

# Is time a healer? Course of demands during the COVID-19 pandemic in long-term care: a repeated cross-sectional survey in Germany

Kira Isabel Hower<sup>1,2</sup>, Holger Pfaff<sup>1,2</sup>, Timo-Kolja Pförtner<sup>1,2</sup>

<sup>1</sup>Faculty of Human Sciences, IMVR, University of Cologne, Cologne, Germany

<sup>2</sup>Faculty of Medicine, IMVR, University Hospital Cologne, Cologne, Germany

Address correspondence to Kira Isabel Hower, E-mail: kira.hower@uk-koeln.de

## ABSTRACT

In the course of the coronavirus disease 2019 pandemic, long-term nursing care facilities are faced with general and pandemic-specific demands. In our study, we examined their burden from the perspective of managers in long-term nursing care facilities and how it differed in outpatient and inpatient settings. A cross-sectional online survey of long-term care managers was conducted in April 2020 ( $n = 503$ ) and December 2020/January 2021 ( $n = 294$ ). Burdens have increased over the course of the pandemic especially for outpatient facilities and in terms of general demands referring to staff (e.g. staff shortages and overload) and work organization (e.g. compliance with regulations on working hours or staffing ratio). Concerns about infections of people in need of care and of employees remain the highest burden in the course of the pandemic. This knowledge helps us to draw implications from the pandemic and to prepare for future crises.

**Keywords** burdens, COVID-19, long-term care, online survey, pandemic

## Introduction

The inpatient and outpatient long-term care workforce in Germany has been confronted with increasing numbers and needs of people in need of care due to demographic changes in the German population; the demand for nursing care is rising. At the same time, there is a lack of qualified nursing staff.<sup>1</sup> Long-term care facilities must compensate for this imbalance since a long time. They were compelled to be capable of providing and maintaining nursing care under difficult conditions. In course of the coronavirus disease 2019 (COVID-19) pandemic, the already resource-constrained sector of long-term care was faced to cope with a number of demands such as hygiene regulations, contact restrictions and many severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus outbreaks and subsequent deaths in nursing care facilities.<sup>2–5</sup>

The unpredictability and rapidity of pandemic developments—e.g. in terms of prevalence, regulatory measures for containment or emerging scientific findings—require long-term care facilities to constantly adapt to new circumstances in order to meet these demands.<sup>2,3</sup> Despite the proven capability to cope with long-lasting general demanding conditions—such as skills shortage—the questions arise:

How is the burden due to general and the additional pandemic-specific demands perceived in course of the pandemic and how does it differ in outpatient and inpatient settings? Can facilities adapt over the course of the pandemic to keep burdens low despite changing circumstances? Answers on these questions are particularly important, as a continuously high sense of burdens might lead to, e.g. inadequate quality of nursing care, adverse health outcomes for long-term care recipients, adverse consequences on caregivers' health or an early exit from the nursing profession.<sup>6–8</sup> Knowing the extent and course of demands and their extent of burden is fundamental to derive appropriate support measures and to avoid adverse consequences. In this study, we examined these questions and address the knowledge gap.

## Methods

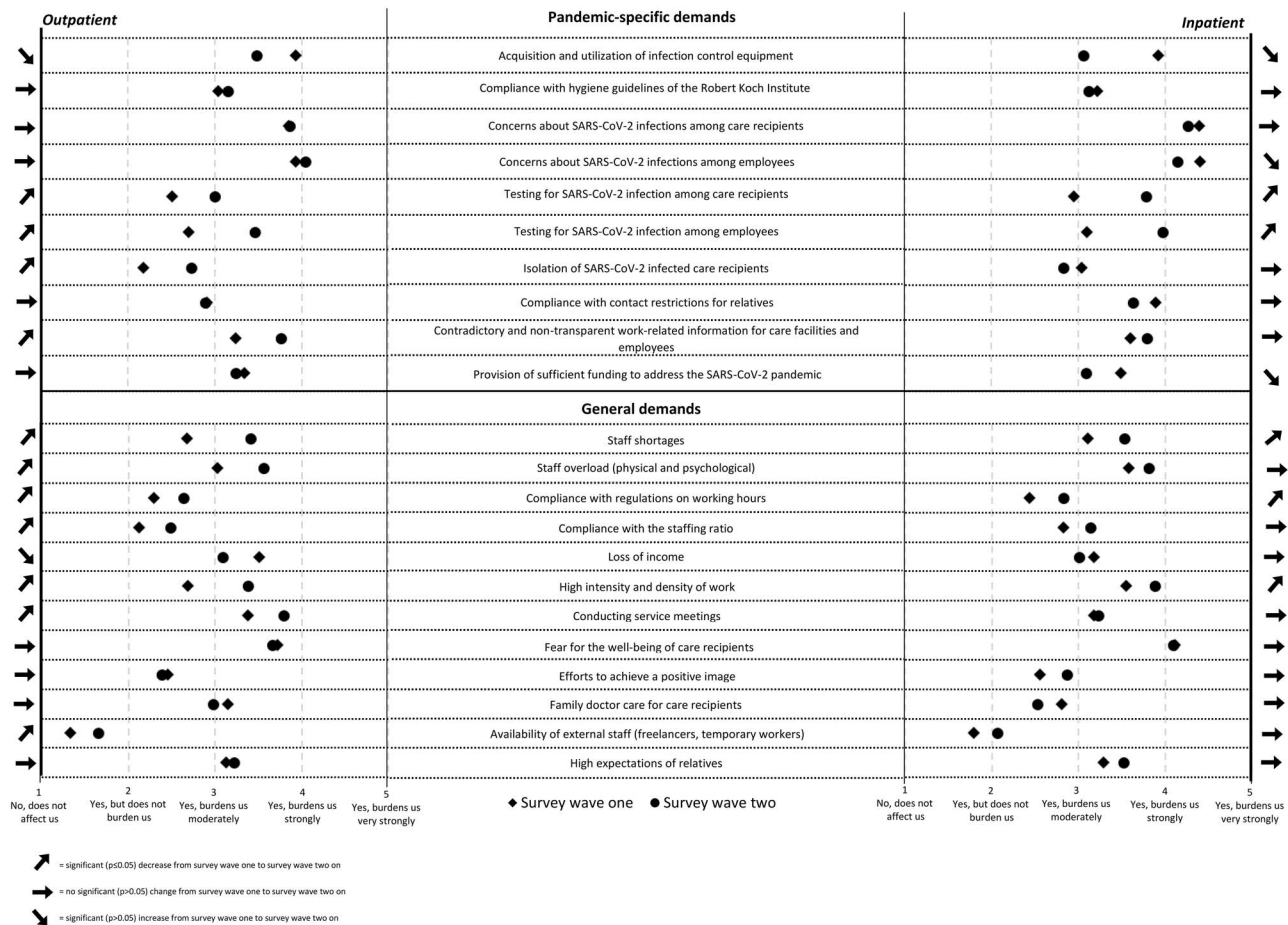
### Study population

We used cross-sectional data of an online survey of long-term care managers from outpatient and inpatient nursing

Kira Isabel Hower, Research Associate

Holger Pfaff, Professor and Head

Timo-Kolja Pförtner, Research Associate



**Fig. 1** Burdens regarding pandemic-specific and general demands of outpatient and inpatient long-term nursing care facilities in course of the pandemic.

and palliative care facilities surveyed in April 2020 (first survey) and between December 2020 and January 2021 (second survey). For the first survey cycle, of 4333 eligible managers, 765 participated in the survey, of which 533 fully and 207 partly completed, and 25 did not agree to be interviewed. For the second survey cycle, of 4185 eligible managers, 520 participated in the survey, of which 299 fully and 192 partly completed, and 29 did not agree to be interviewed. The analytical sample consisted of 503 managers at the first survey cycle and 294 managers at the second survey cycle after the exclusion of cases with missing information.

## Measures

Demands of long-term care facilities were separated into pandemic-specific and general demands. Pandemic-specific demands consisted of 10 items (see Fig. 1) and were assessed via the following question: ‘What demands have affected your organization since the outbreak of the SARS-CoV-2 pandemic and to what extent do they burden you?’ The items showed a high internal consistency reliability (Cron-

bach’s  $\alpha$ : 0.81). The general demands consisted of 12 items (see Fig. 1) and were assessed via the following question: ‘What other demands affects your organization currently and to what extent do they burden you?’ The items showed a high internal consistency reliability (Cronbach’s  $\alpha$ : 0.86). The response categories for items of the pandemic-specific and general demands were ‘No, does not affect us’, ‘Yes, but does not burden us’, ‘Yes, burdens us moderately’, ‘Yes, burdens us strongly’, ‘Yes, burdens us very strongly’. For the analyses, an additive score of burdens relating to pandemic-specific and general demands were created and standardized on a 0–100 scale with higher values indicating higher levels of burdens.

## Statistical analyses

Descriptive analyses were conducted to identify and compare mean levels in general and pandemic-specific burdens at and between survey cycle one and survey cycle two in inpatient and outpatient long-term care facilities. Independent (unrelated) sample *t*-test were performed to evaluate statistical differences in mean levels of burdens between sur-

vey cycle one and survey cycle two, and for differences in changes of burdens between outpatient and inpatient long-term care facilities. Analyses were performed in Stata V.16.0 (StataCorp 2019).

## Results

The burdens regarding the pandemic-specific demands ‘acquisition and utilization of infection control equipment’ significantly decreased in both outpatient and inpatient facilities. The ‘concerns about SARS-CoV-2 infections among employees’ and the ‘provision of sufficient funding to address the SARS-CoV-2 pandemic’ significantly decreased only for inpatient facilities. For both facility types, the burdens in terms of ‘testing employees and care recipients’ significantly increased from survey cycle one to two. The burdens concerning the ‘isolation of SARS-CoV-2 infected care recipients’ as well as the ‘contradictory and non-transparent work-related information for care facilities and employees’ significantly increased only for outpatient facilities.

Concerning the general demands, the burdens particularly increased for outpatient facilities (‘staff shortages’, ‘staff overload’, ‘compliance with regulations on working hours’, ‘compliance with the staffing ratio’, ‘high intensity and density of work’, ‘conducting service meetings’ and ‘availability of external staff’). For inpatient facilities, only the burdens in terms of ‘staff shortages’, ‘compliance with regulations on working hours’ and ‘high intensity and density of work’ significantly increased from survey cycle one to two.

The courses of changes in burdens were significantly different between inpatient and outpatient facilities for ‘acquisition and utilization of infection control equipment’, ‘concerns about SARS-CoV-2 infections among employees’ and ‘isolation of SARS-CoV-2 infected care recipients’. [Figure 1](#) shows all results. Further details can be found in [Supplementary Table 1](#).

## Discussion

This study found that the burdens have increased from survey cycle one to two especially for general demands referring to staff and work organization. Moreover, the concern about infections of both employees and care recipients remains the highest burden in the course of the pandemic—although it has decreased for inpatient facilities. The decrease may be due to the start of vaccination or increased availability of protective equipment. Overall, burdens in outpatient facilities tended to increase in the course of the pandemic, whereas they rather remained the same or decreased in inpatient facilities.

This knowledge helps us to draw lessons learned from the pandemic and to prepare effectively for future crises.

Results might be affected by a selection bias due to time constraints of nursing care managers in light of the current demands or due to a greater motivation to participate by those managers who felt more likely to be affected by the current demands. The current analyses should be continued over time in future studies, should also focus on staff nurses.

In view of the increasing number of people in need of care and the already existing scarcity of specialized nursing staff, the results highlight the need for initiatives to ensure the provision of long-term care.

## Supplementary data

[Supplementary data](#) are available at the *Journal of Public Health* online.

## Funding

The study was self-funded.

## Conflict of interest

None declared.

## References

- Jacobs K, Kuhlmeier A, Greß S (eds). *Mehr Personal in der Langzeitpflege - Aber Woher?* Berlin, Heidelberg: Springer Berlin Heidelberg, 2020.
- Danis K, Fonteneau L, Georges S *et al.* High impact of COVID-19 in long-term care facilities, suggestion for monitoring in the EU/EEA, May 2020. *Enro Surveill* 2020;**25**:1–5.
- Gardner W, States D, Bagley N. The coronavirus and the risks to the elderly in long-term care. *J Aging Soc Policy* 2020;**32**:310–5.
- Hower KI, Pfaff H, Pfortner T-K. Pflege in Zeiten von COVID-19: Onlinebefragung von Leitungskräften zu Herausforderungen, Belastungen und Bewältigungsstrategien. *Pflege* 2020;**33**:207–18.
- Thompson D-C, Barbu M-G, Beiu C *et al.* The impact of COVID-19 pandemic on long-term care facilities worldwide: an overview on international issues. *Biomed Res Int* 2020;**2020**:8870249.
- Zheng R, Zhou Y, Fu Y *et al.* Prevalence and associated factors of depression and anxiety among nurses during the outbreak of COVID-19 in China: a cross-sectional study. *Int J Nurs Stud* 2021; **114**:103809.
- Pfortner T-K, Pfaff H, Hower KI. Will the demands by the covid-19 pandemic increase the intent to quit the profession of long-term care managers? A repeated cross-sectional study in Germany. *J Public Health* 2021;**1**–4.
- Lorente L, Vera M, Peiró T. Nurses’ stressors and psychological distress during the COVID-19 pandemic: the mediating role of coping and resilience. *J Adv Nurs* 2020;**77**:1335–1344.