

QUALITATIVE PAPER

Healthcare professionals' experience with emergency department-based acute care performed within nursing homes

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Abstract

Background: hospital admissions of residents from nursing homes often lead to delirium, infections, mortality and reduced functional capacity. We initiated a new service, 'emergency department-based acute care service', maintained by consultants from an emergency department (ED) moving emergency care from the hospitals into nursing homes.

Objective: this study explored healthcare professionals' experiences with this service.

Design: qualitative semi-structured focus group discussions.

Intervention/Setting: the new service provides acute on-site evaluation and treatment to nursing home residents following calls to the emergency dispatch centre.

Methods: we conducted focus groups with general practitioners, prehospital personnel, municipal acute care nurses, ED staff and nursing home staff. The analysis was performed using the iterative and explorative approach, 'systematic text condensation'.

Results: the participants considered the service as a meaningful and appropriate alternative to hospital admission, as the treatment can be tailored to meet the residents' wishes and daily capabilities. This was experienced to promote dignity for the residents by reducing unnecessary transfers to the ED and the residents could remain in familiar surroundings with staff who knew their habitual behaviour and history. The nursing home staff contributed valuable information to the ED consultants' decision-making. The service made it possible to base the decision-making on complete patient pictures, as the ED consultants had the time to get to understand the residents.

Conclusion: acute care at nursing homes provides an alternative to routine admissions to hospitals and enables healthcare professionals to provide more dignity in the care of nursing home residents.

Keywords: acute care, emergency care, nursing home residents, nursing homes, qualitative, older people

Key Points

- New care models are important as many nursing home residents are transported to the hospital due to minor health issues.
- This paper describes healthcare professionals' experience with a new initiative: acute care performed within nursing homes.
- Acute care at the nursing homes may reduce unnecessary transfers and hospital admissions and may increase the quality of care.

- Acute care performed within nursing homes is perceived as an appropriate alternative to hospital admissions.
- The new initiative contributed unique insight across sectors leading to a treatment tailored to the individual resident.

Introduction

There is an increasing demand for new healthcare models in response to an ageing population and the increasing prevalence of chronic diseases [1–3]. New healthcare models need to be developed targeting residents at nursing homes as these represent a frail population that is often admitted to hospitals because of conditions related to their comorbidity, infections, dehydration, respiratory diseases, falls and circulatory diseases [4–8]. Hospital admissions among this population increase the risk of delirium, hospital-acquired infections and mortality and may ultimately reduce the levels of functional capability [7, 9–11]. Many nursing home residents have cognitive impairment such as dementia and are in the last stage of life which are important factors to consider when establishing treatment levels. Nursing home residents have complex health needs and live on average 2–3 years following relocation to a nursing home [4, 7]. Studies raise awareness about the need of reducing unnecessary transfers and admissions to hospitals from nursing homes [4, 7, 8, 11, 12]. This exemplifies the need for new ways of providing appropriate acute care to this population. Studies suggest that the development of initiatives should focus on multiple determinants such as resources, competencies and increased collaboration across healthcare providers [13–16].

We initiated a new ‘emergency department-based acute care service’ maintained by consultants from an emergency department (ED), the acute care team from the local municipality and the emergency dispatch centre. The service aims to bring the treatment to the patients rather than bring the patients to the treatment. Usually, when falling acutely ill, nursing home residents are transferred to an ED by ambulance. By bringing the care to the nursing homes, the residents receive specialised care on-site, thus avoiding the need for admission to a hospital. To improve and increase the evidence about alternative treatment modalities, we found it relevant to explore how this new service was experienced by healthcare providers. Therefore, this study explored different healthcare professionals’ perspectives on and experiences with the ED-based acute care service.

Method

System setting

In Denmark, the healthcare sector is divided into a primary and a secondary/tertiary healthcare sector. All services are funded by taxes and thus free for the patient at the point of delivery [17]. The primary healthcare sector consists of the services run by municipalities that are responsible for home care and nursing homes and the general practitioners (GPs), who are the patients’ primary contact point to the

secondary healthcare sector. The secondary/tertiary healthcare sector consists of specialised healthcare services provided at the hospitals [17]. Immediate prehospital emergency care is provided by a three-tiered prehospital system consisting of emergency care assistants, paramedics and prehospital anaesthesiologists [18]. In cases of lesser urgency, a system based on out-of-hours general practitioners is in place [19].

The ED-based acute care service was established in the ED at Odense University Hospital on the 1st of November 2020. The service provides acute care to nursing home residents in Odense Municipality. The service is activated by the emergency dispatch centre when an ambulance is requested from a nursing home. The service operates on weekdays between 8 am and 4 pm. The first month of the implementation was a pilot period in which the service could be activated 24/7. When the service is not active, the ED consultants treat patients at the ED. Depending on the urgency of the incident, the acute care service is dispatched along with an ordinary ambulance. At the nursing homes, the ED consultants collaborate with the municipal acute care team [20, 21] and they perform acute evaluation and treatment on-site in the nursing home residents’ homes. The diagnostic and treatment modalities include point-of-care blood sampling, acute ultrasound investigations and intravenous treatment.

Study design

The study was conducted as a qualitative focus group study inspired by a hermeneutical phenomenological approach to exploring the life-world experiences of the service through group interaction [22, 23]. This qualitative approach provided detailed views and meanings of how the interviewed participants experienced this new service [24]. The focus group discussions provided the study with an interactive approach and allowed participants to share point of views, while allowing researchers to collect critical data on the intervention [24, 25]. Lived perspectives and experiences of individuals can be explored within a group context when each participant at the beginning of the discussion has the opportunity to report their individual experiences [23].

Participants

Groups of healthcare professionals were invited to capture perspectives from all professionals who were involved in the care of the nursing home residents. The participants were recruited by email. The invitation was sent to all the GPs in Odense by a gatekeeper (the chairman of the GPs in Odense), two nursing home principals, the head of the anaesthesiologist-manned prehospital mobile emergency care unit [26], the head of the ambulance service, the ED

Table 1. Characteristics of participants

Participants ID	Gender	Age	Profession	Graduate year	Years of experience in current position ^a
Acute care team					
1	Male	34	Nurse	2016	1
2	Female	44	Nurse	2010	1.5
3	Female	51	Nurse	2005	3
4	Female	38	Nurse	2008	0.25
ED					
1	Male	68	Head consultant	1983	12
2	Male	46	Consultant, visiting nursing home ^b	2000	10
3	Female	52	Head nurse	1996	10
4	Male	45	Consultant, not visiting nursing home ^b	2008	1
Nursing home^b					
1	Female	41	Nursing assistant	2008	5
2	Male	40	Nurse	2011	0.5
3	Female	51	Nursing assistant	2001	7
4	Female	33	Nurse	2014	3
5	Female	32	Nurse	2014	0.5
Ambulance					
1	Male	39	Prehospital anaesthesiologist	2009	5
2	Male	66	Prehospital anaesthesiologist	1981	30
3	Female	30	Emergency care assistant	2012	1.5
4	Male	32	Emergency care assistant	2013	3
5	Male	27	Emergency care assistant	2016	0.25
Nursing home					
1	Female	49	Nurse	1996	3
2	Female	58	Nurse	1987	8
3	Female	47	Nursing assistant	2018	4
4	Female	34	Nursing assistant	2009	10
GP					
1	Male	50	GP	2000	16
2	Male	66	GP	1982	28
3	Male	43	GP	2005	8
4	Female	46	GP	2005	5
5	Female	47	GP	2002	9
6	Male	46	GP	2003	10

^aYears of experiences in the current employment. ^bPerformed face-to-face.

head consultant and the head of the municipal acute care team. We gathered six focus groups containing a total of 28 healthcare professionals. Fifteen (54%) were female. Nineteen (68%) were aged 40 years or older. The six focus groups consisted of (i) four municipal acute care nurses, (ii) two ED consultants, the ED head consultant and the ED head nurse, (iii) three nurses and two nursing assistants from one nursing home, (iv) two prehospital anaesthesiologists and three emergency care assistants, (v) two nurses and two nursing assistants from another nursing home and (vi) six GPs. The characteristics of the participants are presented in Table 1. Due to the Covid-19 pandemic, the focus group discussions could be conducted either online or physically at the participant's workplace. Only one focus group was conducted physically.

Focus group discussion guide

We developed a focus group discussion guide (Table 2). Some of the questions were targeted at specific groups of healthcare professionals because certain dimensions were not relevant for all participants as these depended on the patient

care roles and the collaboration with the ED-based acute care service. For example, the ED staff were asked about the potential consequences of reducing the staff at the ED during the activation of the service. Nursing home staff were asked about potential conflicts surrounding the ED consultants' presence at the nursing homes. The development of the guide was based on qualitative research literature [24] and our own experience concerning the initiative. The guide was discussed and revised by all the authors before the focus group discussions were conducted.

Data collection

The focus group discussions were conducted in March–April 2021 and lasted for 41–61 minutes. The composition of focus groups was homogeneous, which was essential as we aimed for the participants to be comfortable enough to discuss and speak freely with their co-workers. Shared culture and norms are important to support informal dialogues [24], and the focus group guide allowed new aspects to surface during the discussions. The author (S.E.J.U.) completed all focus group discussions together with a moderator.

Table 2. Focus group discussion guide

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- What are your experiences with the emergency department-based acute care service?
 - Which residents are most often treated by the emergency department-based acute care service?
 - Which kinds of acute needs do the nursing home residents have?
 - Can you describe how nursing home residents are typically treated by this new service?
 - Which kinds of treatment are often initiated?
 - How do you experience the collaboration in the care of the nursing home residents?
 - How is the distribution of patient responsibilities in the care of the nursing home residents?
 - What happens when the emergency department-based acute care service has finished treating the nursing home residents?
 - What is the importance of this new service for your work?
 - How important is your professionalism for the emergency department-based acute care service?
 - How do you experience the fact that different kinds of professionalism are gathered in this new service?
 - In your experience, which possibilities does the emergency department-based acute care service contribute to?
 - Do you experience any consequences of this new service?
 - ED staff: Are there any consequences of sending an ED consultant to the nursing homes?
 - Nursing home staff: Are there any consequences of having an ED consultant at the nursing homes?
 - Do you experience that the new service has an impact on resources?
 - Do you have future wishes for the emergency department-based acute care service?
 - What do you think will happen with nursing home residents who do not receive care by this new service?
 - Do you have any experiences with situations where an admission to hospital was avoided by the new service?
 - Do you have any experiences with situations where the new service delayed an admission to hospital?
 - How do you think nursing home residents and relatives experience the new service?
 - Anything else?
-

The moderator ensured that all the participants were heard and that all the questions were addressed, made notes and collected participant characteristics. All focus groups were performed in Danish, audio-recorded and transcribed verbatim. Selected quotes are translated into English.

Analysis

A thematic analysis of the meaning and content of data was conducted, inspired by Malterud's systematic text condensation [27]. The strategy was explorative and consisted of four steps: (i) all transcriptions were read several times to get an overall impression of the data and to find preliminary themes. (ii) Meaning units were identified and sorted into code groups. (iii) The code groups with meaning units were re-read—and the content was reduced into meaningful condensations. (iv) The meaning of the condensations was summarised by generalising descriptions and concepts of the focus groups. The analysis was conducted inductively. No codes or themes were predefined [27]. The analysis was conducted by author S.E.J.U. with support from author D.S.N. to create an in-depth understanding of the participants' perspectives.

To ensure transparency and trustworthiness and to ensure that important perspectives and nuances were reported, the findings were discussed and reviewed by all members of the author group. The checklist Consolidated criteria for reporting qualitative research (COREQ) was followed [28].

Ethics

The study was approved by the Danish Data Protection Agency (no. 11.332). The study was conducted following the Association of Internet Researchers guidelines [29] and adhered to the Danish data protection legislation

[30]. Following written and verbal information about the study, all focus group members consented to participate.

Results

Four themes central to the participants' experiences with the ED-based acute care service were identified: (i) promotion of dignity, (ii) a different solution to a hospital admission, (iii) collaboration across professions and sectors (iv) responsibility and resources (Table 3).

Promotion of dignity

Dignity was a recurrent theme among the participants when they were asked about their overall experiences with the ED-based acute care service. In all focus groups, the residents of the nursing homes were described as frail and often with physical and cognitive impairment and as a population being in their last stage of life. This description is central to the participants' view of how the service contributed to the promotion of dignity.

Several of the participants described that this new initiative contributed to dignity and security in situations where the residents needed urgent help or end-of-life care as the residents were able to stay in quiet and familiar surroundings with well-known staff.

Acute care nurse 1: 'They [ED consultant] can be helpful for ending life in a good way for the residents... Now they can die at the nursing home and be surrounded by their families' [focus group 1].

The participants explained that the most frequent reasons for hospital admission among this population were acute deterioration, dehydration and a need for a medical assessment. The new service was reported to ensure smooth

Table 3. Thematic analysis of focus group discussions

Theme	Subtheme	Quotes
Promotion of dignity	Quiet surroundings at the end of life	<i>Acute care nurse 1: 'They [ED consultants] can be helpful in ending life in a good way for the residents who probably should not be surrounded by four white walls at the hospital. Now they can die at the nursing home and be surrounded by their families' [focus group 1].</i> <i>Nursing home nurse 2: 'Then we have a smooth transition from acute care to palliative care, and we avoid getting these confused ill residents out in a noisy and bumpy ambulance with strangers and coloured lamps. . . ' [focus group 3].</i>
	Dignity, transitions and the whole patient picture	<i>Prehospital anaesthesiologist 2: 'The service does not solve the need for observations in the evening and night which is the cause of many hospital admissions. But we welcome everything that can reduce these useless transfers of demented patients who sometimes experience unworthy transitions' [focus group 4].</i> <i>GP 4: 'The attitude among older people is that they are sad to be admitted. For a person of that age, it is enormously exhausting, and the time after the admission is also tough. . . For the individual resident, it is a really good solution. . . ' [focus group 6].</i> <i>ED consultant 2: 'What is the level of daily activities? This will be clear within the first two minutes. You will see if the patient is lying in bed. The patient often sits in a chair, drinking a cup of coffee. . . At the ED, they would have been lying in a bed doing nothing. At the nursing homes, it is a completely different picture, and we can quickly get a good idea of what they are able to do' [focus group 2].</i>
A different solution to a hospital admission	The alternative	<i>Nursing home nurse 4: '. . . We can prevent hospital-acquired infections, and we can prevent complications due to immobility and [keep the residents from] becoming confused when our demented residents are removed from their home' [focus group 3].</i>
	Decision-making and the whole picture	<i>ED consultant 2: '. . . Very often it is speculative what the patients' ailments are. You do not know, but you focus 100% on what is best for the patient. Then you very often conclude that it makes no sense to transfer the patient to the hospital because it has no consequences' [focus group 2].</i> <i>GP 1: 'You have to be careful about what you initiate. Now it is acute conditions. . . What can you assess and what is next? How much hospital do we want to bring to the nursing homes?' [focus group 6].</i>
A new collaboration across professions and sectors	Communication and collaboration	<i>Nursing home nurse 4: 'I would like it to be clearer what we should pay attention to, what we should observe, and what they expect from us' [focus group 3].</i>
	Insight into other healthcare professionals' work	<i>Nursing home nurse 5: 'It is very nice because different professionals stand together, and I feel heard and seen even though I am just a nursing home nurse. I really feel that I can contribute something' [focus group 3].</i> <i>Emergency care assistant 2: 'I have many positive experiences. The ED consultants are good at communicating about the treatment and which tests they need. There is also much communication to nursing home staff, relatives and patients' [focus group 4].</i>
Responsibility and resources	Patient responsibility	<i>GP 5: 'I had a patient where the nursing home nurse said, "call the ED consultant", and I told her that I have an agreement with the family that this patient should not be admitted to hospital again' [focus group 6].</i> <i>Acute care nurse 2: 'It is a completely new framework, and there are many contexts. The possibilities are many. Maybe too many. I felt we had an increased responsibility to say what we found ethical and correct' [interview 1].</i>
	Competencies	<i>Nursing home nurse 4: 'I'm just thinking of my colleagues. The patients become very complex, and their condition can quickly deteriorate. At the hospital, there is access to physicians and more nurses . . . So, who is responsible for giving them some tools to support them in how to care for sick patients?' [focus group 3].</i> <i>Prehospital anaesthesiologist 2: 'A 90-year-old woman whose consciousness was affected – this is where the service really comes into its own. There was no indication for treatment or admission. They [ED consultants] have the resources and opportunities to understand and handle these patients, put the minds of the nursing home staff at ease and talk to relatives and staff about what would be the most appropriate solution' [focus group 4].</i>

transitions from acute care to end-of-life care without hospital admissions.

Nursing home nurse 2: 'Then we have a smooth transition from acute care to palliative care, and we avoid getting these confused ill residents out in a noisy and bumpy ambulance with strangers and coloured lamps. . . ' [focus group 3].

The participants also discussed the meaningfulness of treatment in the residents' own homes, which made it possible to tailor the care and treatment for the individual. In general, the participants in each focus group perceived that most residents did not want to be admitted to the hospital. The new service made it possible to meet the residents' wishes and to support dignity. The nursing home staff preferred to keep the residents at the nursing homes because it was considered to be in their best interest, and the staff portrayed hospital admissions as 'black holes' because they never knew

what happened to the residents during hospitalisation. One consultant from the ED staff, however, said that it surprised him that the nursing home staff wanted to keep the residents at home and that they did not find hospital admission relieving. It is not always possible to keep the residents at the nursing homes and the prehospital consultants explained that they often admit residents to the hospital because of lacking confidence in the capabilities and resources of the nursing homes. This indication for hospital admission was described as being unworthy.

Prehospital anaesthesiologist 2: 'The service does not solve the need for observations in the evening and at night, which is the cause of many hospital admissions. But we welcome everything that can reduce these useless transfers of demented patients who sometimes experience unworthy transitions' [focus group 4].

All nursing home staff found that it instilled security to talk directly with the ED consultants and that the acute care service arrived fast when called upon. All groups of participants discussed that this new initiative made it possible to base the decision-making on complete patient pictures because the ED consultants had the time to get to understand the resident in his or her setting and to talk with the nursing home staff and the relatives. The nursing home staff's knowledge is perceived as being important for the decision-making as they can convey the residents' history and behavioural changes. In this context, meeting the residents in their usual setting contributed with valuable knowledge.

ED consultant 2: 'What is the level of daily activities? This will be clear within the first two minutes. You will see if the patient is lying in bed. The patient often sits in a chair, drinking a cup of coffee . . . At the ED, they would have been lying in a bed doing nothing' [focus group 2].

Concerning the decision-making, the acute care nurses explicitly discussed the ethical concerns, especially considering the choice of treatment. Sometimes the acute care nurses would be in doubt whether the most appropriate solution was to keep the resident at the nursing home or to admit him/her to the hospital. Other focus groups discussed ethics implicitly as they discussed possible implications of moving hospital services to nursing homes.

A different solution to a hospital admission

The acute care service was not considered to be equivalent to hospital admission as there are limits to what can be provided outside the hospitals. The solution was described as an appropriate alternative. All of the focus group participants were very focused on which hospital-related complications might be avoided by keeping the residents in the nursing homes.

Nursing home nurse 4: ' . . . We can prevent hospital-acquired infections, and we can prevent complications due to immobility and [keep them from] becoming confused when our demented residents are removed from their home' [focus group 3].

The participants agreed that most of the residents would not benefit from hospital admissions because of their general state of health. Thus, for many nursing home residents, hospital admissions were considered to have no treatment effect and all agreed that within hospitals, unnecessary actions are often performed to adhere to guidelines. The ED consultants explained that they did not perform all the interventions at the nursing home because of limited possibilities. Sometimes the limited diagnostic possibilities made it challenging to assign diagnoses to the residents.

ED consultant 2: ' . . . Very often it is speculative what the patients' ailments are. You do not know, but you focus 100% on what is best for the patient. Then you very often conclude that it makes no sense to transfer the patient to the hospital because it has no consequences' [focus group 2].

In the focus group with the GPs, the new possibilities of tests and treatment by providing acute care at the nursing homes were discussed. A position was made that the new

service increased the treatment efforts at the nursing homes resulting in overtreatment of the residents.

GP 1: 'You have to be careful about what you initiate. Now it is acute conditions . . . What can you assess and what is next? How much hospital do we want to bring to the nursing homes?' [focus group 6].

The other five GPs disagreed and described that the alternative would have been patient transfers to the ED, and they explained that keeping the residents at the nursing homes was less intrusive for the residents than hospital admission because the residents avoided ED transfers, waiting hours at the ED and confusion.

Collaboration across professions and sectors

The participants described the collaboration between the different sectors as efficient and necessary for the quality of patient care. This collaboration required clear communication. In these discussions, a few of the acute care nurses and nursing home nurses expressed that the communication could be improved.

Nursing home nurse 4: 'I would like it to be clearer what we should pay attention to, what we should observe and what they expect from us' [focus group 3].

Some of them suggested that the open and extensive communication could be improved by aligning expectations on behalf of the patients for all caregivers. This could be obtained by increasing the communication between the nursing home staff, the ED consultants and the acute care nurses. The alignment should take place before the acute care nurse and the ED consultant left the nursing homes. Alignment of care was perceived to increase the quality of patient care.

In the two focus groups with the nursing home staff, the importance of collaboration with the acute care service was discussed. The collaboration made it possible for the nursing home staff to contribute useful information to the ED consultants' decision-making, and they felt appreciated and acknowledged for their insight to the residents.

Nursing home nurse 5: 'It is very nice because different professionals stand together, and I feel heard and seen even though I am just a nursing home nurse. I really feel that I can contribute something' [focus group 3].

This nurse expressed that she is 'only' a 'nursing home nurse'. This statement elucidates how different healthcare professionals perceive themselves. These different attitudes were not neither expressed in other focus groups. In the focus group with the prehospital personnel, the emergency care assistants discussed their collaboration with the acute care service. They described that the communication was clear and that they understood how to support the ED consultants.

Emergency care assistant 2: 'I have many positive experiences. They are good at communicating about the treatment and which tests they need. There is also much communication between nursing home staff, relatives and patients' [focus group 4].

Concerning the communication, the GPs discussed that it could be beneficial to have systematic and faster handovers from the ED to the GPs. They experienced delays when sharing data across electronic patient medical records. All participants described this as a barrier to continuity in patient care.

Another aspect of the new collaboration is the insight into different healthcare professionals' work. The ED consultant [ID 2] portrayed it as an 'eye-opener' as it increased his understanding of the nursing homes which made him understand the nursing staff's thoughts and possibilities. Insight into each other's work was also discussed by the emergency care assistants. They explained that they learned from this initiative in direct dialogues about clinical observations with the ED consultant. Before the acute care service was initiated, typically, residents were transferred to the ED without involving a consultant. The nursing home staff did express that they learned new things about treatment because they were supported by dialogues with the ED consultants.

Responsibility and resources

All focus groups reported that patient responsibility was an important part to consider when bringing specialised care and treatment to nursing homes. Many participants discussed the importance of establishing who was responsible for the patients after they had received treatment by the acute care service. Thus, by many—but not all—focus group participants, it was regarded as essential to create consensus about how to use the service. Few participants in the nursing home focus groups described the service as a supplemental medical service that could be used if a medical assessment was required at a nursing home. This notion was supported by a few GPs who had experienced nurses who insisted that the GP should request the ED-based acute care service. One GP explained that it made no sense to activate the service if a firm decision regarding admission or non-admission of the patient already had been made.

GP 5: 'I had a patient where the nursing home nurse said, "call the ED consultant", and I told her that I have an agreement with the family that this patient should not be admitted to hospital again' [focus group 6].

This exemplifies the importance of creating consensus about who should decide if this service was needed. One GP said that he does not always agree with the ED consultants' decisions about treatment at the nursing home. This notion, however, was not supported by the other GPs.

Several of the acute care nurses and the nursing home staff discussed how they experienced an increased sense of patient responsibility accompanying this initiative.

Acute care nurse 2: 'It is a completely new framework, and there are many contexts. The possibilities are many. Maybe too many. I felt we had an increased responsibility to say what we found ethical and correct' [focus group 1].

In this context, the acute care nurses and some of the nursing home nurses discussed that they were worried about

the competencies at the nursing homes. They questioned whether the nursing home assistants had the competencies to take care of residents who receive treatment initiated by the ED consultants.

Nursing home nurse 4: 'The patients become very complex, and their condition can quickly deteriorate. At the hospital, there is access to physicians and more nurses . . . So, who is responsible for giving them some tools to support them in how to care for sick patients?' [focus group 3].

In the focus groups, none of the nursing home assistants expressed lacking competencies.

According to the respondents, all participants described that they had previously lacked the means to reduce unnecessary hospital admissions. The GPs explained that they often do not have the time to perform acute home visits before they have seen all their otherwise scheduled patients. Thus, it is considered a challenge when the nursing home staff calls concerning deteriorated residents. The GPs said that they sometimes have to admit the residents to a hospital without having seen them. This may result in unnecessary transfers and admissions. The prehospital personnel agreed that the new acute care service reduced unnecessary transfers and released prehospital personnel to perform other acute missions. They also agreed that the ED consultants have better possibilities to provide appropriate care for the nursing home residents than the prehospital anaesthesiologists because they have time to create a complete overview of the patient and gain supplemental information from the surrounding persons.

Prehospital anaesthesiologist 2: 'They [ED consultants] have the resources and opportunities to understand and manage these patients, setting the nursing home staff's minds at ease and talk to relatives and staff about what would be the most appropriate solution' [focus group 4].

Many participants agreed about the ED consultants' competencies. In this context, some of the nursing home staff discussed the GPs and their out-of-hours service. The out-of-hours GPs do not have the same diagnostic capabilities and do not participate in continued treatment at the nursing homes.

Discussion

This study describes how healthcare professionals experience a new healthcare initiative that may solve the need for acute care at nursing homes. Based on our findings, an ED-based acute care service can be organised as an alternative to hospitalisation when the primary healthcare professionals have requested an ambulance. Hospital admissions among nursing home residents were often described as considered unnecessary by healthcare professionals. This is consistent with findings from another study concluding that ambulance transfers from nursing homes to the ED are often made without any expectations of treatment effect or improved clinical outcome [12]. One other survey concluded that unnecessary hospital admissions are often made because the ED is the path of least resistance when managing

deteriorated nursing home residents [31]. Further studies have concluded that some ambulance transfers to the EDs are resulting from a lack of resources and confidence in providing acute care at nursing homes [12, 14]. In accordance with our findings, the pre-hospital anaesthesiologists experienced that they often admitted nursing home residents to the ED because of the lack of resources and competencies. A systematic review investigating the appropriateness of transferring nursing home residents to the ED. The study included 77 studies and found that nursing home staff revealed concerns about inadequate competencies and understaffing [15]. In our study, it was pointed out that sufficient competencies among nursing home staff were important for the future management of acute care of nursing home residents. The systematic review also concluded that 4–55% of ED transfers among nursing home residents are unnecessary and the study called for an increased role of the GPs and for increased collaboration between GPs, EDs and nursing homes [15]. This was also suggested in another quantitative study which found that the involvement of GPs was low in unplanned hospital admissions of nursing home residents [16]. The qualitative review studies suggest that increased resources and improved staff capacity may improve patient care at nursing homes [12, 14]. This is not always feasible in Europe due to the economic and demographic challenges in providing healthcare which should balance with changes in the workforce, technology and environment [32]. This underscores the importance of developing initiatives that support the nursing homes, such as the ED-based acute care service. In Denmark, other supporting local solutions are GPs that are permanently affiliated with one or more nursing homes [33], the municipal acute care teams [20, 21] and geriatric physicians paying visits to nursing homes [34]. The extent of these services differs across the country but does not include acute assessments by ED consultants.

Improving the quality of care for older people is a worldwide issue [2], as many older people experience a lack of continuity in healthcare [6, 35, 36]. Avoiding transitions across sectors might improve continuity in care [36]. In Denmark, 63% of the nursing home residents had at least one hospital admission per year [7] which indicates a need for new acute care solutions aimed at this population. In our study, the ED-based acute care service was described as an appropriate alternative to hospital admissions as the treatment can be tailored to meet the residents' wishes and daily capabilities. Many nursing home residents do not want to be admitted to the ED [15]. One study found that focusing on the individual residents' background and preferences is required to ensure dignity [37]. Dignity considers being seen, heard and treated respectfully as a complete person [38, 39]. The acute care service enables the patient to remain in familiar surroundings with staff who know the residents. This is consistent with studies about advanced care planning concluding that healthcare services delivered at home create a better understanding of the patients' environment, needs, preferences and values [40–42]. In this context, another important aspect of promoting dignity and

quality in acute care includes ethical considerations [14]. Some of the nurses in our study found it difficult to ascertain whether a resident could benefit from hospital admission. This is consistent with another qualitative study that found that nurses often felt that hospital admissions were safer. At the same time, they portrayed the residents' stay at the hospital as 'black holes' [43]. In ethical concerns, it is relevant to involve the residents' wishes, respect their autonomy and consider the potential consequences of hospital admissions. Many residents are in the final stage of life and a potential consequence of hospital admissions is dying in the hospital [9, 11].

The ED-based acute care service is a cross-sectorial initiative and many healthcare professionals collaborate within the service. The total amount of knowledge and competencies created a valuable understanding of the residents. For example, the presence of nursing home staff was essential for the ED consultants to create a complete overview of the residents. Interdisciplinary collaboration and coordination led to a shared understanding of goals and priorities [44]. This is documented in other studies [45] minimising potential communication gaps between nursing homes and EDs [46]. In our study, the healthcare professionals experienced an increased understanding of other healthcare professionals' work and this understanding could be central to improving coordination between the different healthcare providers. The overall quality of care can be improved by a shared understanding of roles and appreciation of others' skills [45, 47, 48] and improved coordination between different health sectors may prevent unnecessary transfers of residents from the nursing homes to the hospitals [43].

Strengths and limitations

This qualitative study contributed information on the ED-based acute care service based on qualitative personal experiences, perceptions and judgements [24]. Traditionally, phenomenological research is conducted through individual interviews, but group interaction stimulates discussions and might open new perspectives [23]. The participants participated voluntarily. This increases the risk of selection bias as some respondents could have special interests. The mixture of researchers strengthened the reflections and interpretations of the analysis but qualitative research is never objective because of preconceived ideas [24]. Only one focus group was conducted face-to-face. Limitations of online interviews are the technical requirements and the need to ensure confidentiality [49]. However, during all the focus groups, only once did a minor technical issue appear with a malfunctioning web camera. All other participants were placed centrally in front of their cameras which made it possible to partially observe their body language.

Implications for health policy and future research

The findings of this study may inspire stakeholders attempting to develop new solutions for handling acute care at nursing homes and attempting to structure future healthcare services. The ED-based acute care service aims to disrupt

the silo mentality found otherwise in healthcare. However, financial implications, structure and resources should be addressed if allocating hospital consultants to the nursing homes. We have applied qualitative research which is increasingly recognised as a method to evaluate new health services [50] and to understand different perspectives is essential for delivering good care [51]. Future research should include other aspects of acute care service, such as the economic considerations and the experiences of the nursing home residents themselves and their relatives.

Conclusion

The ED-based acute care service expanded the possibilities of providing acute care in nursing homes. This promoted dignity for the nursing home residents because the number of unnecessary transfers to the ED was reduced, leaving the residents in familiar surroundings with well-known staff. The initiative was considered a meaningful and appropriate alternative solution to hospital admissions. The staff of the nursing homes did much to provide key insights into the residents, which was used in the ED consultants' decision-making. Furthermore, the ED consultants could make more complete evaluations when they met the residents in their setting. Focusing on ethical concerns about the level of treatment and ensuring sufficient competencies at the nursing homes were pointed out to be important for further development of this solution to the needs of acute care in the nursing homes.

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