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Home care in Germany during the COVID-19 pandemic: A neglected population?

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Abstract

Introduction: Older persons and those with pre-existing conditions are at the biggest risk for severe illness and death from COVID-19. In Germany, more than 3.3 million people out of this population receive care in their own homes. User representatives and nurses have criticized health policy during the COVID-19 pandemic as inappropriate for the home care setting. This policy analysis, therefore, aims to answer the question, which policy changes should be made following Bardach's framework.

Pre-Pandemic Policy: Home care in Germany is mainly funded through the statutory long-term care and statutory health insurance funds. It focuses on compensation of physical functioning, selected therapy-related tasks prescribed by a physician and is not well integrated with acute and primary care.

Policy Problems: The pandemic highlighted the following challenges: nurses are excluded from policy decisions; epidemiological data from the home care setting is lacking; nurses do not have prescribing authority for vaccines; user and family education is not made available; home care-specific guidance on infection control and prevention is absent and the home care setting is underprepared to care for acutely ill patients.

Policy Alternatives: Nurses need to be included in policy decision and authorized to adopt more responsibility in home care than currently possible. Home care-specific policies and guidance are needed and integration with primary care should be sought.

Discussion: Changes to current policy in the identified areas could make the health system more resilient to future crisis.

Clinical Relevance: Older persons and those with pre-existing conditions are at the highest risk for severe illness and death from COVID-19 and most of them receive care in their own homes in Germany. Improving health policy governing home care, improving the availability of valid data and evidence, and improving the delivery of home care during the pandemic will contribute to better outcomes.

KEYWORDS
advanced nursing practice, COVID-19, health policy, home care, public health, vaccines

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INTRODUCTION

Older persons and those with pre-existing conditions are at the highest risk for severe illness and death from COVID-19 and are affected most severely by the pandemic (Robert Koch-Institut, 2021). A significant proportion of this population is in need of long-term care, which is often provided in their own homes by informal carers, mostly family members, or professional home care providers. However, measures to mitigate and prevent the spread of SARS-CoV-2 focused on populations in hospitals and residential long-term care while those receiving care in their own homes were "forgotten" (Frey, 2021). Home care providers were told by federal and state authorities to adapt guidance intended for residential long-term care, despite the obvious differences between settings and circumstances, for example, in terms of the possibility to limit access. One representative from an organization that represents informal carers and persons who receive care (user representative) felt that "home care seems to matter to policy makers and public authorities only as an afterthought" (unpublished focus group conducted by the panel on nursing and long-term care of the German Network Public Health—Covid-19), which was regarded as symptomatic for the policy approach usually taken toward home care, for whom residential care was the predominant perspective.

This policy analysis, therefore, focuses on selected aspects of home care-related health policy with regard to the management of the COVID-19 pandemic in Germany between 2020 and early 2022 with special consideration given to nurses and nursing as the clinical discipline that delivers the majority of services in this setting. It aims to answer the question, which policy changes could help prepare better for a possible future pandemic and improve the performance of the long-term care system in the community in general? It is guided by the first steps of Bardach's framework for policy analysis (Bardach & Patashnik, 2020) and reflects the situation as of July 2022. It serves as an overview and more detailed analyses of the policy alternatives outlined here have to follow that would have to include the selection of evaluation criteria and more fine-grained outcome projections (steps 4 and 5 of Bardach's framework).

In this article, the term "user" is used to describe a person who receives care in their own home, including nursing care and/or social care, provided by either carers or registered nurses or both in combination. "Carers" may refer to both paid carers and unpaid carers, often family members. "Family" refers to the social network that supports a person who receives care in their own home by hands-on care, emotional or other forms of support and may include both relatives, spouses, and partners as well as friends. "Home care" for the purposes of this article means nursing care and social care provided in the user's home mainly by registered nurses and paid carers employed by home care services, in collaboration with the user's family.

POLICY BACKGROUND

Of Germany's population of around 83 million people, around 4.1 million persons received benefits under the long-term care insurance act (Social Code Book XI/SGB XI) in 2019 (latest currently available data) of which 3.3 million lived in their own homes and around 800,000 in residential care facilities (Statistisches Bundesamt, 2020). Of the 3.3 million persons cared for in their own homes, 2.1 million received informal unpaid care by their families alone without any involvement of home care services. The vast majority of recipients of long-term care benefits (80%) were at least 65 years of age (Statistisches Bundesamt, 2020), while children and younger adults, often with chronic conditions or disabilities, constitute only a smaller proportion. In 2012, it was estimated that at least 4.7 million family carers provide a significant proportion of the care needed at home (Wetzstein et al., 2012).

Eligibility for long-term care benefits is needs-tested and benefits are capped and grouped into five care levels. Benefits may take the form of cash payments if no professional home care service is used or in-kind benefits. Home care services provided as in-kind benefits focus on the compensation of functional deficits and assistance with housekeeping (Mutual Information System on Social Protection, 2021).

Additionally, 2.6 million claims for home nursing services were made under the statutory health insurance act (§ 37 Social Code Book V/SGB V) in 2019 (Gesundheitsberichterstattung des Bundes, 2022). Nursing care according to the SGB V may only be provided if prescribed by a physician and only to either avoid hospital admission (or reduce hospital length-of-stay) or to assist medical treatment (e.g., to provide assistance with medications or blood sugar measurement). It mainly consists of individual tasks and does not allow for complex care to be delivered at a user's home.

Nursing and social care provision in users' homes follows a market-driven model and providers are free to offer (or not offer) services where and to whom they choose. No integrated planning process is in place. Local authorities and municipalities have neither responsibility for nor authority over the health services provided in their jurisdiction and this includes home care services. Oversight of the system rests with the self-governing bodies of the statutory long-term care insurance and the statutory health insurance at the state ("Bundesländer") level. Providers are reimbursed by the long-term care and health insurance funds on a fee-for-service basis and have no role in the delivery of public health-oriented services, like community health assessments or community interventions for health promotion and prevention.

Health and social care services in the community as well as primary care in general are fragmented and users are left with the task of integrating different services which have frequently been criticized as one of the fundamental weaknesses of the German health system (Borutta, 2020; Sachverständigenrat zur Begutachtung der Entwicklung im Gesundheitswesen, 2014). Health promotion, prevention, and education for individual users and families are not explicitly part of the benefits available and therefore do not receive relevant and specific funding, which means that they represent only a marginal aspect of home care services delivered (DBfK-Bundesarbeitsgemeinschaft Prävention, Rehabilitation, Beratung, 2011).

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Nurse Practitioners are not established and a legal framework for advanced nursing practice is also absent in Germany.

DEFINING THE PROBLEM—RATIONALE FOR POLICY CHANGE

During the COVID-19 pandemic, perceived burden has significantly increased for those who receive care, their families, carers, and nurses (Balzer et al., 2022; Eggert & Teubner, 2021; Elsbernd et al., 2021; Hower et al., 2020, 2021; Räker et al., 2021). Lack of communication with colleagues and risk of infection was felt more significantly by those working in home care compared to residential long-term care (Elsbernd et al., 2021). Some services that helped support families who cared for someone at home were suspended at times (e.g., day care services, respite care, home help services) and 28% of users reduced or even stopped the usage of a professional home care service altogether (Räker et al., 2021). In a majority of these cases, the reduction of services was initiated by users and their families, but in around one-third of cases service reductions were initiated by the service provider. Home care staff was perceived as posing an infection risk by over 61% of family carers surveyed (Räker et al., 2021). Around one-third of family carers surveyed believed that during the pandemic the overall care situation had deteriorated (Räker et al., 2021, p. 45) Some home-care-related policies appear to have increased burden on services and users while others may have diminished the potential of the home care sector for managing the pandemic.

Incidence of COVID-19 among German home care users, carers, and health workers in the home care setting as well as COVID-19-related mortality are not known. Access to COVID-19 vaccines is difficult for home care users (Lorenz-Dant et al., 2022). Home care services voiced concern regarding the quality of official guidance regarding pandemic management and quality of collaboration with the respective authorities (Elsbernd et al., 2021; Hower et al., 2021).

CHALLENGES FOR THE GERMAN HOME CARE SETTING DURING THE PANDEMIC

To gather evidence regarding the challenges encountered by the German home care sector during the COVID-19 pandemic, a literature search on Pubmed and CINAHL was conducted using the search terms "home care", "Germany," and "Covid-19" as well as synonyms for these terms. For German literature, the LIVIVO database was searched using German equivalents of the search term and an additional internet search was conducted using Google and Google scholar. These searches were supplemented with literature and primary data from stakeholder consultations gathered as part of the development of the German guideline on the provision of home care during (Deutsche Gesellschaft für Pflegewissenschaft, 2022) the pandemic and the Working Group on Nursing and Long-term Care of the "German Network Public Health – Covid-19." Sources were included if they refer to home care delivered by nurses in Germany since the start of the pandemic and include data about the performance and problems of that sector during the pandemic or referred to policy-related aspects.

Only few studies could be identified that provide data on the situation of home care in Germany during the pandemic, most of them published in German.

Exclusion of nurses from policy decisions and health-care administration

On the German federal level until late 2021, scientific advisors to the Chancellor (the head of the German government) on pandemic management were not officially named. After the September 2021 federal election, the new German Chancellor appointed an official Covid-19 scientific advisory committee to the federal government. No nursing academic or other representative of the nursing profession was invited to join this committee. This decision was protested by the German Nursing Council and the German Society for Nursing Science to no avail.

The federal committee on the evaluation of the Infection Prevention Act (§ 5 (9) Infection Protection Act) also does not include any nursing expertise, even though long-term care was the subject of many of the measures introduced into law to manage the pandemic. A commission into necessary reforms of state and local health authorities, appointed by the Federal government, does not include any representation of the nursing profession either, despite protests from the German Nursing Council.

While nurses and nurse academics have been asked to provide advice to some state governments and authorities, nurses' and nurse academics' expertise has been widely excluded from policy making and daily operations of local health authorities regarding the pandemic response.

The Robert Koch-Institute (RKI) is Germany's federal government public health institute and provides intelligence and data for federal policy makers. It also issues guidance on infection control and prevention in long-term care in general and on pandemic management in particular. No dedicated roles for nurses exist in the respective departments of the RKI that deal with long-term care facilities. Local health authorities neither have dedicated roles for nurses and the role of a public health nurse is not established in Germany.

Lack of epidemiological information

Local health authorities record incidence and associated mortality of certain notifiable infections defined by the Infection Protection Act. They will also record if infections or death occurred in institutional settings, such as hospitals, nursing homes etc., if this information is provided by the reporting physician or laboratory. However, home care is not clearly defined as such a setting by law and no clear criteria exist for physicians or labs when and how to report infections as

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related to a home care setting and often the responsible physician or laboratory may not be aware if a patient receives home care. This is compounded when testing is done in COVID-19-specific testing centers that are not linked to the health system. Home care services and community nurses are not involved in data collection on COVID-19 incidence and mortality in the community. Incidence of COVID-19 in persons who receive care in their own homes as well as COVID-19-related mortality in this group therefore remain unclear in Germany. The Federal Robert Koch-Institute, which aggregates and publishes COVID-19-related incidence and mortality data from local health authorities, therefore stopped breaking down data for home care settings in July 2021. Surveys indicate, that home care did experience a significant number of recipients who were infected or even died of COVID-19 (Wolf-Ostermann & Rothgang, 2020).

In addition to COVID-19 incidence and prevalence, epidemiological information on vaccination rates proved crucial during the pandemic. Germany does not maintain an immunization registry, unlike countries such as Australia, Norway, or Singapore. Data on COVID-19 immunizations, therefore, represent estimates based on administered vaccine doses. For institutional long-term care Robert-Koch-Institute initiated surveillance on vaccination rates at the end of the year 2021 (Robert Koch-Institut [RKI], 2022b). For home care, RKI initiated a study on vaccination rates only late in the pandemic based on a self-selection sample of home care services in March 2022 (RKI, 2022a).

Exclusion of nurses from the vaccination campaign

One major challenge during the pandemic is the provision of vaccinations to a large number of persons within the shortest possible time. While the capacity to vaccinate the population was initially limited by the absence and then the limited supply of vaccines, in later phases the available capacity for the administration of vaccinations limited how quickly the population could get protected against COVID-19. Vaccination hesitancy also hampers vaccine uptake. While the rate of double-vaccinated and boostered recipients of home care is unclear, in residential long-term care it was only at 81% in March 2022 (RKI, 2022b).

In most parts of the country, vaccination centers were established to provide the COVID-19 vaccine to those who were prioritized to receive it, including older persons and those with pre-existing conditions (Lorenz-Dant et al., 2022). Later, vaccines were also made available for administration by General Practitioners and other physicians in the community. Nursing homes were in many regions visited by “mobile vaccination teams” dispatched from the vaccination centers. Home care users, however, had to make their way to the Vaccination Centres or ask their GP for a home visit (Lorenz-Dant et al., 2022). This posed a major challenge for patients and their families alike, for example, due to limited mobility or cognitive deficits caused by dementia. Some regional authorities would organize for patients to be driven to the vaccination centers but still leaving the burden of getting an appointment and organizing the shuttle-service to patients and their carers who asked home care services for assistance. However, home care services often where unable to provide this kind of assistance due to legal and funding restrictions (Elsbernd et al., 2021, p. 113). Some providers together with General Practitioners or the German Red Cross tried to initiate local mobile vaccination teams but those endeavors were mostly not supported by local authorities (Elsbernd et al., 2021, p. 114).

Registered nurses working in the community, who could have administered vaccinations in a patient's home efficiently as part of regular visits or specially organized community rounds, are not allowed to prescribe and administer vaccinations without a physician present in Germany. Despite the demand by nurses' organizations (Deutscher Pflegerat e.V., 2021), no changes to this regulation were made during the pandemic, while exemptions were passed by the Federal Parliament for pharmacists and veterinarians to administer the COVID-19 vaccine.

Lack of home-care-specific guidance on infection prevention and control (IPC)

Official guidance or regulation on infection control for home care settings does not exist in Germany. Home care services are usually referred to regulations specific to nursing home settings which they are asked to adapt to their working environment (Kommission für Krankenhaushygiene und Infektionsprävention beim RKI, 2005). Not only are these recommendations outdated as they originate from the year 2005, they also do not account for the realities of home care, which mean that clinicians are guests in a private home and cannot control how users set up or clean their private space. Equipment is taken to and from private households and many other social or cultural factors beyond the control of the clinician influence infection prevention and control practices. Since the pandemic started, the RKI has issued and regularly updated official COVID-19-specific guidance on infection control for residential care facilities (Robert Koch-Institut, 2022). For home care services, only a short web page with view recommendations has been published, last updated in November 2020 (Robert Koch-Institut, 2020).

Providers of home care have to have an infection prevention and control plan in place. Local health authorities are supposed to provide advice to service providers in developing these documents and also run checks on IPC practices. Staff at local health authorities, however, are not necessarily familiar with social and nursing care in the community, as there are no roles specifically dedicated to this topic with a nursing background.

During the pandemic, local health authorities had to translate Federal and State regulations into actionable orders for healthcare providers in their jurisdiction and support implementation. Large variability occurred across the country as each local authority acted independently (Elsbernd et al., 2021). Home care services and residential long-term care facilities were overwhelmed with the amount and rapid succession of updated and new information and regulation in many instances (Elsbernd et al., 2021). Home care

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services perceived "contradictory and intransparent" guidance as increasing burden over time (Hower et al., 2021) The quality of the collaboration with local health authorities was rated least favorable of all collaborations within the health system (Eggert & Teubner, 2021, p. 16). A lack of understanding for the specific circumstances of long-term care settings was described (Elsbernd et al., 2021).

Lack of resources for user and family education

The COVID-19 pandemic caused severe insecurity for those in need of long-term care and their families, regarding measures to avoid infection, early detection of infection, quarantine and isolation measures, management of COVID-19-related illness as well as vaccination. Fear of infection caused users and their families to cancel services (Räker et al., 2021). The German guideline on the provision of home care during the pandemic, therefore, stresses the importance for home care services to provide information and education to users and their families and work closely with them to tailor general recommendations into individualized approaches that work for the living conditions and circumstances of a specific user and their family and help implement infection protection and control (IPC) practices (Deutsche Gesellschaft für Pflegewissenschaft, 2022). If implemented as intended, this would consume significant resources of community nurses as the pandemic situation changed frequently and new research results emerged that needed constant revisiting of prior arrangements with users and families. However, user and family education provided by nurses and home care services does not receive dedicated reimbursement, neither under the health insurance act (SGB V) nor the long-term care insurance act (SGB XI) and therefore any pandemic-specific education provided threatens the financial viability of the service or reduces the time available to the user for other necessary services, depending on the specific funding arrangement.

Home care underprepared to care for acutely ill patients with COVID-19

Due to the lack of epidemiological data, it remains unclear how severely ill patients with COVID-19 were that were cared for in the community and how many of those who receive long-term care in the community were transferred to hospital for COVID-19-related treatment. A German guideline from the Association of Family Physicians (Deutsche Gesellschaft für Allgemeinmedizin und Familienmedizin e.V., 2022) indicates, that treatment in the community is possible for mild and moderate cases but stipulates that patients from at-risk populations need close supervision to detect escalating needs at the earliest possible time. How home care services and community nurses should work together with the treating physician to achieve that, however, is not discussed in this guideline, which did not receive any input from nurses. It exemplifies a lack of service integration in the response to the pandemic and the general lack of primary care integration in the German system (Kringos et al., 2015).

While the international literature discusses how digital solutions can assist nurses and physicians in treating COVID-19 patients at home, no such options were available in the German healthcare system. Hospital-at-home services, that require highly skilled home care provided by nurses and the multiprofessional team, are not available in Germany.

POLICY ALTERNATIVES

Not only nurses in Germany experienced that they were excluded from decision-making at all levels of the health system during the pandemic. Internationally nurse leaders were confronted with "organizational and national deafness" (Rasmussen et al., 2022) that left nurses' expertise untapped in the health policy process and left some morally distressed. This is despite that fact that nurses have suffered severe psychosocial impacts from the pandemic and are instrumental to patient care and safety. When guidance on nurse-led settings like home care is prepared, nurses' expertise is needed to ensure it is tailored to the operational realities of, for example, home care and has the user's quality of life at its heart.

In addition to some positive international examples (Rasmussen et al., 2022) the German state of Baden-Württemberg stood out where nurse leaders were included by the state's ministry for health in the pandemic task force and a study into the effects of the pandemic on long-term care was commissioned (Elsbernd et al., 2021) that highlighted the need to include nurses in decision-making on the institutional level but also on the policy level. An international survey conducted by the International Council of Nurses (International Council of Nurses, 2021) demonstrates the importance of involving nurses in planning and administration of COVID-19 vaccination campaigns to battle vaccine hesitancy and boost vaccination rates.

In Germany nurses and their expertise need to be represented at all levels of policy making and pandemic management. This includes scientific advisory committees and evaluation committees as well as local, state and federal health authorities, where they are currently underrepresented. While some nurses serve as members of federal and state parliaments, the role of a Chief Nursing Officer does not exist. The federal representative for social care and nursing is a role without any authority or budget, that is assumed by a member of parliament, currently Ms Claudia Moll, a former registered nurse, in addition to her other duties. In only two of the 16 German states nurses have achieved professional self-governance, while the other states and the federal level lack a formally mandated voice of all nurses in the policy process.

The German Council of Nurse in response to the exclusion from the federal scientific advisory committee on COVID-19, invited nurse academics who had worked on COVID-19 to join an independent "scientific nursing advisory committee on COVID-19 and Germany's pandemic response" (Deutscher Pflegerat e. V., 2022). This committee collates and publishes advice on pandemic management with

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a perspective to nursing care and relevant settings (hospital, long-term care facilities, home care, midwifery) and advocates for necessary policy changes. This increased visibility for nursing expertise lead Members of the Federal Parliament to contact the committee to discuss upcoming recommendations, demonstrating the benefits such a committee may have for professional advocacy.

Based on the previous analysis of the evidence and taking existing international policies into account, some further policy alternatives can be outlined as follows, including considerations of potential criteria for evaluation and outcome projections.

Epidemiological surveillance

Germany lacks epidemiological data on infectious diseases in home care settings as demonstrated by the COVID-19 pandemic. Due to these inadequacies, it is also impossible to estimate how general infection control measures (e.g., so called "lockdowns") or specific measures aimed at community and home care (e.g., mask wearing, suspension of group activities, re-organization of services to limit spread of possible infections) have impacted COVID-19 incidence and mortality. Unwanted effects, such as increased caregiver burden, have been documented but generalizability and representativeness of these results remain unclear as studies are based on convenience samples. Vaccination rates in individuals who receive care in their own homes are also still unclear, so that it remains difficult to evaluate the effectiveness of the vaccination strategy and make potentially necessary adjustments.

Pandemic management for a large at-risk population mainly consisting of older persons and persons with pre-existing conditions was therefore informed by very little data and evidence. This structural deficiency extends beyond the current pandemic. Systematic surveillance is not only needed to prepare for a potential future pandemic but also to shed light on the impact other infectious diseases may have on home care settings, including seasonal influenza. The continuously growing threat from antibiotic-resistant microbes is another reason why surveillance is needed in this setting, not least because home care patients may eventually carry problematic pathogens on to other settings.

A system of epidemiological surveillance of home care settings needs to be established that generates high-quality data to inform health policy. Such a system would not only be valuable in case of a future pandemic but could also aid efforts to curb growing antibiotic resistance. It should therefore be linked with the existing systems for influenza (https://influenza.rki.de/) and antibiotic resistance (https://ars.rki.de/) surveillance. In a first step, reporting of infectious diseases according to the Infection Prevention Act should include mandatory information on whether the infected person is receiving care in their own home and whether this care is provided by a professional service or exclusively by the family. Community nurses should be given added responsibility in epidemiological surveillance.

COVID-19 surveillance was significantly improved when a panel study of residential long-term care facilities was initiated. Panel studies allow to track epidemiologically relevant factors over time. A panel of users who receive care in their own homes should be established that would not only allow to better understand COVID-19 incidence and mortality in this population but may also help to understand the effectiveness and acceptability of infection control measures and the burden the pandemic poses for users and their families. Irrespective of the pandemic, such a panel could generally help to understand home care, influencing factors, and outcomes better.

Research into home care

Research into the provision and the outcomes of home care is limited and calls for more research have been made internationally (McEnroe-Petitte, 2021). No established research networks, longitudinal studies or dedicated funding mechanisms (pre-pandemic and pandemic-specific) exist in Germany. Initiatives such as the Canadian Research Network for Care in the Community (CRNCC; https://www.torontomu.ca/crncc/) or the establishment of a Community Nursing Research Community of Practice at King's College in the UK may serve as examples from other countries and regions, that will help to foster knowledge on the provision of home care.

While some surveys based on convenience samples investigated effects of the pandemic on users and providers (Eggert & Teubner, 2021; Hower et al., 2021; Räker et al., 2021; Wolf-Ostermann & Rothgang, 2020) no investigations into the effectiveness of measures taken against the pandemic or adaptation of care practices could be identified. This information is needed to inform policy and future pandemic preparedness.

The German Council of Nurses advisory committee on COVID-19 devised recommendations on the further development of the COVID-19-related research and funding agenda (Balzer et al., 2022) that encompass recommendations for the home care setting. Nurse-led research will deliver answers to questions pertinent to pandemic management that are not being addressed by other disciplines. This research must be funded and supported and structurally enabled before a next pandemic may arise.

Prescription and administration of vaccines by nurses

Reaching high vaccination levels as fast as possible proved to be one effective cornerstone of pandemic management, reducing morbidity and mortality caused by SARS-CoV-2. This is particularly true in older populations and those with pre-existing conditions. While the quick establishment of vaccination centers and mobile vaccination teams for nursing homes proved effective, the large population of users receiving care in their own homes was mostly left to fend for themselves, placing a high level of burden on vulnerable persons and

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their carers. How this influenced vaccination uptake over time in this population remains unclear as no specific monitoring data are available. Community nurses, who provide regular care in this population, were excluded from the vaccination effort.

While in many jurisdictions around the world, nurses are authorized to prescribe and administer vaccinations independently (International Council of Nurses, 2021; Stewart et al., 2021), this is not the case in Germany. Based on an international survey, the International Council of Nurses calls for an active role of nurses in all aspects of COVID-19 vaccination campaigns to ensure timely delivery of vaccinations and to combat vaccine hesitancy (International Council of Nurses, 2021) and the important contribution nurses can make to the success of COVID-19 vaccination campaigns have been demonstrated (Burden et al., 2021). The German Medical Assembly, however, reiterated their conviction that no healthcare profession other than physicians should be allowed to independently prescribe and administer vaccinations (Deutsches Ärzteblatt, 2022), thereby upholding outdated beliefs about patient safety and collaboration in health care.

Community nurses can bring vaccinations to patient's homes as part of the regular care they provide or reach out to those in the areas they serve who do not use nursing services regularly. This helps to provide vaccinations quickly, reduces stress on already overburdened GP services and also reduces patient and caregiver burden. It would therefore be advisable to give registered nurses in Germany the authority to prescribe and administer vaccines. This will not only benefit the further management of the COVID-19 pandemic (e.g., in case further booster vaccinations are needed) but may also help to increase uptake of other vaccinations in this particular population, such as influenza or shingles.

Home-care-specific guidance on infection prevention and control

Internationally, health authorities have issued guidance on infection control in home care settings in general and especially during the pandemic (e.g., Centers for Disease Control and Prevention, 2019; Community Infection Prevention and Control, Harrogate and District NHS Foundation Trust, 2021; Public Health Agency of Canada, 2022), thereby acknowledging specific challenges of the setting. In lieu of official German guidance, the German Society for Nursing Science established a working group to develop an evidence-based guideline on "Home care, social inclusion, and quality of life during the COVID-19 pandemic" (Deutsche Gesellschaft für Pflegewissenschaft, 2022). This guideline has been updated several times since its inception and combines recommendations from the international literature as well as guidance issued by German authorities, adjusted to home care. Guideline authors point out how difficult it is to establish an evidence-base for infection control in the home care setting. How well this guidance has been adopted in practice is unclear as implementation has not been studied yet.

Elsbernd et al. (2021, p. 218) conclude, that the duties of local health authorities toward residential aged-care facilities and home care need to be clarified and communication channel should be improved. Relatively early in the pandemic, a large proportion of home care services surveyed favored regulations to be unified across the country, hoped for support from the local health authorities and the involvement of nursing-specific expertise and specialists (Stolle et al., 2020; Wolf-Ostermann & Rothgang, 2020) and asked for guidance tailored to the needs of those with dementia.

Specific guidance for IPC practices in home care settings should be developed and updated regularly, building on the existing nursing guideline (Deutsche Gesellschaft für Pflegewissenschaft, 2022). This multidisciplinary guidance should be endorsed by Federal authorities as practiced in other countries. It should include guidance for regular day-to-day service provision as well as for practices to be adopted in case of epidemic spread of infectious diseases or a future pandemic. A unified approach should be taken that minimizes regional or even local variations to a minimum to facilitate implementation of measures across services. Emerging evidence on infection control measures should be synthesized regularly and made available to clinicians and service providers in a way that is easy to access and adopt (Fischer et al., 2022).

User and family education in home care

After a time lag in the beginning of the pandemic, authorities on different levels of government in later phases addressed information needs regarding the COVID-19 pandemic, in particular offering online information (e.g., https://www.infektionsschutz.de/coronavirus/; www.zusammengegencorona.de/). However, this information does not address the specific questions and needs of persons who receive care in their own homes and their families. Neither are concise, easy-to-use and regularly updated resources aimed specifically at community nurses made available by the authorities. Some larger providers of home care developed their own information materials for staff, users, and families to provide guidance and education (Eggert & Teubner, 2021). How information and education needs of individual users and their families are met is left to individual nurses and service providers. General Practitioners, as another important resource for information and education, have been overburdened during the pandemic, reflecting systematic constraints that pre-date the pandemic, and may therefore not have been able to fulfill educational needs either. Those persons who are solely cared for by their families in their own homes may not even get a chance to talk to a healthcare provider about IPC measures, etc. as they do not have regular contact and no outreach to them was attempted. Overall, voices of user representatives indicate that information needs have not been met for significant proportion of users (Frey, 2021, personal communication).

The German long-term care system does not address the need for user and family education, health promotion. and prevention as reflected by the lack of reimbursement for such nursing interventions

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in user's homes. During the pandemic, infection protection and control as well as increasing vaccine education were the main goals of public health policy. Community nurses are best placed to provide education on these issues to vulnerable populations who receive care in their own homes, as indicated by the respective guideline (Deutsche Gesellschaft für Pflegewissenschaft, 2022). Therefore, health promotion, prevention, and user and family education should receive dedicated funding both from long-term care and health insurance funds.

Acute care at home

The provision of home health care, including hospital as home, has been recognized by the WHO European Region for more than a decade now as an important element of the healthcare system (Tarricone & Tsouros, 2008) and some hail it as the "most important care setting" (Santon, 2018). A Cochrane review concludes that hospital at home is safe and "admission avoidance hospital at home, with the option of transfer to hospital, may provide an effective alternative to inpatient care for a select group of elderly patients requiring hospital admission "(Shepperd et al., 2016).

During the pandemic, hospital at home was used in some countries, for example, the United States (Balatbat et al., 2021) to treat patients with COVID-19 at home to alleviate pressure on the hospital system and reduce the risk of spreading COVID-19 to hospital settings. Early study results suggest that hospital at home is safe and efficacious for some patients with COVID-19 and when care in the patient's home could be guaranteed (Schiff et al., 2022; Sitammagari et al., 2021). Remote monitoring of symptoms has even been practiced for more severe COVID-19 cases (Huynh et al., 2021; Pronovost et al., 2022) Health systems should therefore explore the role that acute care in patient's home and hospital at home should have in the future.

Delivery of home care and in particular hospital at home needs a high level of service integration (physicians, physiotherapists, nurses etc.) and coordination across sectors (primary care sector and hospital care sector) that is currently not achieved in the German health system. The use of digital technologies and multidisciplinary teamwork is paramount for hospital at home to be successful (Balatbat et al., 2021). However, Germany's efforts to provide a digital infrastructure for health care are trailing behind in European comparison (Bratan et al., 2022).

To establish more acute care services in patient's homes or even offer hospital at home would need a fundamental paradigm shift in the way health care is organized, digitally enabled, and reimbursed in Germany (Schaeffer et al., 2015). Nurses would need to be allowed to take over more responsibility for patient care and advanced nursing practice roles would need to be established. However, as has been noted before, at a national level, no "clear vision on current and future primary care" (Kringos et al., 2015, p. 91) can be identified.

Expanding registered nurses scope of practice

Allowing nurses to practice more independently and in advanced nursing practice roles would make the health system more flexible by providing more (acute) care at user's homes, take pressure from the hospital system, and keep users in a familiar environment. It would also be one step toward hospital at home services, that are established in other countries but have not yet been introduced to Germany. Nurses should lead research and development into such new models of care, to improve healthcare delivery and crisis preparedness. Additionally, service integration in primary care needs to be improved. The German Advisory Council on the Development of the Health System (Sachverständigenrat zur Begutachtung der Entwicklung im Gesundheitswesen, 2014) recommended the establishment of integrated multidisciplinary local acute and long-term care centers, modeled after international examples, but very few attempts so far have been made to make them a reality.

To reach users and families who do not regularly use home care service providers, a nursing role outside the current fee-for-service model should be considered that would resemble that of public health or community health nurses in other countries. This role should include community health and needs assessments and interventions. It could be a significant element in local crisis preparedness as these nurses would know the communities they serve, be able to reach out to vulnerable and hard-to-reach members of the community, provide user and family education, and help integrate service delivery. Users who had stopped using home care services during the pandemic could still have been contacted by a community health nurse.

Such roles do currently not exist in the German system, mainly due to the fact, that local councils and municipalities, who would have to take responsibility for them, are currently not involved in healthcare delivery and policy. However, a case to give them more authority has been made before (Sachverständigenrat zur Begutachtung der Entwicklung im Gesundheitswesen, 2014; Schaeffer et al., 2015).

DISCUSSION

The German home care setting was least prepared for the pandemic due to structural deficiencies and "invisibility" of home care work, provided both by informal carers and formal carers and nurses, and a lack of vision for primary care. Invisibility lasted throughout the pandemic, demonstrated by a lack of data to guide policy and little attention to the voice of families and patients. Policy measures were largely aimed at residential care and hospitals but failed to address home care, including IPC measures and vaccination. The needs of informal carers where hardly addressed and the competencies of professional nurses were not used well.

As shown in this policy analysis, there is reason to conclude that persons who receive care in their own homes and their carers as well as the community nurses and organizations who provide home care

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were in many instances not well represented in Germany's pandemic response.

As a respondent put it in one survey (Elsbernd et al., 2021, p. 128): "In particular regulations and infection control measures do not or only marginally account for the home care setting. [But it] differs from residential aged care." In the same survey, respondents felt that home care and home care recipients were "forgotten" (Elsbernd et al., 2021, p. 113) in the pandemic response.

This neglect may likely be based on long-standing policy decisions regarding the scope of services available in acute and long-term home care and the way the sector is represented in policy making. These include limitations in the scope of practice of registered nurses, for example, pertaining vaccinations and advanced nursing practice, lack of service integration in primary care, lack of representation of nurses and their organizations in decision-making and health policy and ignorance about what kind of acute care can be delivered in patients homes.

The COVID-19 pandemic amplified short-comings in regulations and governance regarding home care in Germany. However, if the voices of service users and clinicians are heard and international examples and evidence are taken into account, some policy changes hold the potential to strengthen the German health system, provide home care that better serves user needs and is more resilient in situations of crisis, that may come in the shape of a future pandemic or other disruptions. Home care needs to be considered as an integral and fundamental aspect in all health policies in the future and nurses' expertise must be included in all levels of decision-making.

The pandemic also exposed again the limited agency nurses have in policy making in Germany in general. This is fundamentally demonstrated by the lack of professional self-governance in all but two German states and at the Federal level, and in addition, it is estimated that no more than 10% of all registered nurses are members of a professional organization (Hommel, 2018). This means that nurses are not systematically heard and involved in policy making and that professional organizations lack the resources to organize more robust lobbying for patients and nurses. Nursing academics are often overlooked and their contribution to healthcare policy not included (DPR), which is partly due to the late establishment of nursing as an academic discipline in Germany compared to many other countries.

Only a small number of studies focusing on the German home care system could be identified for this analysis and only few of those were published in the international literature. While this demonstrates a lack of research capacity in nursing and regarding this setting, it also means that more empirical data are needed for a more thorough policy analysis. This should include dedicated studies to explore policy alternatives suggested here in more detail and discuss them with different stakeholder groups. Outcomes of policy changes as well as trade-offs need to be projected (Bardach & Patashnik, 2020). This paper therefore only represents a first step toward a well-informed formulation of policy alternatives for home care in Germany.

Some of the learnings from the German system may provide helpful insights for other jurisdictions that are confronted with similar challenges. However, applicability to other countries is limited by differences in how health care is organized and provided and the regulatory framework for nursing work. Germany's model of social-insurance-based health and long-term care coverage combined with a market-driven approach to service delivery and no regional/municipal authority clearly differs from systems without universal coverage, from state health systems and systems where service delivery is organized locally and regionally. Also, the lack of self-governance of the nursing profession and the lack of academic education for nurses (nearly all nurses are only trained on a vocational level and do not possess a university degree, Hommel, 2018) present a significant disadvantage for German nurses compared to those in other countries, that need to be taken into consideration when the results of this policy analysis are discussed.

CLINICAL RESOURCES

Deutsche Gesellschaft für Pflegewissenschaft (Ed.) (2022): Häusliche Versorgung, soziale Teilhabe und Lebensqualität bei Menschen mit Pflegebedarf im Kontext ambulanter Pflege unter den Bedingungen der COVID19-Pandemie [Home Care, Social Inclusion and Quality of Life of persons's who receive care in their own homes during the COVID-19-pandemic]. https://www.awmf.org/leitlinien/detail/ll/184-002.html.

International Long-Term Care Policy Network (2022): Resources to support community and institutional Long-Term Care responses to COVID-19. https://ltccovid.org/.

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CONFLICT OF INTEREST

The author is the chairperson of the German Scientific Nursing Advisory Committee on the COVID-19 pandemic and coordinator for the Germany guideline on "Home care, social inclusion, and quality of life during the COVID-19 pandemic." He has received funding from the German Federal Ministry of Health for a review on the effectiveness of infection control measures in residential aged care facilities and on factors that influence COVID-19 infections in that setting.

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