of this work. The authors take full responsibility for the content of this publication.

Data Sharing Statement

All data requests should be submitted to the corresponding author for consideration. Access to anonymized data may be granted following review and subject to ethical approvals.

Funding

This work was funded by the National Institute for Health and Care Research (NIHR) Applied Research Collaboration East Midlands, UK. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

ORCID

Despina Laparidou http://orcid.org/0000-0002-5427-7422
Viet-Hai Phung http://orcid.org/0000-0002-5827-590X
Maria Kordowicz http://orcid.org/0000-0002-1405-9607
Gregory A. Whitley http://orcid.org/0000-0003-2586-6815
Ffion Curtis http://orcid.org/0000-0001-6843-8568
Robert Spaight http://orcid.org/0000-0003-4361-5876
Elizabeth Miller http://orcid.org/0000-0003-2008-6764
Adam L. Gordon http://orcid.org/0000-0003-1676-9853
Aloysius Niroshan Siriwardena http://orcid.org/0000-0003-2484-8201

References

1. National Institute for Health and Care Excellence. Care homes as a model for housing with care and support [accessed 2023 Nov 29]. https://www.scie.org.uk/housing/role-of-housing/promising-practice/models/care-home.
2. Unroe KT, Hickman SE, Carnahan JL, Hass Z, Sachs G, Arling G. Investigating the avoidability of hospitalizations of long stay nursing home residents: opportunities for improvement. Innov Aging. 2018;2(2):igy017. doi:10.1093/geroni/igy017.
3. Wolters A, Santos F, Lloyd T, et al. Emergency admissions to hospital from care homes: how often and what for?. In Improvement Analytics Unit Briefing. London: the Health Foundation; 2019 [accessed 2023 Nov 30]. https://www.health.org.uk/publications/reports/emergency-admissions-to-hospital-from-care-homes.
4. Wang HE, Shah MN, Allman RM, Kilgore M. Emergency department visits by nursing home residents in the United States. J Am Geriatr Soc. 2011;59(10):1864–72. doi:10.1111/j.1532-5415.2011.03587.x.
5. Dwyer R, Gabbe B, Tran TD, Smith K, Lowthian JA. Patterns of emergency ambulance use, 2009–13: a comparison of older people living in residential aged care facilities and the community. Age Ageing. 2018;47(4):615–9. doi:10.1093/ageing/afy056.
6. Cantwell K, Morgans A, Smith K, Livingston M, Dietze P. Differences in emergency ambulance demand between older adults living in residential aged care facilities and those living in the community in Melbourne, Australia. Australas J Ageing. 2017;36(3):212–21. doi:10.1111/ajag.12413.
7. Dwyer RA, Gabbe BJ, Tran T, Smith K, Lowthian JA. Predictors of transport to hospital after emergency ambulance call-out for older people living in residential aged care. Australas J Ageing. 2020;39(4):350–8. doi:10.1111/ajag.12803.
8. O'Neill B, Parkinson L, Dwyer T, Reid-Searl K. Nursing home nurses' perceptions of emergency transfers from nursing homes to hospital: a review of qualitative studies using systematic methods. Geriatr Nurs. 2015;36(6):423–30. doi:10.1016/j.gerinurse.2015.06.001.
9. Curtis F, Jayawickrama WIU, Laparidou D, Weligamage D, Kumarawansha WKWS, Ortega M, Siriwardena AN. Perceptions and experiences of residents and relatives of emergencies in care homes: a systematic review and metasynthesis of qualitative research. Age Ageing. 2022;51(3):1925–34. doi:10.1093/ageing/afab238.
10. Chambers D, Cantrell A, Preston L, Marincowitz C, Wright L, Conroy S, Lee Gordon A. Reducing unplanned hospital admissions from care homes: a systematic review. Health Soc Care Deliv Res. 2023;11(18):1–130. doi:10.3310/KLPW6338.
11. King LK. Emergency medical services providers' perceptions of nursing homes, assisted living facilities, and older adult patients [PhD thesis]. Baltimore County (USA): University of Maryland; 2018.
12. Torabi M, Borhani F, Abbaszadeh A, Atashzadeh-Shoorideh F. Experiences of pre-hospital emergency medical personnel in ethical decisionmaking: a qualitative study. BMC Med Ethics. 2018;19(1):95. doi:10.1186/s12910-018-0334-x.
13. Bluemel MK, Traweger C, Kinzl JF, Baubin MA, Lederer W. Expectations of patients, nurses and physicians in geriatric nursing home emergencies. Emerg Med J. 2011;28(4):283–e6. doi:10.1136/emj.2010.093948.
14. East Midlands Ambulance Service NHS Trust (EMAS). About EMAS [accessed 2023 Nov 29]. https://www.emas.nhs.uk/.
15. Office for National Statistics. East Midlands region 2021 census area profile [accessed 2023 Nov 29]. https://www.nomisweb.co.uk/sources/census_2021/report?compare=E12000004.
16. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–101. doi:10.1191/1478088706qp063oa.
17. Fritz Z, Pitcher D, Regnard C, Spiller J, Wang M. ReSPECT is a personal emergency care plan summary. BMJ. 2017;357:j2213. doi:10.1136/bmj.j2213.
18. Department of Health and Social Care. Quick guide: hospital transfer pathway- 'red bag'. transforming urgent and emergency care services in England [accessed 2023 Nov 30]. https://www.england.nhs.uk/wp-content/uploads/2018/06/quick-guide-redbag-hospital-transfer-v1.pdf.
19. The Makaton Charity. About Makaton [accessed 2023 Nov 30]. https://makaton.org/aboutMakaton/.
20. Language Line Solutions. Welcome to the language of solutions [accessed 2023 Nov 30]. https://www.languageline.com/en-gb/.
21. University of Northampton. First ever dementia friendly ambulance design signals better care for patients [accessed 2023 Nov 30]. https://www.northampton.ac.uk/news/first-ever-dementia-friendly-ambulance-design-signals-better-care-for-patients/.
22. Arendts G, Quine S, Howard K. Decision to transfer to an emergency department from residential aged care: a systematic review of qualitative research. Geriatr Gerontol Int. 2013;13(4):825–33. doi:10.1111/ggi.12053.
23. Schwabe S, Bleidorn J, Günther A, Primc N, Rubeis G, Schneider N, Poeck J. Nurses' perspectives on the role of relatives in emergency situations in nursing homes: a qualitative study from Germany. BMC Geriatr. 2022;22(1):283. doi:10.1186/s12877-022-02991-y.
24. Amadoru S, Rayner J-A, Joseph R, Yates P. Factors influencing decision-making processes for unwell residents in residential aged care: hospital transfer or residential inreach referral? Australas J Ageing. 2018;37(2):E61–7. doi:10.1111/ajag.12512.
25. Hartley P, Warmoth K, Gordon AL, Goodwin VA. Reablement interventions in care homes: the need for theory and process evaluation. Age Ageing. 2022;51(11):afac261. doi:10.1093/ageing/afac261.
26. Musa MK, Akdur G, Brand S, Killett A, Spilsbury K, Peryer G, Burton JK, Gordon AL, Hanratty B, Towers A-M, et al. The uptake and use of a minimum data set (MDS) for older people living and dying in care homes: a realist review. BMC Geriatr. 2022;22(1):33. doi:10.1186/s12877-021-02705-w.
27. Mukamel DB, Saliba D, Ladd H, Konetzka RT. Association of staffing instability with quality of nursing home care. JAMA Netw Open. 2023;6(1):e2250389. doi:10.1001/jamanetworkopen.2022.50389.
28. Dubucs X, Balen F, Charpentier S, Lauque D, De Souto Barreto P, Tavassoli N, Houze-Cerfon C-H, Rolland Y. Factors associated with emergency medical dispatcher request and residents' inappropriate transfers from nursing homes to emergency department. Eur Geriatr Med. 2022;13(2):351–7. doi:10.1007/s41999-021-00574-5.
29. Sinclair AJ. Good clinical practice guidelines for care home residents with diabetes: an executive summary. Diabet Med. 2011;28(7):772–7. doi:10.1111/j.1464-5491.2011.03320.x.
30. Davies SL, Goodman C, Bunn F, Victor C, Dickinson A, Iliffe S, Gage H, Martin W, Froggatt K. A systematic review of

integrated working between care homes and health care services. BMC Health Serv Res. 2011;11:320. doi:10.1186/1472-6963-11-320.

31. Cetin-Sahin D, Cummings GG, Gore G, Vedel I, Karanofsky M, Voyer P, Gore B, Lungu O, Wilchesky M. Taxonomy of interventions to reduce acute care transfers from long-term care homes: a systematic scoping review. J Am Med Dir Assoc. 2023;24(3):343–55. doi:10.1016/j.jamda.2022.12.025.
32. Devi R, Martin GP, Banerjee J, Gladman JR, Dening T, Barat A, Gordon AL. Sustaining interventions in care homes initiated by quality improvement projects: a qualitative study. BMJ Qual Saf. 2023;32(11):665–75. doi:10.1136/bmjqs-2021-014345.