



Treatment and Care for Nursing Home Residents with COVID-19: A Qualitative Study

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Purpose: Coronavirus disease 2019 (COVID-19) placed a significant strain on nursing homes, leading to numerous outbreaks and high mortality rates. This situation created considerable stress and challenges for residents, their physicians and nurses, as well as family caregivers. By understanding these challenges, we can gain new insights and learn valuable lessons. Thus, the purpose of this study is to examine the treatment and care provided to nursing home residents with COVID-19, as experienced by physicians, nurses, and family caregivers.

Participants and Methods: This study is a secondary analysis of 35 interviews with physicians, nurses, and family caregivers, each with personal experience caring for nursing home residents diagnosed with COVID-19. The interviews took place from December 2020 to April 2021. We analyzed the transcriptions based on Braun and Clarke's reflexive thematic analysis model and followed a qualitative descriptive design as outlined by Sandelowski.

Findings: The analysis produced three themes: 1) Balancing medical treatment, 2) The need for increased systematic monitoring of vital functions, and 3) Determining the treatment level for nursing home residents. These themes were explored through the unique perspectives of the three participant groups: physicians, nurses, and family caregivers. The findings revealed several challenges related to treatment and care for nursing home residents diagnosed with COVID-19. This applied both to relief of symptoms, monitoring of vital functions, assessment of treatment level and use of advance care planning.

Conclusion: Drawing from the experiences of physicians, nurses, and family caregivers, there should be a unified plan at the municipal or national level for competency development in nursing homes to prepare for future crises like pandemics or epidemics. Additionally, the safe engagement of family caregivers and relatives should be given priority.

Keywords: alleviation, nursing homes, palliative care, pandemic, safekeeping, systematic mapping

Introduction

The coronavirus disease 2019 (COVID-19) pandemic heavily impacted nursing homes (NHs), which suffered numerous disease outbreaks and high mortality rates.^{1,2} Residents primarily comprise vulnerable elderly individuals over 80 years old, suffering from chronic illnesses, and requiring extensive assistance, and over 80% of them have dementia or cognitive impairment.^{3,4} Furthermore, the close living environments of NHs, combined with the residents' frailty and multimorbidities, make these settings highly susceptible to infection outbreaks.²

As the pandemic evolved, residents, employees, and relatives worldwide had to adapt to fluctuating restrictions and guidelines. This necessitated significant restructuring, resource allocation, and task reallocation within the NHs.⁵⁻⁷ Despite long-standing challenges around staffing shortages and difficulties in retaining nursing personnel,^{8,9} these issues became even more pronounced during the pandemic's initial waves. Increased care needs, healthcare staff illnesses necessitating quarantines, remote managerial work, physicians' limited availability mainly through phone and video conferencing, and the absence of professionals like therapeutic personnel all added to these challenges.^{1,8}

Several studies have addressed the experiences of NH residents, healthcare staff, and relatives during the pandemic, reflecting their perspectives on the impact of COVID-19. Residents frequently reported feelings of isolation, depression, and loss of freedom,^{10,11} while healthcare staff mentioned excessive workloads, exhaustion, feelings of abandonment, helplessness, and encountering ethical dilemmas.^{10,12–15} Many relatives suffered from anxiety, powerlessness, and frustration and faced complicated decisions, such as visiting and exposing themselves to infection, or allowing the person to die without them to the site.^{10,16–18}

To our knowledge, no studies have explored the experiences of physicians, nurses, and family caregivers caring for NH residents with COVID-19 in one and the same study. Gaining insight into the unique challenges and necessary adaptations in response to an unfamiliar, serious, and potentially deadly infectious disease^{1,2} could facilitate improved understanding and learning for the ongoing development of NH care. Therefore, this study aims to examine the treatment and care for NH residents with COVID-19, as per the experiences of physicians, nurses, and family caregivers.

Materials and Methods

This study presents a qualitative secondary analysis of data gathered from 35 interviews with physicians, nurses, and family caregivers. Based on a descriptive design as outlined by Sandelowski,^{19,20} we used a qualitative approach for this research. All findings are reported according to the Consolidated Criteria for Reporting Qualitative Studies (COREQ) checklist.²¹

Sample and Setting

The sample comprised ten physicians, 15 nurses, and ten family caregivers, each with experience in managing COVID-19-affected residents at NHs. Among the physicians were nine women and one man, aged between 33 and 65 years, employed at ten distinct NHs. One physician was associated with two NHs. Their recruitment was entrusted to dementia coordinators, physicians, and leaders from various NHs, united under the network of the Norwegian National Advisory Unit on Ageing and Health (Ageing and Health). They were also sourced from a Facebook group of NH physicians in Norway.

The 15 nurses, comprising 14 women and one man aged between 27 and 60 years, were employed at eight different NHs. NH leaders recruited these nurses from three out of four health regions in both urban and rural areas of Norway.

Several of the physicians and nurses were recruited via the snowball method, a strategy where some of the first invited participants are asked to recruit more participants through their network.²²

Additionally, the caregiver sample comprised eight women and two men, spanning ages 27–67, from seven different NHs located in both urban and rural regions. This group included one spouse, eight adult children, and one grandchild. They were recruited by NH leaders and dementia coordinators from the Ageing and Health network.

For demographic data see [Table 1](#).

Unfortunately, it was impossible to ascertain whether multiple participants were associated with the same NH. Previously used data from three separate studies^{14,15,18} were reassessed for this study.

Table 1 Demographic Data of the Participants

Participant	Profession or Role	Gender	Age	Type of Nursing Home Ward	Position Percentage
1	Physician	Female	58	Long-term	100
2	Physician	Female	37	Short- and long-term	100
3	Physician	Female	49	Long-term	100
4	Physician	Female	62	Short- and long-term	100

(Continued)

Table 1 (Continued).

Participant	Profession or Role	Gender	Age	Type of Nursing Home Ward	Position Percentage
5	Physician	Male	65	Short-term	100
6	Physician	Female	41	Long-term	100
7	Physician	Female	33	Long-term	80
8	Physician	Female	42	Long-term	65
9	Physician	Female	51	Long-term	100
10	Physician	Female	38	Long-term	100
1	Nurse	Female	34	Long-term	100
2	Nurse	Female	40	Long-term	100
3	Nurse	Female	33	Dementia ward	100
4	Nurse	Female	50	Sheltered long-term	100
5	Nurse	Male	43	Long-term	100
6	Nurse	Female	60	Long-term	60
7	Nurse	Female	57	Sheltered long-term	100
8	Nurse	Female	44	Long-term	80
9	Nurse	Female	27	Long-term	100
10	Nurse	Female	28	Short-term/rehabilitation	100
11	Nurse	Female	39	Long-term	100
12	Nurse	Female	35	Long-term	100
13	Nurse	Female	45	Long-term	100
14	Nurse, ward manager	Female	43	Long-term	100
15	Nurse, ward manager	Female	50	Somatic	100
1	Family caregiver, daughter	Female	49	Municipal emergency 24-hour unit	Not applicable
2	Family caregiver, daughter	Female	57	Long-term dementia ward	Not applicable
3	Family caregiver, son	Male	52	Long-term	Not applicable
4	Family caregiver, spouse	Female	56	Short-term	Not applicable
5	Family caregiver, daughter	Female	67	Long-term	Not applicable
6	Family caregiver, daughter	Female	67	Long-term	Not applicable
7	Family caregiver, daughter	Female	56	Long-term	Not applicable
8	Family caregiver, daughter	Female	58	Dementia ward	Not applicable
9	Family caregiver, son	Male	64	Long-term	Not applicable
10	Family caregiver, grandchild	Female	27	Long-term	Not applicable

Data Collection

The interviews were carried out by SGJ (physicians), AHH (nurses), and ST (family caregivers) between December 2020 and April 2021. Due to the COVID-19 social restrictions, all interviews were conducted by telephone. These interviews

followed a semi-structured format using guides focused on similar themes and open-ended questions. All groups provided insights into their experiences concerning COVID-19 symptoms, resident treatment clarification, isolation/visit regulations, as well as the treatment and care provided. The interviews were audio recorded and transcribed verbatim.

Preunderstanding

The first author (AN) is a female registered nurse specializing in intensive care. AMMR and SE are female professors and registered nurses. BL is a male physician in nursing home and geriatric psychiatry medicine. AHH, SGJ, and ST, who carried out the interviews, are all female registered nurses. All co-authors possess clinical experience in geriatrics and/or nursing and conduct research in the fields of medical and health sciences.

Analysis

We carried out an analysis of the transcribed interviews using the reflexive thematic approach as outlined by Braun and Clarke.²³ This approach enabled us to identify meaning patterns across the three datasets using an inductive strategy.

The reflexive thematic analysis is a process in six phases, where the sixth and last phase consists of how the report is written up to form a whole.²³

Those performing the analysis was not the same persons conducting the interviews. In the first phase, AN therefore used time to get to know the data material. This involved repeatedly listening to the audio recordings, and thoroughly read and reread the datasets to familiarize ourselves with their content. During the second phase, AN coded the datasets to uncover various patterns of meaning. This was a process that was performed repeatedly as the author systematically went through the datasets. From there, in the third phase, AN and AMMR generated initial themes based on the coded material centered around the data and study objectives. For the fourth phase, we conducted a detailed review of the preliminary themes generated in stage three to further revise and develop them. In the fifth and final phase, AN, AMMR, SE and BL refined, defined, and named the themes.²³

AN utilized the NVivo v1.7.1 software (QRS International, 2022) for the first three stages of the analysis.

Adopting a descriptive qualitative design,^{19,20} we adhered closely to the data. Our analysis drew out the semantic level meanings.²³ Examples from the analytical process can be found in [Table 2](#).

In our data, physicians and nurses often use the term “relatives”. However, these “relatives” are not necessarily the same as the family caregivers participating in our study. Hence, we use the term “relatives” to refer to the group mentioned by healthcare professionals and “family caregivers” to refer to our study’s participants.

Ethical Considerations

The project (project number 503268) was evaluated by the Norwegian Agency for Shared Services in Education and Research (SIKT), formerly known as the Norwegian Center for Research Data (NSD). It found the project adhered to data protection legislation regarding personal data. This study has been conducted in accordance with the Declaration of Helsinki. Participants were supplied with oral and written project information and subsequently gave their written

Table 2 Examples from the Analytical Process

Data Extract	Codes	Theme
<p>“They have had very panicky dyspnea and needed large doses of Morphine and one patient was given a mixture of morphine and midazolam in an infusion pump that went on for 24 hours, and it worked very well”. (Physician)</p> <p>“To one of the patients we used an infusion pump to get regular relief with morphine and midazolam. It worked very well. The patient didn’t have to wake up with these acute attacks and be terrified”. (Nurse)</p> <p>“During the period when he was really in a bad condition, the physician was very concerned that he shouldn’t be in pain, at the same time they didn’t want to give such large doses that, I guess it’s a balance all the way”. (Family caregiver)</p>	Treatment and relief of symptoms of COVID-19	Balancing medical treatment

(Continued)

Table 2 (Continued).

Data Extract	Codes	Theme
<p>“They were in their rooms, and they had less contact with the carers and perhaps less to drink. We wondered if this (increasing confusion) was simply due to dehydration or because they were so isolated”. (Physician)</p> <p>“The patients’ oxygen saturation was worse than I was able to observe clinically. And that was surprising, because I consider myself to be quite good at judging the patient’s condition clinically. When vital measurements do not match what you see, it’s terribly strange. It was a bit shocking and a very strange feeling that the clinic and vital measurements did not match, and this occurred in many of the patients”. (Nurse)</p> <p>“I felt that the mental health was not taken care of. 18 days in isolation is a long time So, I don’t think he’s been taken care of, I was getting a little upset”. (Family caregiver)</p>	<p>Nursing and care of the NH residents</p> <p>Mapping and measurements of the NH residents’ condition</p>	<p>The need for increased systematic monitoring of vital functions</p>
<p>“I think that you have to make an individual assessment in each case, and in the vast majority of cases it will be right not to admit to the hospital, but in some cases, it is right to admit, I think. There are very large differences within a nursing home population”. (Physician)</p> <p>“We (the nurses) wanted to have an advance plan for the treatment of those patients who could become so acutely ill that they needed palliative treatment in the ward. However, the physician believed that we should only contact him in each individual case. The nurses experienced this as an additional burden because we wanted to have a plan in advance, so that we could start the treatment when it was necessary”. (Nurse)</p> <p>“It is a dilemma to decide when it’s time to end such treatment and we have very much agreed with what the doctor said all the way through, but I have reflected upon whether I was actually at one point forced to agree that the treatment should be terminated”. (Family caregiver)</p>	<p>Experiences with clarification of treatment</p>	<p>Determining the treatment level for NH residents</p>

consent to participate. The participants informed consent included publication of anonymized responses. To ensure anonymity, any identifiable information in the transcribed interviews was anonymized.

Findings

The study’s findings are summarized into three themes: 1) Balancing medical treatment, 2) The need for increased systematic monitoring of vital functions, and 3) Determining the treatment level for NH residents.

The COVID-19 disease progression in the NH residents was reported to range from mild symptoms, like fever and cough, to severe conditions involving respiratory complications, dehydration, weight loss, increased fall risk, and delirium. Many observed that, unlike previous experiences, NH residents with COVID-19 experienced rapid health deterioration, resulting in a quicker terminal phase and a more expedited demise.

The isolation requirements adversely impacted the health of NH residents, both emotionally and physically. Residents exhibited heightened restlessness and anxiety, as well as a decline in functional abilities, which participants attributed to reduced social contact and stimulation.

Balancing Medical Treatment

Treatment plans describing various drugs and their implementation for different symptoms were devised by the physicians. The nurses primarily noted the beneficial impacts of this palliative drug treatment.

Oxygen (O₂) therapy was administered to combat dyspnea and lowered oxygen saturation. The physicians noted that while morphine was effective in treating pain and dyspnea, they frequently had to elevate the dosage beyond what is typically prescribed for non-COVID cases. Notably, individuals with heightened panic attacks from dyspnea required

larger morphine doses. Midazolam was prescribed to alleviate anxiety and restlessness, but it demanded an augmented dosage surpassing the standard in palliative care to induce relief.

The nurses reported frequently and closely monitoring the impact of pain and oxygen treatments. They confirmed that using a subcutaneous infusion pump with morphine and midazolam effectively managed pain and panic attacks. However, it was necessary to double or triple the doses to achieve substantial relief from pain and restlessness.

To one of the patients we used an infusion pump to get regular relief with morphine and midazolam. It worked very well. The patient didn't have to wake up with these acute attacks and be terrified. (Nurse)

The physicians reported positive experiences using haloperidol to treat nausea, delirium, and hallucinations, as well as glycopyrronium bromide to manage respiratory tract phlegm. Some NH residents received intravenous fluids to prevent dehydration and delirium due to their diminished ability to drink.

Most family caregivers expressed confidence in the staff's evaluations, treatments, and follow-ups for their loved ones. The dosage of painkillers was adjusted to prevent discomfort, and the family caregivers experienced that the physicians also exhibited caution to prevent overdosing.

During the period when he was really in a bad condition, the physician was very concerned that he shouldn't be in pain; at the same time, they didn't want to give such large doses that., I guess it's a balance all the way. (Family caregiver)

Some family caregivers, however, questioned the adequacy of the pain treatment:

He was put on Paracetamol. I was told that it was preventive. I'm not a health professional, but could one gram of Paracetamol three times a day prevent pain when you have corona? (Family caregiver)

The Need for Increased Systematic Monitoring of Vital Functions

To assure quality care, frequent monitoring and customized measures were necessary for various symptoms. Many residents displayed decreased appetite, thus prompting the need for nutritional intervention, including assisting more individuals with feeding. Additionally, ensuring adequate hydration became a priority.

They were in their rooms, and they had less contact with the carers and perhaps less to drink. We wondered if this (increasing confusion) was simply due to dehydration or because they were so isolated. (Physician)

The nurses reported that NHs residents required diligent supervision to ensure appropriate care and meet their basic needs. Given their physical fragility and increased need for rest, the isolation they experienced often resulted in diminished stimuli. Physicians and nurses agreed that this situation could exacerbate anxiety and restlessness or even lead to apathy.

The nursing home was completely closed, and that was a main challenge for everyone who lives here. In the end, it didn't sound like anyone lived here. The residents just sat completely apathetically in their rooms. (Nurse)

The staff regularly monitored the vital functions of NHs residents, like blood pressure, pulse, temperature, respiratory rate, and oxygen saturation, to evaluate and assess their health. Some employed the "National Early Warning Score" (NEWS) tool for early detection of health deterioration among residents, particularly in wards where nurses were well-acquainted with the tool.

It is an easy and good mapping tool that provides important information when contacting a physician, and when hospitalization might be necessary. So, it's a nice aid. (Physician)

Those who did not use systematic mapping tools followed up the residents with repeated measurements of vital functions. The healthcare staff monitored fluid intake using drinking lists. However, some nurses noted a discrepancy between their usual clinical evaluations of residents' health and the results from the vital measurements. This discrepancy was described as "alarming" by one nurse who was accustomed to depending on her clinical judgment.

The patients' oxygen saturation was worse than I was able to observe clinically. And that was surprising because I consider myself to be quite good at judging the patient's condition clinically. When vital measurements don't match what you see, it's terribly strange. It was a bit shocking and a very strange feeling that the clinic and vital measurements didn't match, and this occurred in many of the patients. (Nurse)

Overall, family caregivers were generally pleased with the staff's care and treatment of NH residents, expressing confidence in the level of care their loved ones received. They recognized the staff's efforts, especially given the lack of a definitive cure for COVID-19. However, one caregiver raised concerns about the sufficiency of mental health protections during isolation, feeling that her husband's care was subpar.

I felt that the mental health was not taken care of. 18 days in isolation is a long time. So, I don't think he's been taken care of; I was getting a little upset. (Family caregiver)

Determining the Treatment Level for NH Residents

The level of treatment at NHs, including the use of advance care planning (ACP), has been delineated through regular routines, as described by both physicians and nurses. This process entails open dialogues with the relatives of residents, as well as the residents themselves, provided they are capable of participating in discussions.

During the COVID-19 pandemic, numerous physicians engaged in additional conversations with residents' relatives to discuss treatment options and hospitalization plans. Many relatives preferred to avoid hospitalization for their loved ones. The physicians and nurses emphasized that individual assessments for NH residents were crucial to determining the necessity for hospital treatment.

I think that you have to make an individual assessment in each case, and in the vast majority of cases, it will be right not to admit to the hospital, but in some cases, it is right to admit, I think. There are very large differences within a nursing home population. (Physician)

Physicians and nurses concurred that ACP was crucial in the event of sudden health decline. Swift and informed professional decisions can be challenging during emergencies, particularly when staff knowledge about the resident is limited. However, certain nurses reported that the NHs physician often hesitated to make preemptive treatment decisions, preferring instead to assess each situation as it arises and make decisions on-The-go.

We (the nurses) wanted to have an advance plan for the treatment of those patients who could become so acutely ill that they needed palliative treatment in the ward. However, the physician believed that we should only contact him in each individual case. The nurses experienced this as an additional burden because we wanted to have a plan in advance so that we could start the treatment when it was necessary. (Nurse)

Many family caregivers indicated that they had discussed ACP, often accompanied by the NH resident. Most preferred that their loved ones receive treatment at the NH instead of being hospitalized.

Participation in decisions about ceasing treatment presented a dilemma for a family caregiver. Despite receiving adequate support and information from healthcare professionals, he felt his limited proficiency hindered his capability to make decisions about terminating the treatment.

It is a dilemma to decide when it's time to end such treatment, and we have very much agreed with what the doctor said all the way through, but I have reflected upon whether I was actually at one point forced to agree that the treatment should be terminated. (Family caregiver)

Discussion

Our study explored the experiences of treatment and care for NH residents with COVID-19, as described by physicians, nurses, and family caregivers. The findings revealed that COVID-19 posed several challenges within the treatment and care areas in NHs. Participants emphasized the use of palliative drugs to alleviate COVID-19 symptoms and underscored the importance of close monitoring of NH residents to guarantee adequate care and treatment. They also highlighted the

utility of systematic mapping tools to supplement clinical observations. In light of COVID-19, they often renewed ACP and clarified treatment levels, actions deemed vital to address before a potential emergency situation. While many family caregivers were invited to engage in these discussions, some found participating in decision-making related to treatment and care to be challenging.

Alleviation of Symptoms Due to COVID-19

The physicians and nurses described the use of drugs to reduce pain, restlessness, dyspnea, delirium, and/or respiratory secretions. Additionally, O₂ treatment was administered in cases of dyspnea and/or reduced oxygen saturation. The NH residents experienced symptoms such as fever and cough but also severe episodes with respiratory problems and delirium. This type of symptomatology and course in NH residents with COVID-19 is corroborated by other studies.²

The drugs mainly used were treatments for symptom relief, also known from palliative care, such as morphine, midazolam, haloperidol, and glycopyrronium bromide.^{2,24} Most of the physicians and nurses in Norwegian NHs are familiar with using these drugs in palliative care.²⁵ However, it was a new experience to prescribe these drugs to NH residents with COVID-19 as no one had prior knowledge of symptoms or course. Some participants in our study described that using a subcutaneous infusion pump with a mixture of morphine and midazolam over 24 h displayed good symptom relief for pain and panic attacks. However, in some cases, physicians and nurses had to double or triple the doses of morphine and midazolam to relieve the residents' discomfort. Studies describing symptom relief of NH residents with COVID-19 and the dosage of medication seem to be scarce, but in cases with severe COVID-19 symptoms, the use of palliative drugs appears to provide good symptom relief.^{26,27} Both Heath et al's²⁶ and Mendis et al's²⁷ studies showed that the doses of morphine and midazolam in the last 24 h of life were relatively moderate and that the use of a continuous subcutaneous infusion of either morphine, midazolam or a combination of both often was required. Despite repeated literature searches, we have not succeeded in finding studies that share similar experiences with higher doses of morphine and midazolam for NH residents with COVID-19, to which our participants refer. Due to other settings in the two above-mentioned studies and the small number of studies describing the use of palliative medications to relieve COVID-19 symptoms, it is difficult to transfer these results to NHs. However, it may indicate a greater need for the use of continuous subcutaneous infusion of morphine and midazolam to relieve dyspnea, anxiety, and restlessness caused by severe respiratory infections such as COVID-19. Previous studies have shown barriers to safe drug management among nurses in NHs²⁸ and barriers in palliative care for both physicians and nurses.^{29–31} Important barriers for nurses included disturbances during the preparation of medicines, high workload, fear of hastening death, lack of knowledge about medicines, palliative care, and recognizing signs when death was approaching.^{28,30} The physicians stated that end-of-life care required time, they needed more time for communication with patients and family, and their own interest in end-of-life care was lacking.³¹ COVID-19 drastically changed the familiar day-to-day life in the NHs with many cases of illness, high mortality, changing restrictions, unpredictability, new tasks, and high workload.^{1,2,6,8} Based on this and seen in relation to previous research, one could assume worry among our participants regarding the use of palliative drugs for NH residents with COVID-19. None of the nurses or physicians in our study expressed worries or skepticism about having to double or triple doses of morphine and/or midazolam to relieve symptoms of COVID-19. The family caregivers also did not express any worries about this but had confidence in the staff's assessments and treatment of their loved ones. A possible explanation could be that the physicians and nurses found it absolutely necessary to give such high doses to relieve the NH residents' discomfort and that they were confident that what they were doing was right. Further research into how palliative medication in NHs is used to alleviate symptoms caused by serious illnesses such as COVID-19 is needed.

Extended Care Needs

Several residents from the NHs were left physically debilitated due to COVID-19, requiring assistance with fundamental needs like eating, drinking, and personal hygiene. The introduction of restrictive visitation policies and mandatory isolation further exacerbated this situation, eliminating regular activities and visits from family members. This circumstance heightened feelings of anxiety and restlessness among these residents, often manifesting as apathy. Physicians and nurses equally noted these repercussions.

In addition, studies have indicated the presence of quality deficiencies in the care provided to NH residents during the COVID-19 pandemic.^{10,32} Caring for NH residents with complex care needs can be experienced as challenging especially during crisis like the COVID-19 pandemic. Despite these challenges, the majority of family caregivers expressed trust in the staff's appraisal and treatment methodology when dealing with their loved ones during the pandemic. Some, however, raised concerns regarding pain management and the safeguarding of mental health during isolation. Typically, family members expect not just a supportive partnership with the nursing staff but also quality care and attention for their loved ones.³³ They view themselves as more than mere visitors; they are caregivers who advocate for their loved ones' rights.^{10,34} Given the uncertainties and challenges arising from the pandemic, some family caregivers have expressed doubts regarding the quality of their loved ones' care. There has been voiced concern over the impact of imposed isolation and visitation restrictions on mental health.¹⁰ It is crucial to critically evaluate these aspects, as quarantine can induce symptoms like depression, stress, low mood, sleep disturbances, and anger. Moreover, these symptoms may persist even after the quarantine period has concluded.³⁵

Increased Need for Systematic and Close Follow-Up

Our findings indicated that NH residents with COVID-19 required an increased need for close monitoring and follow-up. Many required palliative drug treatment, an oxygen supply, and, in some cases, intravenous fluid therapy to prevent dehydration or delirium. Physicians and nurses often used NEWS to identify health deterioration in NH residents and found it beneficial for making treatment decisions. NEWS³⁶ is a tool developed to detect early declines in patients' health and a validated tool for hospital use.³⁷ It played an effective role in identifying COVID-19 deterioration in hospitalized patients.^{38,39}

However, there were some apprehensions about NEWS's suitability for NH residents due to their complex health statuses and its impact on professional treatment decisions.^{40,41} In our findings, nurses reported an increased use of NEWS during COVID-19, and both physicians and nurses expressed positive experiences with the tool. Stocker et al⁴² also found an enhanced response to deteriorating health conditions in NH residents due to the increased use of NEWS.⁴²

Some nurses in our study learned that solely relying on clinical observations was sometimes inadequate in determining NH residents' decline in health because of COVID-19. For example, a resident's oxygen saturation measurements were often significantly lower than what their clinical condition suggested. Silent hypoxemia, a condition where oxygen saturation is extremely low without obvious respiratory distress, may occur in COVID-19 patients.^{38,43} Hence, NEWS can be a suitable tool for the early identification of health deterioration in NH residents and can also aid in clinical assessments and inter-professional communication.^{40,44}

However, considering potential challenges associated with NEWS's application in NHs, it is crucial to provide staff with sufficient training and regular practice opportunities for its effective implementation. Further research into the implementation and use of NEWS in nursing homes will therefore be necessary.

Decisions About the Level of Treatment

Many NHs have protocols for ACP, and with the advent of COVID-19, many physicians initiated additional conversations. These primarily addressed the level of required treatment and potential future hospital admissions. ACP is often defined as

a process that includes the identification of the patient's values and defining goals and preferences for future medical treatment and care and discussion of these factors with the patient's family and healthcare providers.⁴⁵

One family caregiver described participating in shared decision-making as a tough decision. Despite receiving adequate support from health professionals, he felt coerced into agreement. This demonstrates that relatives can feel responsible and guilty about treatment withdrawal decisions, even when they are well supported.⁴⁶ Given the strenuous working conditions during COVID-19, the physician may have been driven to make hasty decisions and might not have been able to spend adequate time with the family caregiver. Keeping this in mind, it becomes crucial to clarify ACP early on, under more regular conditions where sufficient time and a calm atmosphere are available for relatives to ask questions and reflect.

NH residents may face an increased risk of delirium, falls, and infections when admitted to a hospital. It is therefore crucial to evaluate if a hospital stay would be beneficial for each resident.⁴⁷ In our study, family caregivers and relatives indicated a preference to avoid hospitalization for their loved ones, consistent with findings from other research.^{47–49} Notably, Spacey and Porter's review⁴⁸ also found that during the COVID-19 pandemic, both residents and their relatives were inclined to avoid hospital admission. This stemmed from residents' fear of infection and relatives' concerns that their loved ones could die without a familiar presence.⁴⁸ Regardless, the potential benefits of hospitalization for some NH residents must not be overlooked, necessitating individual case assessments.

In emergencies, our study found that most healthcare providers agreed on the importance of having an ACP already in place. However, a few physicians were hesitant to determine the level of treatment beforehand, preferring instead to make decisions as situations evolved. It is especially crucial during pandemics or humanitarian crises to ensure the administered treatments align with residents' wishes,⁵⁰ as healthcare professionals often need to make swift decisions. These hurried choices may lead to more intensive treatment that may oppose the residents or their relatives' preferences.⁴⁹ Therefore, steps should be taken to promote understanding of ACP and its benefits among NH residents, their relatives, and healthcare staff.

Strengths and Limitations

This study's sample comprises physicians, nurses, and family caregivers from various NHs and health regions in Norway. Despite the limited sample size, its informants provide a rich source of data grounded in their clinical and personal experiences with the COVID-19 pandemic at NHs. The research is a secondary analysis, and a consequent limitation lies in the inability to return to the informants for further questions. To circumvent potential biases from the primary analysis affecting our results, we utilized uncoded transcripts from the parent studies.⁵¹ The study's strength is underpinned by our interdisciplinary group conducting the research. However, given the variations in NH health service culture and content across countries, our findings must be interpreted with this in mind. While generalization is scarcely the aim of qualitative research, the focus is more on understanding the unique characteristics within a specific context.²² Yet, our findings could hold transferability potential to comparable contexts.⁵² Hence, this study might enhance comprehension and knowledge regarding NH residents' treatment and care, especially in the context of potential future epidemics or pandemics.

Conclusion

The study offers key insights from the perspectives of physicians, nurses, and family caregivers about the treatment and care of NH residents during a pandemic. It underscores the necessity of a structured municipal or national plan to bolster competence in clinical assessments, ACP, and NH resident treatment during crises like a pandemic. Considering the potential negative effects of isolation and strict visiting restrictions, it is crucial to prioritize establishing a secure and mutual relationship between NH residents and their families. After all, family caregivers and relatives are essential care providers for their loved ones.

Disclosure

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