Geriatric Nursing 66 (2025) 103679

Contents lists available at ScienceDirect

Geriatric Nursing

journal homepage: www.gnjournal.com

Featured Article

Impacts of COVID-19-related measures on older non-COVID-19 patients, their caregivers, and healthcare professionals in acute care settings: A secondary analysis of real-time qualitative data from the TRADE study

Natascha-Elisabeth Denninger[a,b,c,*], Simone Brefka[d,e,f], Dhayana Dallmeier[d,e,g], Michael Denkinger[d,e,f], Martin Müller[a,b]

[a] University/University Hospital Heidelberg, Department of Primary Care and Health Services Research, Nursing Science and Interprofessional Care, Im Neuenheimer Feld 130.3, 69120 Heidelberg, Germany
[b] Rosenheim Technical University of Applied Sciences, Centre for Research, Development and Technology Transfer, Hochschulstraße 1, 83024 Rosenheim, Germany
[c] Martin Luther University Halle-Wittenberg, International Graduate Academy, Institute for Health, Midwifery and Nursing Science, Medical Faculty, Magdeburger Straße 8, 06112 Halle (Saale), Germany
[d] Agaplesion Bethesda Hospital Ulm, Research Unit on Ageing, Zollernring 26, 89073 Ulm, Germany
[e] Geriatric Centre Ulm, Agaplesion Bethesda Hospital Ulm, Zollernring 26, 89073 Ulm, Germany
[f] Institute for Geriatric Research, Ulm University Medical Centre, at Agaplesion Bethesda Hospital Ulm, Zollernring 26, 89073 Ulm, Germany
[g] Boston University School of Public Health, Department of Epidemiology, 715 Albany Street, Boston, MA 02118, USA

ARTICLE INFO

Article history:
Received 19 December 2024
Received in revised form 14 July 2025
Accepted 7 October 2025
Available online 25 October 2025

Keywords:
COVID-19, Pandemics
Aged
Patients
Caregivers
Health personnel
Hospitals
Hospitalization
Visitor to patients
Qualitative research

ABSTRACT

The COVID-19 pandemic led to profound changes in healthcare, requiring hospitals to implement extensive structural adaptations for infection control. This study investigates the effects of COVID-19-related measures on older, non-COVID-19 patients, their caregivers, and healthcare professionals. Using real-time qualitative data from the TRADE project, collected during the pandemic's peak, this secondary analysis identifies seven key themes: (1) structural changes; (2) altered tasks and care practices; (3) ward and occupancy adjustments; (4) shifts in staffing situation; (5) revised visitation policies; (6) changes in communication; and (7) reduced social contact post-discharge. While essential for safety, COVID-19-related changes in hospital care posed challenges to direct patient care, increased staff burden, and limited social interaction. The study findings emphasize the need for clear, flexible, and well-communicated visitation policies and the integration of technology to maintain patient-family connections, promoting resilience and preparedness for future healthcare crises.

Introduction

The COVID-19 pandemic had a profound impact on healthcare systems worldwide. Hospitals were forced to reorganize resources, reduce elective procedures[1,2] and implement infection control measures, including full or partial visitation restrictions.[3,4]

As a result, patients,[5] family caregivers,[4,6] and healthcare professionals[7-9] experienced significant strain. Older adults were among the most affected, not only due to their increased risk of severe illness, but also because of structural and organizational constraints such as visitor bans, triage protocols, and isolation policies. These measures disrupted patient- and family-centered care, delayed treatments, reduced social interaction, and restricted caregiver access, even for patients not suffering from COVID-19. Older patients hospitalized for conditions other than COVID-19 frequently experienced loneliness, anxiety, emotional distress, loss of autonomy, and reduced access to personal support networks and care services.[4,5] Additionally, while the shift toward digital healthcare delivery created new opportunities, it also introduced barriers for older individuals, with technological access and usability emerging as critical issues.[10,11] At the same time, family caregivers were excluded from their normal roles, fundamentally altering patient-caregiver communication and care routines.[4,6] Healthcare professionals faced heavier workloads, staff shortages, and increased emotional burden.[7-9]

Although research on the impact of the pandemic-related measures continues to grow, including studies exploring the experiences

*Corresponding author at: University/University Hospital Heidelberg, Department of Primary Care and Health Services Research, Nursing Science and Interprofessional Care, Im Neuenheimer Feld 130.3, 69120 Heidelberg, Germany.
E-mail address: Natascha.denninger@med.uni-heidelberg.de (N.-E. Denninger).

https://doi.org/10.1016/j.gerinurse.2025.103679
0197-4572/$ – see front matter

of healthcare professionals[12,13] and caregivers,[6] there has been a focus on hospitalized COVID-19 patients.[14,15] In contrast, few studies have specifically examined the experiences of older adults hospitalized for non-COVID-19 conditions,[5] despite their heightened vulnerability to structural changes in care delivery and social isolation. Real-time qualitative studies capturing the lived experiences of older non-COVID-19 patients, their caregivers, and the healthcare professionals caring for them during acute hospital stays remain scarce. Yet these perspectives are essential for understanding the broader impacts of COVID-19-related measures and for informing future crisis response strategies that address the specific needs of older adults.

This study fills this research gap by conducting a secondary analysis of qualitative data collected as part of the TRADE (TRAnsport and DElirium in older people) project, an intervention study aimed at improving care transitions for older adults.[16,17] Using real-time data generated during the peak phases of the pandemic in Germany, we examined how measures impacted older non-COVID-19 patients, their caregivers, and healthcare professionals in acute care hospital settings.

By focusing on their lived experiences, this study offers new, practice-relevant insights into how pandemic-related measures influenced clinical routines, interprofessional collaboration, and the patient-caregiver relationship. The findings highlight critical implications for geriatric nursing practice and support the development of more resilient, caregiver-inclusive care models and crisis preparedness strategies.

The TRADE project

TRADE was a complex intervention implemented and evaluated in a pilot study (04/2021–03/2022) across 18 wards in four German hospitals. Its aim was to improve care transitions and reduce delirium incidence in older patients by optimizing discharge and transfer processes and actively involving caregivers.[16,17]

To examine the implementation of the intervention, including contextual factors, underlying mechanisms, and perceived feasibility and acceptability among healthcare professionals, patients, and caregivers, a mixed-methods process evaluation (referred to here as the "parent study") was conducted from 02/2021 to 05/2022.[18] The qualitative data collected during this period included interviews, focus groups, and documents, and were analyzed using qualitative content analysis.[19]

Although the intervention was developed prior to the onset of the COVID-19 pandemic, it was implemented and evaluated in the midst of the pandemic's unique challenges. To address the impact of the COVID-19 pandemic on the TRADE project, broadly formulated questions about pandemic-related restrictions were incorporated into interview and focus group guides (see Supplementary material: Interview questions related solely to COVID-19). These questions were primarily designed to explore contextual influences on the delivery of the TRADE intervention.[18] However, the resulting qualitative data also offered an opportunity to examine the broader effects of pandemic-related measures on older hospitalized patients, their caregivers, and healthcare professionals, extending beyond the original scope of the parent study.

The TRADE project was registered in the "German Register of Clinical Studies" (ID: DRKS00017828, date of registration 17.09.2019). Ethical approval was obtained by the relevant ethics committees of the participating clusters (University of Ulm (# 84/19 and 265/20), University of Heidelberg (# S-443/2019 and S-692/2020), University of Tübingen (# 352/2019BO2)). All participants received prior written and verbal information via email and telephone detailing the study's aim, data protection regulations, and study content. Interview and focus group participants signed a written informed consent form indicating that further analyses with new research questions might be conducted.

Methods

Study design

We conducted a secondary data analysis, an effective methodology for addressing emerging research questions beyond the scope of the original study.[20] The data that were re-analyzed comprise semi-structured, guide-based interviews, focus groups, and documents (including minutes from meetings and records of discussions with key interest holders, focusing on pandemic-related changes, as well as study planning and adjustments). The COVID-19-related questions included in the original interviews were initially intended to document contextual factors influencing the implementation of the TRADE intervention.[18] For this secondary analysis, we re-examined both the interview and focus group data and accompanying documents to explore a new and broader research scope.

The present report follows the guidelines outlined in the Consolidated Criteria for Reporting Qualitative Research (COREQ).[21]

Study population and sampling

Three university hospitals and one geriatric hospital in South-Western Germany, comprising 18 wards (~ 400 beds) for different disciplines (internal medicine, oncology, geriatrics, traumatology), took part in the parent study. Study participants included (i) patients aged 70 years and older, (ii) caregivers (family or close friends), (iii) healthcare professionals (nurses, physiotherapists, speech/occupational therapists, physicians, administrative staff, and others involved in discharge management), as well as (iv) coordinating study nurses and (v) study physicians. All participants were required to be legally competent, aged 18 or older, and fluent in German. Patients and caregivers were selected through purposive sampling based on the predefined inclusion and exclusion criteria. Purposive sampling was also used for healthcare professionals, aiming to ensure representation across relevant professional groups and hierarchical levels. All participants were then contacted personally by the lead author and informed about the interview via telephone and email.

Data collection

The data for this secondary analysis were drawn from the parent study. The data collection continued until data saturation was reached, defined as the point at which no new information or themes emerged. For this secondary analysis, we ensured comprehensive thematic coverage by re-examining all COVID-19-relevant codes, subcodes, and interview and document segments to identify nuanced perspectives relevant to our research aim.

The data included

(a) Semi-structured interviews and focus groups: A total of 72 interviews and two focus groups were conducted via telephone and lasted between nine and 66 min, totaling 5567 min. Interviews were carried out by one researcher (ND). All guides, tailored to patients, caregivers, healthcare professionals, study nurses, and physicians, were pilot-tested for clarity. Interviews and focus groups were conducted in German, audiotaped, and transcribed verbatim using the transcription software "f4transkript".[22] Transcripts were not returned to participants for comment or verification.
(b) 82 documents, including minutes of meetings with cluster and project partners and other meeting minutes (e.g., discussions with ward managers), were collected.

Data protection was ensured in accordance with the requirements of the EU General Data Protection Regulation.

Table 1
Overview of the qualitative methods.

Methods	Participants	Total time (min.−max.) required for interviews/focus groups in minutes
Interviews with patients and caregivers (n **= 33**)	19 patients, 14 caregivers	964 (9−66)
Interviews with healthcare professionals (n **= 39**)	11 nurses, 4 nursing directors, 9 physicians, 2 administrative staff, 3 social workers, 1 patient manager, 1 physiotherapist, 1 speech/occupational therapist, 4 study nurses, 3 study physicians	1522 (20−66)
Focus groups (n **= 2**)	3 nurses, 2 medical directors	81 (40−41)
Documents (n **= 82**)	82 meeting records of meetings with clusters and project partners, and other meeting records	/

Table 1 provides an overview of the individual qualitative methods, participants and duration of the interviews and focus groups.

Data analysis

For this secondary analysis we used thematic analysis in six steps.[23] (i) Familiarization with the qualitative data by repeated reading and reviewing the coding manual from the parent study; (ii) Generating initial codes, re-coding text passages tagged as "COVID-19″ to focus on pandemic-related impacts on patients, caregivers, and healthcare professionals; additionally, all relevant COVID-19-related subcategories and summaries from the primary analysis were reviewed to ensure that no key points were overlooked; (iii) Sorting initial codes into themes; (iv) Reviewing and refining themes for coherence; (v) Defining overarching themes and subthemes; (vi) Summarizing themes in a report, with illustrative quotations. All data handling was done in MAXQDA (parent study: version 2019; secondary analysis: version 2022).[24,25] German quotations were translated into English.

Results

We identified seven main themes related to the impact of measures taken during COVID-19 on older hospitalized patients, their caregivers, and healthcare professionals: Structural changes, Altered tasks and care, Shifts in staffing situation, Ward and occupancy adjustments, Revised visiting policies, Communication modification, and Reduced social contact after hospital discharge. Table 2 summarizes the seven main themes and their related sub-themes, each accompanied by a short description to illustrate their relevance to the study findings.

Theme 1 − structural changes

To minimize the risk of infection, public spaces such as cafeterias were closed, restricting social interaction and patient well-being. At times, patients were not allowed to leave their rooms and/or wards. Contact time between healthcare professionals and patients was deliberately reduced to lower the risk of infection, and unintentionally reduced due to cumbersome protective gear (masks, gowns, gloves, protective caps), rendering patient interaction more difficult, especially at the beginning of the pandemic.

> „*[...] where you could only enter the rooms with certain protective gear [...]. I think people [healthcare professionals] automatically went into the rooms less often than usual.*"
>
> *(LEAD_12: 42−44)*

Table 2
Themes and sub-themes related to the impact of COVID-19 measures.

Theme	Sub-themes	Description
Theme 1 − Structural changes	Closure of public spaces	Closure of cafeterias and lounges limited patient interaction
	Room and ward confinement	Patients were restricted to rooms or wards, leading to isolation
	Reduced patient contact by staff	Protective gear and infection control reduced face-to-face interaction
	Decreased mobilization and rehabilitation	Isolation led to reduced rehabilitation and mobilization efforts
Theme 2 − Altered tasks and care	Additional pandemic-related tasks	Staff took on new responsibilities such as swabbing and documentation
	Prioritization of care	Care was rationed and prioritized due to time constraints and competing demands
	Workflow and role changes	Staff were redeployed and had to adapt to new settings and teams
Theme 3 − Shifts in staffing situation	Absenteeism and shortages	High staff absences occurred due to illness, quarantine, or personal circumstances
	Team instability	Staff turnover and redeployment disrupted team routines and continuity
	Exhaustion and reduced engagement	Motivation and participation in training or extra duties declined significantly
Theme 4 − Ward and occupancy adjustments	Introduction of intermediate wards	New quarantine units led to multiple transfers during hospital stays
	Ward restructuring	Wards were reorganized to accommodate different patient groups and diagnoses
	Extended hospital stays	Limited rehabilitation capacity prolonged acute care stays
	Staff burden despite low occupancy	Reduced occupancy still caused high strain due to care for isolated patients
Theme 5 − Revised visiting policies	Visiting restrictions and bans	Strict and inconsistent policies caused confusion and limited patient contact
	Impact on healthcare professionals	Staff had to compensate for caregiver absence, increasing workload and stress
	Impact on patients and caregivers	Isolation, uncertainty, and emotional distress varied depending on circumstances
	Impact on admissions and discharge	Visitation limits delayed or complicated transitions and disrupted coordination
Theme 6 − Communication modifications	Different use of communication tools by patients	Staff often underestimated patients' digital skills; many used phones or tablets
	Altered communication between healthcare professionals and caregivers	Phone-based updates were inconsistent; caregivers missed discharge conversations
	Altered team communication	Team meetings were cancelled, with digital tools used for coordination
Theme 7 − Reduced social contact after hospital discharge	Continued isolation and limited visits	Many patients received few or no visits after discharge due to infection risk
	Adaptive caregiving strategies	Caregivers compensated with household help, protective measures, and presence

This reduction in contact also led to a decrease in mobilization and other rehabilitation measures. Patients were isolated both from the world outside the hospital and from the internal environment within the hospital.

> „*That was COVID time. They were locked in their rooms. It was a heavy blow. You were going crazy. No interaction. [...] No one visited. It was terrible. I don't mean to imply that patients were poorly cared for. There was no other way. But they got their food delivered and that was it. There was no rehabilitation either.*“
> *(CAREGIVER_with_11: 18–20)*

Theme 2 – altered tasks and care

The COVID-19 pandemic led to a multitude of additional tasks for healthcare professionals, including conducting swab tests on patients and themselves. Although bed closures reduced overall occupancy rates, healthcare professionals had to care for more patients than before COVID-19, primarily due to severe staffing shortages. The resulting time pressure necessitated prioritizing and rationing patient care, impacting standard care practices, such as the communication of information to patients and their caregivers.

> „*[...] At the moment, we are at a level where we have to make compromises in all areas, [...] we are working according to a priority list. And some things that are necessary are simply being left out.*“
> *(NURSE_23: 107)*

Ensuring care during the COVID-19 pandemic was described by one administrator as a "balancing act", where maintaining patient care and retaining staff were both critical. Nursing professionals were redeployed to different wards, leading to significant stress as they had to continuously adapt to new teams and environments. These additional responsibilities and changes in work structure further exacerbated the already challenging conditions faced by healthcare professionals during the pandemic.

> „*We are in a different phase of personnel management, where we have to be extremely cautious with every additional demand placed on staff. Primarily, it's about ensuring we function and provide care. And then, if you're pushing staff beyond that – it's really a balancing act.*”
> *(LEAD_13: 42–45)*

Theme 3 – shifts in staffing situation

While the previous theme focused on how care tasks and workflows were reorganized during the pandemic, this theme addresses the underlying staffing situation and its broader consequences for team stability and service delivery.

The COVID-19 pandemic exacerbated the existing staffing shortages, particularly in nursing. Illnesses, primarily due to COVID-19, led to numerous absences. Healthcare professionals who were parents faced temporary work interruptions when their children exhibited ambiguous symptoms. During the pandemic, healthcare professionals had to immediately stop working when pregnant. Additionally, the staffing situation worsened as some healthcare professionals reduced their working hours, quit their jobs entirely, or moved to other hospitals with less workload. These changes resulted in significant stress, general fatigue, and weariness among healthcare professionals.

> „*[...] We had phases where we genuinely did not know who would be working the next day. Just due to sickness, quarantine, and this going on for months – it wears you down.*“
> *(LEAD_13: 42–45)*

Participation in training sessions, even online, and other activities outside of patient care were severely limited due to additional shifts necessary to cover for sick colleagues and a reduced desire for overtime. The constant changes in regulations caused unrest within teams, leading to neglecting other relevant areas such as training or studies. This continuous adjustment to new regulations and the increased workload further contributed to staff exhaustion and demotivation.

> „*Because the staff are currently resisting any additional burdens [carrying out additional tasks beyond patient care,* e.g. *trainings]; they are at their limit. They are simply at their limit right now.*“
> *(NURSE_23: 45)*

Theme 4 – ward and occupancy adjustments

Intermediate wards for newly admitted patients were introduced to ensure that they remained in quarantine until COVID-19 test results were available before being transferred to regular wards. This resulted in every patient experiencing at least one transfer per hospital stay. Wards had to be restructured: some were designated "intermediate wards", while others had to care for patients with other diagnoses and from other departments. This situation necessitated adjustments in care structures.

> „*[...] all patients are first tested to ensure they are COVID negative, and then, the next day, they are distributed to the appropriate wards.*”
> *(CAREGIVER_with_21: 161–184)*

Limited capacity of rehabilitation facilities extended the lengths of acute care hospital stays. Bed closures due to staff shortages exacerbated the situation. Despite lower occupancy rates, the burden on staff was immense due to additional demands and the need to care for isolated patients. These structural changes and staff shortages placed a significant strain on the healthcare system, requiring constant adjustments and compromises in patient care.

> „*Because honestly, it is a special time right now. Even with lower occupancy, it is still a different kind of burden for many.*“
> *(PHYSICIAN_13: 158)*

Theme 5 – revised visiting policies

Visiting restrictions and bans

Visitation policies varied considerably between hospitals, even within the same federal state and even the same cities, resulting in confusion and dissatisfaction. Some hospitals imposed a total visitation ban, which sometimes lasted for several months. All hospitals enforced strict entry requirements, such as one visitor per patient per day and compliance regulations regarding immunity status (vaccinated, recovered, and tested). Visits often had to be scheduled through online booking systems. If no slots were available, no visitation was possible. Entry controls required a valid test result or proof of vaccination, along with forms to be completed, which sometimes led to long queues.

> „*I find the visitation policy a bit strict and somewhat confusing. What about people who can't easily register online? [...] And most of the slots were already full or cancelled. [...] And you need to show a daily test or be vaccinated twice. It's sometimes a bit chaotic at the reception.*“
> *(PATIENT_without_11: 78–86)*

In exceptional cases, special permission for visitation was granted, but the handling of this permission varied from hospital to hospital. Such exceptions were palliative care situations, pre-surgery consultations, or obtaining signatures for patients under guardianship.

„[. . .] Only in very special exceptional cases a visit is allowed. [. . .] It does happen occasionally, but these are patients who have received a very poor prognosis or diagnosis [. . .]."

(NURSE_25: 43−46)

Impact on healthcare professionals

The visitation restrictions led to a significant increase in the workload for the healthcare professionals, who were already facing staff shortages. Staff had to take on additional responsibilities that would normally be handled by caregivers, including providing emotional support and everyday assistance. The increased use of alternative communication methods, such as phone calls, proved to be time-consuming and put further strain on staff.

„We have an absolute visitation ban starting today. [. . .] That doesn't make it any easier, having to somehow communicate with caregivers over the phone. And that's an additional burden."

(THERAPIST_11: 84−85)

Impact on patients and their caregivers

The visitation restrictions during the COVID-19 pandemic had substantial effects on patients and their caregivers, with reactions varying significantly depending on individual circumstances. Patients with long hospital stays and cognitive impairments struggled to understand the visitation restrictions, leading to high emotional stress for both parties.

"And therefore, in my opinion, this order [visitation ban] makes absolutely no sense. I can understand it, but I honestly don't know if it makes sense for EVERYONE in the end, and I explicitly say for EVERYONE. This includes hospital staff, who I believe have much more to do because of it, let alone patients and their caregivers, has it offered any benefit at all?"

(CAREGIVER_with_12, 24−32)

The support and companionship typically provided by caregivers were no longer present in the hospitals.

„[. . .] Because I usually take on that role, I speak with the doctors and am there in person. And all of that was missing this time. [. . .] And she was even more 'lost,' so to speak."

(CAREGIVER_with_22: 39−54)

However, patients without cognitive impairments and with shorter hospital stays perceived the calm resulting from visitation restrictions positively and supported these measures irrespective of the pandemic.

„There are patients who receive endless visitors. And that was eliminated, which I personally found very calming, and the hospital was very peaceful because of it. There was no hustle and bustle throughout the building; the corridors were actually quiet. [. . .] Yes, I liked it."

(PATIENT_without_33: 77−90)

Some patients did not want to receive visitors due to fear of infection.

„And you simply tell a friend, 'Corona's here, so you won't be visiting me anymore.' You don't do that. You don't take those risks. [. . .] The risk for the friend. [. . .] Just stay away from the hospital."

(PATIENT_without_41: 67−72)

The lack of access to certain services, such as hairdressing in rehabilitation, cafeterias in hospitals, or interactions between patients, further affected the well-being of patients.

Caregivers experienced great uncertainty and often did not understand the various regulations that varied from hospital to hospital within a federal state. Entry controls at hospitals requiring a valid test result or proof of vaccination and completion of forms led to additional stress and increased time consumption.

„[. . .] because he was standing at the entrance for what felt like an eternity and said he [my father] would very much like to visit my mother."

(CAREGIVER _with_21: 90−96)

Choosing the designated visitor often posed an ethical dilemma. In many cases, only one person was allowed to visit the patient, leading to difficult decisions within families.

„So, you are only allowed in three times a week. We, of course, made full use of that. And once my father went instead of me because only one person is allowed at a time. And I didn't want to claim it all for myself because, after all, he is still her husband."

(CAREGIVER_with_22: 205−232)

Due to restrictions on transport services, it was not possible to involve caregivers in the transportation process. Some preferred to arrange for transport services to bring patients home rather than picking them up directly from the hospital.

„So, they should order medical transport to bring him home, which I think is wiser in the current situation. As I said, because I am not allowed in anyway. I can't help him get dressed. Nor can I pack his things or help him pack. And so on and so forth. If we didn't have a visitation ban, then it would be a different story."

(CAREGIVER_with_12: 108−112)

Impact on admissions and discharge processes

The restrictions also complicated the admission and discharge processes, as the usual support from caregivers was no longer available and important information was often delayed.

Interviewer: "How did you and your mother experience the COVID-19 situation?"

Caregiver: "It was terrible. [. . .] I wasn't even allowed in the emergency room. [. . .] I put a post-it note with contact numbers on my mom's admission form, but those somehow got lost. [. . .] And no one called me or informed me. [. . .] I mean, if she is being examined, that's fine with me because it's necessary. But to leave her sitting there for six hours without anything to drink or eat, I didn't think that was good."

(CAREGIVER_with_21: 185−190)

Theme 6 − communication modification

Different use of communication tools by patients

The perceptions of healthcare professionals and caregivers regarding the digital competence of older patients differed. Many healthcare professionals assumed that patients over the age of 70 might face challenges with digital technologies.

„*Even when it comes to just writing emails, or with their own grandchildren, many are already overwhelmed by that.*“
(SOCIAL WORKER_22: 122–123)

However, patients often demonstrated they were well-equipped and capable of maintaining contact with the outside world. They used various communication tools such as mobile phones, tablets, and letters to maintain contact with their caregivers.

„*We talked on the phone, we used WhatsApp. That all worked. [...] We could have video conferences, he did that with the kids too. So that went quite well.*“
(CAREGIVER_with_34: 75–79)

Altered communication between healthcare professionals and caregivers

The nature and intensity of communication between hospital staff and caregivers varied greatly. Important matters were typically discussed over the phone between physicians and caregivers. However, many caregivers reported that they had to call repeatedly to obtain necessary information, and often did not receive regular updates on the patient's condition or their care status. One caregiver, for example, described how the lack of a structured discharge conversation left important nursing and medical questions unanswered:

„*I know it's COVID, it's not possible [to give detailed information]. [...] Maybe I would have liked to have had a discharge or transition discussion with the doctor. [...] That might have been one more task, for the doctor to briefly go over the medical part again. [...] Maybe just briefly – I mean, she did say, the doctor said: 'The wound looks great.' But between great and great [...], I don't need to explain to you. [...] I might have been able to get my medical questions answered.*“
(CAREGIVER_without_21: 192–221)

The regulations for telephone communication also differed: In some hospitals, caregivers could simply call the ward and be connected or receive a callback. In other cases, there were set time windows of two hours for calls with physicians or fixed appointments for conversations.

„*[...] They arranged it with these two-hour windows daily, from Monday to Friday. [...] And I found that to be a very good thing [...].*“
(CAREGIVER_with_12, 36–41)

Casual interactions between caregivers and healthcare professionals, as well as the participation of caregivers in ward rounds, were eliminated. Caregivers had to rely heavily on the information provided by healthcare professionals.

„*It was difficult to call caregivers to plan care because they couldn't see their mother or father. They had no idea of their current condition. It was very, very, very difficult to convey that. [...] Because, of course, the caregivers only have their impression from earlier. [...].*“
(SOCIAL WORKER_22: 71–74)

Especially during longer hospital stays, it would have been important for caregivers to see the patients shortly before discharge to assess their health condition themselves.

„*[...] it would have been easier for me if I could have just gone in for a short visit a day or two before discharge. I could have seen her [my mother] for five minutes and then left. Then I could have assessed the situation better rather than relying on hearsay. [...]*“
(CAREGIVER_without_21: 192–221)

Altered team communication

Measures to contain the pandemic impaired team communication. Shared breaks or team meetings could not take place, making information exchange and collaboration within the team more difficult. Alternative communication methods were used for important topics.

„*Due to COVID, there were unfortunately no ward meetings. [...] But our ward manager said that if there are very important points, she would send voice messages to everyone. But no other meetings.*“
(NURSE_41: 185–196)

Theme 7 – reduced social contact after hospital discharge

After being discharged from the hospital, many patients faced the challenge of receiving few to no visits due to fear of infection, despite their need for support. The initially difficult situation gradually improved as patients and their caregivers adapted. With recovery, improved health, double vaccination, which provided a sense of security, and safety precautions such as wearing masks and prior quarantine, visits became more frequent.

„*But we had visitors, people who tested themselves beforehand and/or sat here with masks. He [husband] did get visitors at home. [...] With precautionary measures. And he is now also becoming more confident because he is feeling better.*“
(CAREGIVER_with_34: 194–197)

Caregivers also adjusted to the new circumstances, taking on additional daily tasks like grocery shopping and supporting patients in their daily lives.

„*I avoid going to the supermarket because of COVID, and my son brings me everything I need. He lives in the neighbourhood. [...] Just because of COVID, I stay away because the cardiologists have warned me to be very careful.*“
(PATIENT_without_32: 44–53)

In many cases, caregivers stayed overnight with the patients or temporarily moved in with them after discharge to ensure continuous care. These measures reflect how both patients and their caregivers flexibly responded to the challenges and adapted to the evolving situation.

„*[...] And the other daughter, who also stayed longer, did her home office here.*“
(PATIENT_without_32: 337–339)

Discussion

This secondary data analysis structures and summarizes the impact of measures taken during the COVID-19 pandemic on older hospitalized non-COVID-19 patients, their caregivers, and healthcare professionals. It identifies key changes as healthcare systems adapted to the crisis, including structural changes, altered tasks and care, shifts in staffing situation, wards and occupancy adjustments, revised visitation policies, modifications to communication, and reduced social contact after hospital discharge. Our study adds a comprehensive perspective on the far-reaching impacts of these measures, illustrating how structural changes and staffing shifts disrupted workflows and heightened strain on healthcare professionals. Patients experienced isolation and limited access to rehabilitation, while caregivers struggled with inconsistent visitation policies. By capturing the interplay between systemic changes and psychosocial consequences, this analysis provides critical insights to inform future health policy and crisis preparedness.

The pandemic led to widespread restructuring in healthcare facilities, such as the repurposing of entire wards and the establishment of specialized quarantine areas to manage incoming cases. These structural adjustments align with similar findings documented in other studies,[26-28] underscoring the systemic transformations necessitated by the crisis.

The repurposing of wards and the reassignment of personnel to unfamiliar departments created substantial mental strain and heightened anxiety among healthcare professionals, who often lacked adequate preparation and support. Addressing these mental and practical challenges remains a significant issue during such sudden reassignment.[12,29,30]

Another prominent challenge identified in this study was the increased frequency of patient transfers due to quarantine protocols. The introduction of intermediate wards, where patients were required to remain in isolation until their COVID-19 test results were available,[31] resulted in additional transfers during their hospital stay. Frequent room changes have been shown to be a significant risk factor for developing adverse health outcomes, such as delirium, particularly among older adults.[32,33] The pandemic further exacerbated this risk by limiting visitors, reducing the availability of orientation cues, and requiring staff to wear extensive protective equipment, which hindered clear communication and recognition. While some studies have suggested that reduced visitor access might decrease delirium by creating a calmer environment,[34] others indicate that social isolation can exacerbate cognitive changes,[35] underscoring the nuanced nature of the impact of these factors. These findings illustrate the complex relationship between visitation policies, isolation, and cognitive health, pointing to the necessity of further research to understand how these factors interact and affect patient outcomes.

The COVID-19 pandemic also disrupted standard care practices, limiting the ability of healthcare professionals to provide sufficient information and emotional support to patients and their caregivers. Analysis revealed that healthcare professionals often had to prioritize and ration care tasks under significant time constraints, leading to challenges in maintaining effective communication with patients and caregivers. Similar challenges, such as the postponement of elective procedures and the reduction of essential services, have been documented during non-COVID-times in other studies.[36,37] Even prior to the pandemic, staffing shortages and limited time were identified as persistent obstacles to high-quality care,[38] often forcing prioritization of urgent tasks while neglecting important aspects like emotional support. The pandemic amplified these issues, leading to increased workloads and greater communication challenges for healthcare professionals, negatively affecting both patient outcomes and professional well-being.[4,6,39,40] This situation raises questions about the long-term impacts on patients, caregivers, and healthcare professionals, particularly regarding systemic burdens in healthcare.[4,41-43]

Visitation restrictions, initially implemented to reduce infection risk, had major effects on both patients and healthcare professionals. Although these restrictions were intended to protect vulnerable populations, they disrupted patient care routines, particularly for those with cognitive impairments or extended hospital stays. Healthcare professionals reported an increased burden as they took on roles traditionally filled by family caregivers, such as providing social support and assisting with daily activities. Meanwhile, patients with extended hospital stays experienced isolation, heightened anxiety, and, in some cases, reduced participation in daily life, consistent with findings from other studies.[4,44] Caregivers frequently expressed frustration with inconsistent and unclear visitation policies, which varied widely even within the same region. These inconsistencies created confusion and stress among patients and caregivers, reflecting the challenges of implementing effective visitor access policies during health crises.[45] Examples from countries like Canada, where visitation policies were adapted to permit controlled caregiver access, demonstrate how different approaches aimed to balance infection control with the need for social and emotional support for patients.[46] These findings align with existing literature emphasizing the importance of ethical, transparent, and well-communicated visitation frameworks that are consistently applied and adaptable to individual patient needs.[47]

Given these challenges, technology emerged as a crucial tool to mitigate some of the negative impacts of visitation restrictions, enabling communication between patients and caregivers. This study suggests that many patients over the age of 70 successfully use devices like mobile phones and tablets to stay socially connected. However, not all patients were familiar with these technologies or had access to them, highlighting disparities in digital inclusion. Furthermore, the findings demonstrate the critical role of healthcare professionals in supporting the use of digital communication tools, though varying levels of digital proficiency among staff may pose challenges to their effective implementation.[48] While digital communication tools provide valuable support, studies confirm that they cannot fully replace the benefits of in-person visits.[4]

Strengths and limitations

The study has several strengths. It builds on a prospectively collected dataset from the COVID-19 pandemic period, encompassing various interviews, focus groups, and document records. This dataset enabled us to thoroughly examine the impact of the COVID-19-related measures on older non-COVID-19-patients, their caregivers, and healthcare professionals in acute care settings. Importantly, the data were collected in real time during the pandemic, allowing participants' experiences to be immediately recorded as events unfolded, thereby minimizing recall bias.[49] This real-time aspect provides a unique perspective on the immediate effects and adaptations within healthcare systems during the crisis. Another strength is that the researchers who conducted the parent study[18] also performed the secondary data analysis. This ensured familiarity with the data and the study context, allowing for a nuanced and comprehensive interpretation. Additionally, ethical and legal protocols were comprehensively considered during the initial data collection, informing participants of potential further analyses. This allowed the secondary analysis to proceed without requiring additional consent, streamlining the research process while adhering to ethical standards.

Nevertheless, the study has certain limitations. The data were not collected specifically to address our secondary research question, which limited our ability to explore particular topics in depth or to ask follow-up questions. Variations in COVID-19 measures, such as differences in visitation restrictions across participating hospitals, introduced a degree of variability that could limit the consistency of findings. However, this variability also provides insights into the effects of differing policies and highlights the importance of standardized approaches in future healthcare crises.

Despite these limitations, the study offers meaningful insights into the impact of COVID-19-related measures on vulnerable populations and healthcare professionals, underscoring the need for adaptable, well-communicated policies in acute care settings.

Conclusion

The COVID-19 pandemic profoundly impacted older hospitalized patients, caregivers, and healthcare professionals. This study underscores the critical need for standardized yet adaptable visitation policies, particularly for high-risk groups such as patients with cognitive impairments or those undergoing extended hospital stays. Effective policies must balance infection control measures with minimizing the adverse effects of social isolation, which may exacerbate cognitive changes. Future research should therefore further explore the complex interplay between visitation restrictions, isolation, and cognitive health in hospital settings. Although digital communication tools proved valuable for maintaining connections between patients and caregivers, they cannot replace the benefits of in-person interactions. A hybrid approach, prioritizing in-person visits wherever feasible while leveraging digital solutions during periods of restricted access, could offer a balanced strategy to support patients' social and emotional needs. During the pandemic healthcare professionals faced increased workloads, frequent role reassignments, and limited resources including time constraints and communication deficits. Strategic measures to enhance healthcare system resilience are needed, including staffing plans for crisis situations and digital infrastructure that supports effective communication between caregivers, healthcare professionals, and primary care providers.

Drawing on in-depth, real-time qualitative data collected during the pandemic, this study provides unique insights into how systemic crisis responses shaped care delivery, patient experience, and professional practice. Addressing these challenges can ensure better management of future healthcare crises, fostering resilient systems that prioritize patient outcomes, caregiver well-being, and healthcare professional resilience.

Funding

This work was funded by the German Joint Federal Committee/Innovation fund (grant number: 01VSF18052). The funding source had no role in any of the decisions taken in planning and conducting the project or publishing the results. Open Access funding enabled and organized by Project DEAL.

Data availability

The data supporting the findings of this study are not publicly available for reasons of sensitivity, but can be obtained from the corresponding author upon reasonable request.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CRediT authorship contribution statement

Natascha-Elisabeth Denninger: Writing – original draft, Visualization, Validation, Software, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Simone Brefka:** Writing – review & editing, Project administration. **Dhayana Dallmeier:** Writing – review & editing, Supervision, Funding acquisition. **Michael Denkinger:** Writing – review & editing, Supervision, Funding acquisition. **Martin Müller:** Writing – review & editing, Validation, Supervision, Methodology, Funding acquisition, Formal analysis, Conceptualization.

Acknowledgments

We express our gratitude to all patients, caregivers, and healthcare professionals who participated in the interviews and focus groups. Additionally, we extend our thanks to the student assistants for their valuable contribution in transcribing them. Special thanks to Anke Bahrmann, Petra Benzinger, Tobias Geisler, Jochen Klaus, Jonas Hoch, Isabella Kast, Gabriele Müller, and Maria Luisa Möller-Winheim for their assistance in recruiting participants.

Supplementary material

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.gerinurse.2025.103679.

References

1. Ferreira DP, Bolognani CV, Santana LA, et al. Impact of the COVID-19 Pandemic on Elective and Emergency Surgeries, and Postoperative Mortality in a Brazilian Metropolitan Area: a Time-Series Cohort Study. *Risk Manag Healthc Policy*. 2024;17:1701–1712. https://doi.org/10.2147/RMHP.S459307.
2. Uimonen M, Kuitunen I, Paloneva J, Launonen AP, Ponkilainen V, Mattila VM. The impact of the COVID-19 pandemic on waiting times for elective surgery patients: a multicenter study. *PLoS One*. 2021;16(7):e0253875. https://doi.org/10.1371/journal.pone.0253875.
3. Marmo S, Milner KA. From Open to Closed: COVID-19 Restrictions on Previously Unrestricted Visitation Policies in Adult Intensive Care Units. *Am J Crit Care*. 2023;32(1):31–41. https://doi.org/10.4037/ajcc2023365.
4. Hugelius K, Harada N, Marutani M. Consequences of visiting restrictions during the COVID-19 pandemic: an integrative review. *Int J Nurs Stud*. 2021;121:104000. https://doi.org/10.1016/j.ijnurstu.2021.104000.
5. Nielsen DS, Hansen RF, Beck SH, Wensien J, Masud T, Ryg J. Older patients' perspectives and experience of hospitalisation during the COVID-19 pandemic: a qualitative explorative study. *Int J Older People Nurs*. 2021;16(2):e12362. https://doi.org/10.1111/opn.12362.
6. Montesanti S, MacKean G, Fitzpatrick KM, Fancott C. Family caregivers as essential partners in care: examining the impacts of restrictive acute care visiting policies during the COVID-19 pandemic in Canada. *BMC Health Serv Res*. 2023;23:320. https://doi.org/10.1186/s12913-023-09248-3.
7. Gupta N, Dhamija S, Patil J, Chaudhari B. Impact of COVID-19 pandemic on healthcare workers. *Ind Psychiatry J*. 2021;30(Suppl 1):S282–S284. https://doi.org/10.4103/0972-6748.328830.
8. Lai J, Ma S, Wang Y, et al. Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA Netw Open*. 2020;3(3):e203976. https://doi.org/10.1001/jamanetworkopen.2020.3976.
9. Abdel-Azeem A, Alshowair A, Alshora E, et al. Occupational Stress and Burnout Among Healthcare Workers in Saudi Arabia During the COVID-19 Pandemic. *Inquiry*. 2024;61:469580241275328. https://doi.org/10.1177/00469580241275328.
10. Wilson J, Heinsch M, Betts D, Booth D, Kay-Lambkin F. Barriers and facilitators to the use of e-health by older adults: a scoping review. *BMC Public Health*. 2021;21(1):1556. https://doi.org/10.1186/s12889-021-11623-w.
11. Bertolazzi A, Quaglia V, Bongelli R. Barriers and facilitators to health technology adoption by older adults with chronic diseases: an integrative systematic review. *BMC Public Health*. 2024;24(1):506. https://doi.org/10.1186/s12889-024-18036-5.
12. Davey Z, Srikesavan C, Cipriani A, Henshall C. It's What We Do: experiences of UK Nurses Working during the COVID-19 Pandemic: impact on Practice, Identity and Resilience. *Healthcare (Basel)*. 2022;10(9). https://doi.org/10.3390/healthcare10091674.
13. Murat M, Köse S, Savaşer S. Determination of stress, depression and burnout levels of front-line nurses during the COVID-19 pandemic. *Int J Ment Health Nurs*. 2021;30(2):533–543. https://doi.org/10.1111/inm.12818.
14. Cheong D, Ní Chróinín D, Chiang L, Rolls K. I was there because I needed to be there': a qualitative study of the experience of older adults hospitalised with COVID-19 in Australia. *Australas J Ageing*. 2025;44(1):e13412. https://doi.org/10.1111/ajag.13412.
15. Reay A, Dismore L, Aujayeb A, et al. Analysing the patient experience of COVID-19: exploring patients' experiences of hospitalisation and their quality of life post discharge. *J Clin Nurs*. 2024;33(9):3634–3641. https://doi.org/10.1111/jocn.17194.
16. Leinert C, Brefka S, Braisch U, et al. A complex intervention to promote prevention of delirium in older adults by targeting caregiver's participation during and after hospital discharge - study protocol of the TRAnsport and DElirium in older people (TRADE) project. *BMC Geriatr*. 2021;21(1):646. https://doi.org/10.1186/s12877-021-02585-0.
17. Denninger N-E, Brefka S, Skudlik S, et al. Development of a complex intervention to prevent delirium in older hospitalized patients by optimizing discharge and transfer processes and involving caregivers: a multi-method study. *Int J Nurs Stud*. 2024;150:104645. https://doi.org/10.1016/j.ijnurstu.2023.104645.
18. Denninger N-E, Brefka S, Meyer G, et al. Implementation context, mechanisms and outcomes of a transitional care intervention to prevent delirium: a mixed-methods process evaluation from the TRADE study. *BMC Geriatr*. 2025;25(1):704. https://doi.org/10.1186/s12877-025-06331-8.
19. Kuckartz U, Rädiker S. *Qualitative Content Analysis: Methods, Practice and Software*. 2nd edition Sage; 2023.

20. Ruggiano N, Perry TE. Conducting secondary analysis of qualitative data: should we, can we, and how? *Qual Social Work*. 2017;18(1):81–97. https://doi.org/10.1177/1473325017700701.
21. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349–357. https://doi.org/10.1093/intqhc/mzm042.
22. dr. dresing & pehl GmbH. f4transkript (computer software). Accessed May 4, 2022. https://www.audiotranskription.de/f4transkript/.
23. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3 (2):77–101. https://doi.org/10.1191/1478088706qp063oa.
24. VERBI Software. MAXQDA 2019 [computer software]. Accessed August 2, 2023. https://www.maxqda.com.
25. VERBI Software. MAXQDA 2022 [computer software]. Accessed May 22, 2024. https://www.maxqda.com.
26. Stichler JF. How the Coronavirus Pandemic Has Changed Healthcare Design. *HERD*. 2022;15(1):12–21. https://doi.org/10.1177/19375867211060822.
27. Bessis S, Dinh A, Gautier S, et al. A Restructured Hospital Into a One-Building Organization for COVID-19 Patients: a Resilient and Effective Response to the Pandemic. *Front Public Health*. 2022;10:709848. https://doi.org/10.3389/fpubh.2022.709848.
28. Król Z, Szymański P, Bochnia A, et al. Transformation of a large multi-speciality hospital into a dedicated COVID-19 centre during the coronavirus pandemic. *Ann Agric Environ Med*. 2020;27(2):201–206. https://doi.org/10.26444/aaem/123801.
29. Kennedy E, Kennedy P, Hernandez J, Shakoor K, Munyan K. Understanding Redeployment During the COVID-19 Pandemic: a Qualitative Analysis of Nurse Reported Experiences. *SAGE Open Nurs*. 2022;8:23779608221114985. https://doi.org/10.1177/23779608221114985.
30. Ballantyne H, Achour N. The Challenges of Nurse Redeployment and Opportunities for Leadership During COVID-19 Pandemic. *Disaster Med Public Health Prep*. 2022;17:e134. https://doi.org/10.1017/dmp.2022.43.
31. Barbieri G, Spinelli S, Filippi M, et al. COVID-19 pandemic management at the Emergency Department: the changing scenario at the University Hospital of Pisa. *Emerg Care J*. 2020;16(2). https://doi.org/10.4081/ecj.2020.9146.
32. Goldberg A, Straus SE, Hamid JS, Wong CL. Room transfers and the risk of delirium incidence amongst hospitalized elderly medical patients: a case-control study. *BMC Geriatr*. 2015;15:69. https://doi.org/10.1186/s12877-015-0070-8.
33. McCusker J, Cole M, Dendukuri N, Belzile E, Primeau F. Delirium in older medical inpatients and subsequent cognitive and functional status: a prospective study. *CMAJ*. 2001;165(5):575–583.
34. Hashemighouchani H, Cupka J, Lipori J, et al. The Impact of Environmental Risk Factors on Delirium and Benefits of Noise and Light Modifications: a Scoping Review. *F1000Res*. 2020;9:1183. https://f1000research.com/articles/9-1183/v1.
35. Reppas-Rindlisbacher C, Boblitz A, Fowler RA, et al. Trends in Delirium and New Antipsychotic and Benzodiazepine Use Among Hospitalized Older Adults Before and After the Onset of the COVID-19 Pandemic. *JAMA Netw Open*. 2023;6(8):e2327750. https://doi.org/10.1001/jamanetworkopen.2023.27750.
36. Mohamed Abdel Shafi A, Hewage S, Harky A. The impact of COVID-19 on the provision of cardiac surgical services. *J Card Surg*. 2020;35(6):1295–1297. https://doi.org/10.1111/jocs.14631.
37. Winkelmann J, Webb E, Williams GA, Hernández-Quevedo C, Maier CB, Panteli D. European countries' responses in ensuring sufficient physical infrastructure and workforce capacity during the first COVID-19 wave. *Health Policy (New York)*. 2022;126(5):362–372. https://doi.org/10.1016/j.healthpol.2021.06.015.
38. Geerligs L, Rankin NM, Shepherd HL, Butow P. Hospital-based interventions: a systematic review of staff-reported barriers and facilitators to implementation processes. *Implement Sci*. 2018;13:36. https://doi.org/10.1186/s13012-018-0726-9.
39. McBride DL. The Impact of Visiting Restrictions During the COVID-19 Pandemic on Pediatric Patients. *J Pediatr Nurs*. 2021;61:436–438. https://doi.org/10.1016/j.pedn.2021.09.004.
40. Fernandez R, Lord H, Halcomb E, et al. Implications for COVID-19: a systematic review of nurses' experiences of working in acute care hospital settings during a respiratory pandemic. *Int J Nurs Stud*. 2020;111:103637. https://doi.org/10.1016/j.ijnurstu.2020.103637.
41. Benzinger P, Kuru S, Keilhauer A, et al. Psychosoziale Auswirkungen der Pandemie auf Pflegekräfte und Bewohner von Pflegeheimen sowie deren Angehörige – Ein systematisches Review [Psychosocial effects of the pandemic on staff and residents of nursing homes as well as their relatives-A systematic review]. *Z Gerontol Geriatr*. 2021;54(2):141–145. https://doi.org/10.1007/s00391-021-01859-x.
42. Benzinger P, Wahl H-W, Bauer JM, et al. Consequences of contact restrictions for long-term care residents during the first months of COVID-19 pandemic: a scoping review. *Eur J Ageing*. 2023;20:39. https://doi.org/10.1007/s10433-023-00787-6.
43. Goddard AF, Patel M. The changing face of medical professionalism and the impact of COVID-19. *Lancet*. 2021;397(10278):950–952. https://doi.org/10.1016/S0140-6736(21)00436-0.
44. Moss SJ, Krewulak KD, Stelfox HT, et al. Restricted visitation policies in acute care settings during the COVID-19 pandemic: a scoping review. *Crit Care*. 2021;25:347. https://doi.org/10.1186/s13054-021-03763-7.
45. Jaswaney R, Davis A, Cadigan RJ, et al. Hospital Policies During COVID-19: an Analysis of Visitor Restrictions. *J Public Health Manag Pract*. 2022;28(1):E299–E306. https://doi.org/10.1097/PHH.0000000000001320.
46. Munshi L, Odutayo A, Evans GA, et al. Impact of Hospital Visitor Restrictions During the COVID-19 Pandemic. *Sci Briefs Ontario COVID-19 Sci Adv Table*. 2021;2(31). https://doi.org/10.47326/ocsat.2021.02.31.1.0.
47. McDougall R, Warton C, Chew C, Delany C, Ko D, Massie J. Visitor restrictions in hospitals during infectious disease outbreaks: an ethical approach to policy development and requests for exemptions. *Bioethics*. 2023;37(7):715–724. https://doi.org/10.1111/bioe.13188.
48. Maaskant JM, Jongerden IP, Bik J, et al. Strict isolation requires a different approach to the family of hospitalised patients with COVID-19: a rapid qualitative study. *Int J Nurs Stud*. 2021;117:103858. https://doi.org/10.1016/j.ijnurstu.2020.103858.
49. Campbell L, Morley G. The Ethical Complexity of Restricting Visitors during the COVID-19 Pandemic. *BMJ Qual Saf*. 2023;32(12):689–692. https://doi.org/10.1136/bmjqs-2023-016103.