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Hospital in the Home: Rethinking Home, Care, and Professionalism from a Transdisciplinary Perspective

Emma Klakk[1], Janine M. Traulsen[1], Mette Birkedal Bruun[1], Jacob Holst Andersen[2], Louise Bangsgaard Antonsen[3], Hanne Bess Boelsbjerg[4], Marianne Hald Clemmensen[3], Kasper Edwards[5], Sarah Kruckow[6], Marie Lavesen[7], Cæcilie Sloth Laursen[11], Nicholas Thomas Lee[8], Marie Meier[1], Charlotte Verner Rossing[9], Julia Aviaja Lindholt Tonning[10], Ida Wentzel Winther[4], and Lotte Stig Nørgaard[1]

[1]University of Copenhagen, [2]AbbVie, [3]Rigshospitalet, [4]Aarhus University, [5]Technical University of Denmark, [6]Municipality of Hilleroed, [7]Bispebjerg Hospital, [8]Royal Danish Academy, [9]Danish College of Pharmacy Practice, [10]Municipalities of Ballerup, Herlev, and Furesoe and [11]IT University of Copenhagen
emma.klakk@teol.ku.dk

Abstract: *Healthcare is rapidly moving into the home to address the challenges of rising costs of hospital care, shortage of healthcare staff, and patient preferences. Hospital in the Home (HITH) is one model addressing these challenges; however, this model poses new challenges to the home, patients, relatives, and healthcare professionals. Derived from presentations and discussions at a transdisciplinary workshop and subsequent collaboration, four themes relevant and essential for future transdisciplinary research on HITH are proposed, namely, 1) HITH Definitions and their Implications; 2) The Home - Materiality, Atmosphere, and Everyday Life; 3) The Professions - the Home as a Workplace for Healthcare Professionals; and 4) Social Networks - Relatives, Patients, and Responsibilities. We argue that a transdisciplinary research- and practice-informed approach to HITH offers integrated problem-solving and the possibility of asking new and innovative questions and reaching a wider professional audience.*

Keywords: Hospital in the home; home; transdisciplinarity; healthcare; home care

Introduction

Healthcare, including hospital care, is rapidly moving into the home as a response to the rising costs of hospital care, the shortage of healthcare workers, and patient preferences (Traulsen & Nørgaard, 2023; AbbVie, 2023; de Sousa Vale et al., 2019). In the future, the number of inpatient beds will likely decline while the population of elderly people and those with chronic

illnesses will grow. Healthcare systems in the Global North seek to integrate various levels of care - primary, secondary, and tertiary – across different environments, such as hospitals, clinics, and homes, to provide seamless patient care. This integration includes transitioning suitable patients from hospital settings to home-based care whenever feasible (Udvalg om det nære og sammenhængende sundhedsvæsen, 2017). Hospital in the Home (HITH) is a care model promoted and adopted by private and public healthcare organisations in the Global North (Leff et al., 1999; Klein et al., 2016). HITH provides hospital-level care in a patient's home that significantly substitutes acute hospital care (Caplan et al., 2012). This tendency also manifests itself in a Danish context where the government plans to strengthen primary healthcare services by investing in more at-home services as well as by enhancing the collaboration and cohesion between sectors (Indenrigs- og Sundhedsministeriet, 2023; 2024; Abildtrup, 2024) and HITH models are currently being tested (Cerdan de las Heras et al., 2023).

This commentary is a response to the scarcity of scientific - and especially transdisciplinary - literature on HITH. Our insights and recommendations are derived from a workshop on healthcare in the home hosted at University of Copenhagen in December 2023 (Bruun & Klakk, 2024) and subsequent meetings and collaboration between workshop participants. The authors are researchers and practitioners working with issues related to healthcare, the home, technology, privacy, everyday life, health management, and working environments for healthcare professionals. The authors bring diverse perspectives to the topic of Hospitals in the Home (HITH), shaped by their disciplines and professional experiences. The sociologists and anthropologists focus on how HITH affects everyday life, family dynamics, and health equity, across social contexts. Healthcare professionals (nurses and pharmacists) and organizational scholars emphasize both the promise and the practical challenges of delivering care at home, highlighting the need to respect domestic space while addressing patient needs as well as living up to logistical and professional demand. Scholars in history and architecture explore how HITH redefines boundaries between public and private spheres, and how cultural shifts in responsibility between families and the state may deepen inequalities. Industry representatives and health innovation experts view HITH as essential for future healthcare sustainability, advocating for transdisciplinary collaboration to address capacity issues. Despite differing motivations, all authors share a commitment to critically examining home-based care and ensuring its development is thoughtful, inclusive, and responsive to real-life complexities.

Research questions

Seen from a transdisciplinary perspective:

1. What happens to and in the home when the hospital-level care moves in, and
2. How do the spatial and social dimensions of the home affect the practice of hospital-level care ?

Objective of the study

We aim to identify relevant themes for future research on HITH and to argue for the importance of transdisciplinary activities when addressing significant changes in the current delivery of

healthcare. We take our point of departure in the Danish context, where we are all based and where HITH has been piloted and is now slowly spreading (Sandreva et al., 2024; Cerdan de las Heras et al., 2023). However, through transparent and detailed descriptions of our context and procedure, we hope our findings and recommendations will be transferable to other contexts (Amin et al., 2020).

A Transdisciplinary Research- and Practice-Informed Approach to Hospital in the Home (HITH)

By 2023, many meetings and workshops among healthcare professionals about Hospital in the Home (HITH) were held in Denmark. However, just as in the scientific literature on the topic, the focus was primarily on the advantages seen from a healthcare perspective. Most research focuses on clinical and economic outcomes (mortality, readmission, patient satisfaction, and costs) compared to in-hospital care (Caplan et al., 2012; de Sousa Vale et al., 2019; Leong et al., 2021). Some recent studies from Denmark are focusing on the user experience of patients and healthcare professionals using HITH telemedical solutions (Cerdan de las Heras et al., 2023), patients' experiences (Bove et al., 2022; Jensen et al., 2020), and the complexity of healthcare professionals' tasks in HITH (Rasmussen et al., 2021). While it is important to research and discuss the clinical and economic advantages of HITH, we find it equally important to integrate into these discussions the challenges and consequences it might have for the patients, their relatives, their homes, and the healthcare professionals working in the home.

To explore and address the above-mentioned consequences, we propose transdisciplinary collaboration between different academic disciplines and non-academic professionals in healthcare and policy. Since HITH is a relatively new concept that has not been researched a lot, we left the approach of an in-depth inquiry by a single discipline and brought together a range of perspectives to get an overview of possible issues (von Thiele Schwarz et al., 2021). Inspired by Stock and Burton (2011), we define transdisciplinarity as collaboration across disciplines and sectors where all involved actors participate equally. Furthermore, transdisciplinarity focuses on a shared issue and problem-solving and strives for practical outcomes to facilitate change. We use this definition of transdisciplinarity throughout the commentary. A transdisciplinary approach enables us to engage in dialectic thinking, to ask new questions that integrate a wide array of factors, and to reach a wider audience of scholars and practitioners.

Gathering multiple experts from academia, practice, and policy to exchange knowledge and experience is an important first step toward a transdisciplinary approach. Thus, we conducted a workshop about HITH in December 2023. Our transdisciplinary team comprises practitioners and researchers with professional and disciplinary backgrounds in pharmacy, sociology, anthropology, history, theology, science and technology studies, organizational studies, nursing, architecture, and health innovation. They were invited to join the workshop and co-write this commentary based on their experience and expertise in health- and home-related topics. However, while the author list is extensive, it is not exhaustive of relevant disciplines and expertise.

Methodological approach

The first aim of our process was to engage academic researchers, key healthcare professionals, and relevant stakeholders in a workshop discussion of the social, physical, digital, legal, ethical, health-related, and existential aspects of expanded home healthcare and hereby facilitate a transdisciplinary exploration of HITH. The workshop was convened by the first, second, third, and last authors. The second aim was to take inspiration from this discussion and write a commentary that identifies possible consequences and suggests areas of future research that can guide the development of HITH.

The workshop was structured with short lectures, transdisciplinary group work, and a plenum summary where insights were noted. The lectures covered dehospitalisation, video consultations, health equity, health law and patients' rights, privacy and the home from a historical perspective, and the multifunctional home. Participants discussed in transdisciplinary groups and defined focus points for future research on HITH .

In combination, the groups proposed eight focus points for future research: perspectives from patients and relatives, professions and competence building, patients' choice and involvement, goals and effects of HITH, patient safety, definitions of HITH-related terms and concepts, sustainability, and cohesion in treatment. Following the workshop, we elaborated on, combined, and condensed these focus points into four themes relevant to future research in HITH. Table 1 shows the process (inspired by von Thiele Schwarz et al., 2021).

Table 1: Outline of process

Purpose	**Activity**	**Participants**	**Outcome**
Phase 1			
To bring together a range of perspectives from different disciplines and professions to explore possible challenges and advantages of HITH.	A full-day workshop with lectures, group work, and plenum discussions. (December 2023)	Fifteen authors and an additional four participants.	A summary describing discussions, insights, and focus points from the workshop.
Phase 2			
To develop, combine, and condense the focus points for future research and plan the writing process.	Follow-up meeting with a summary of the workshop and group work intended to develop focus points for future research on HITH. (March 2024)	Twelve authors.	A plan for the writing and publication process, as well as a summary listing focus points for future research on HITH.

Phase 3			
To co-write a transdisciplinary commentary that integrates various disciplinary and professional perspectives on HITH.	Outline of the commentary based on the workshop and follow-up meeting. (April-May 2024)	The first, second, third, and last authors.	An outline, two drafts and a final co-written commentary.
	Feedback and additions to the outline. (June 2024)	All authors.	
	First draft based on outline and feedback. (August-September 2024)	The first, second, third, and last authors.	
	Feedback and additions to the first draft. (October-November 2024)	All authors.	
	Second draft based on first draft and feedback. (December 2024-February 2025)	The first, second, third, and last authors.	
	Feedback and additions to the second draft. (March 2025)	All authors.	
	Finalising the commentary. (March 2025)	The first, second, third, and last authors.	
	Approving the final version of the commentary. (April 2025)	All authors.	

After the workshop and the follow-up meeting, summaries were written and shared with all authors. These summaries tracked the collaboration's progress and informed those who did not participate in all three steps. Between the three phases, the participants could share and validate insights in their respective professional environments and bring back new perspectives to the meeting and writing process (von Thiele Schwarz et al., 2021). At the follow-up meeting, it was decided to invite two additional authors to contribute primary sectoral perspectives. Furthermore, we agreed that the workshop conveners were responsible for planning the writing process and structuring the text. The writing process took place between April 2024 and April 2025. It was structured in seven steps of writing, commenting, and editing in a shared online document, enabling interaction through commenting on and reading each other's contributions.

By the first draft, we agreed on four themes particularly relevant to future HITH research. They represent the focus points and discussions we have had throughout the process and have been developed continuously through the writing process: (1) HITH Definitions and Their Implications, (2) The Home - Materiality, Atmosphere, and Everyday Life, (3) The Professions - the Home as a Workplace for Healthcare Professionals, and (4) Social Network - Relatives, Patients, and Responsibilities

In the following, we elaborate on these four themes and summarise transdisciplinary observations across them. Afterwards we conclude with a discussion of the strengths and limitations of our transdisciplinary approaches, and finally, we pose recommendations for future research.

Findings and Thematic Discussions

Theme 1: Hospital in the Home (HITH) Definitions and Their Implications

There is no consensus in research or practice regarding conceptualising and defining hospital-level care in the home. Different terms for HITH are used interchangeably and in contradiction in the research literature, e.g., hospital in the home, hospital-level care, treatment at home, virtual home hospital, home hospitalisation, hospital at home, domiciliary care, outpatient care, home-based care, admission avoidance, early supported discharge, and dehospitalisation (Caplan et al., 2012; AbbVie, 2023; de Sousa Vale et al., 2019; Mathura et al., 2024; Rasmussen et al., 2021; Bove et al., 2022; Santomauro et al., 2024). However, many studies on HITH do not use any of these terms, while some use the term but do not refer to a care model that is a substitution for in-hospital care. This confusion adds to the challenges of transdisciplinary collaborations, which often struggle with tacit assumptions and lack shared concepts and language (Stock & Burton, 2011).

In our case, discussions of definitions revealed a series of semantic and definitory differences between fields and sectors. While disentangling such differences and attempting to reach a correct and fine-tuned vocabulary may seem like hair-splitting, it is important foundational work if the transdisciplinary collaboration is to succeed. Regarding what to include in the definitions and specifications, we discussed what types of treatments and diseases benefit from HITH, whether this is a solution for all, or whether there should be specific requirements for the patient, the relatives, or the home itself. Furthermore, we discussed whether to include 'hospital' in the definition of hospital-level care in the home. No matter how much equipment, practices, and professionals we move from the hospital to the home, would it ever become a *hospital* in the home? Additionally, practice - at least in Denmark - shows that the transition between different types of home-based treatment and care might not be sharply defined or divided, and patients might receive different kinds in combination with or extension of each other. Nevertheless, practice and research in other types of home-based care are valuable and relevant to the debate on the development of HITH and are discussed in this commentary.

One way of distinguishing between different levels of home-based care is suggested by Fischer et al. (2024) and Nørgaard and Traulsen (2024): (1) *Home treatment*: Out-patient treatment at home, e.g., IV antibiotics, (2) *Home monitoring*: Out-patient follow-up, e.g., in the case of chronic obstructive pulmonary disease and heart failure, and (3) *Home admissions*: Hospitalisation at home with 24/7 monitoring and alarms, e.g., early transfer to the home where the hospital remains responsible for the treatment.

In Denmark, 'home treatment' has been the standard term for when the hospital is responsible for treatment based in private homes. However, we use the term HITH throughout to differentiate between hospital-level care at home and other kinds of home-based care. HITH resembles level 3 of the above definition, covering hospital-level care in a patient's home managed by the hospital.

Another core question related to the definition of HITH relates to how *home* is understood. The perception of a home forms how we should perceive hospitals in the *home* (evoking questions regarding institutional homes, homelessness et al.) and define what aspects of a home can be affected by hospital-level care moving into a patient's home (family relations, privacy, interior and materiality, everyday life, the atmosphere et al.). Social dynamics in a home and expectations of a home differ between cultures. What it means to be a home, a family, and its social relations and responsibilities differ across time, from family to family, and from home to home (Meier & Vallgårda, 2022; Winther, 2006; 2009). These conceptual nuances will be elaborated on in the following sections.

Theme 2: The Home - Materiality, Atmosphere, and Everyday Life

Different diseases require different types of equipment. Sometimes, the HITH model requires telecare technologies, a hospital bed, or medical devices such as IV stands or infusion pumps. How does the presence of medical devices and other "alien" objects with their "unhomely" aesthetics, smells, and sounds influence the home's materiality, atmosphere, and everyday life?

Materiality and Aesthetics of the Home

Homemaking is a practice of personalising a dwelling and creating a sense of belonging, autonomy, and control over everyday life. Material objects, such as photos, decorations, and furniture, contribute to the personalisation of a home through self-actualisation (Meijering & Lager, 2014; Miller, 2001). Especially for older people, who often value the objects for "[...] the memories and relationships to other people they represent, rather than for their material value" (Meijering and Lager, 2014: 862), these objects become significant. A recent Danish study indicates that patients like the idea of staying in the everyday surroundings of their home compared to the hospital setting (Cerdan de las Heras et al., 2023). Being surrounded by other patients, dressed in hospital clothes, and eating hospital food can reinforce the patient's feeling of being sick and having lost control over their situation and surroundings.

In contrast, being at home offers the patients the possibility of wearing their own clothes, sleeping in their own bed, and moving around as they wish and can. However, the aesthetics of a home are altered when healthcare equipment enters the domestic space. Bove et al. (2022) show that patients and their relatives might have to compromise their aesthetics, rearrange furniture, or designate specific spaces of the home for medical equipment. For some patients and relatives, this interior relocation can create a feeling of participation in the treatment. However, for others, it might feel like an intrusion into their living space and a loss of control over their home, including its aesthetics and interior design (Winther, 2012).

Atmosphere and Everyday Life at Home

Not just material objects and aesthetic preferences constitute a home. Also, ideas and existential values, social and family relations, and everyday practices contribute to homemaking and the feeling of home (Meier, 2023; Winther, 2006, 2009). Being hospitalised at home allows patients and their relatives to schedule their everyday lives more freely than if they had to fit into a hospital schedule of ward rounds, mealtimes, and controls (Cerdan de las Heras et al., 2023). In contrast to in-hospital treatment, HITH may accommodate the continuation of some aspects of the patients' and relatives' everyday lives and secure more involvement in the treatment and care (Wong et al., 2025). However, some everyday routines might get disturbed by HITH; for example, night-time self-monitoring can interfere with sleeping habits, just as home visits from nurses can be experienced as disturbing the private sphere of the entire family (Cerdan de las Heras et al., 2023; Dinesen et al., 2008). Furthermore, some family roles might be more challenging to combine with being a patient or caregiver at home. Women spend more time on unpaid domestic work, while men spend more time on paid and often out-of-home work (Kan et al., 2022; Cunha & Atalaia, 2019). Such contrasts indicate that there may be gendered differences in how roles, chores, and family relations are affected by HITH.

Another aspect of HITH that can interfere with the atmosphere and feeling of home are the noises and smells from healthcare equipment, medicine, and visits by healthcare professionals, as sensing is inherent to how a place is experienced. A home is partly made up of familiar and routine sensory experiences and can be challenged by unfamiliar or intrusive tastes, smells, and noises (Sou & Webber, 2023). Furthermore, the introduction of telecare technologies into the home can significantly impact the meaning of the home for both patients and relatives (Oudshoorn, 2012), and creating a care space in the home can be a fragile accomplishment (Langstrup et al., 2013). The atmosphere, everyday life, and experiences of home involve the people who partake of it, and this section is closely connected to theme four on social networks described below.

Theme 3: The Professions - the Home as a Workplace for Healthcare Professionals

Home-based care has long required healthcare professionals to visit patients in their private dwellings; however, HITH introduces new tasks, responsibilities, technologies, and

professional dynamics to private homes. What does HITH require of the home as a workplace and of the skills of healthcare professionals?

Infrastructure and Equipment

Private dwellings involve a variety of conditions that can be detrimental to healthcare professionals and patients. Safety hazards include poor lighting, extreme temperatures, and clutter, which increase the risk of falls and other injuries (Vincent & Amalberti, 2016; Gershon et al., 2008). When working in private homes, healthcare professionals may lack the appropriate medical devices, standards of hygiene, temperature-regulated storage for medicines, and other facilities provided in the hospital setting. These include access to colleagues and experts to consult and assist, such as other healthcare professionals, cleaners, and porters. Furthermore, there is a potential for transmission of infections between homes, since proper cleaning equipment might not be available in the patients' homes (Vincent & Amalberti, 2016).

HITH necessitates new waste management solutions and efficient delivery and exchange of medical equipment to homes because it introduces significant quantities of single-use items and packaging from medical devices and medication into the home. Solutions regarding delivery, collection, and exchange of supplies and equipment, as well as collection and disposal of waste, must be established to ensure HITH interventions run professionally and smoothly. Rasmussen et al. (2021) found that nurses providing care and treatment in patients' homes experienced that not all necessary supplies from the hospital were accommodated because the hospital lacked an understanding of the home as a treatment place. As a result, the patients questioned the professionalism and competencies of the nurses, and they were left with feelings of uncertainty and mistrust in the caregiver-patient relationship. Solutions for supplies and waste management require collaboration between different health units, industry, and renovation infrastructure and are very important for workflow, patient satisfaction, and the patient-caregiver relationship.

Professional Skills and Care Relationships

Many HITH models combine telemedicine with visits to the patient's home. Besides a stable internet connection, this requires technical competencies and education of healthcare professionals and patients. In a study by Cerdan de las Heras et al. (2023) on user experience with HITH telemedicine (tested in a hospital setting), the interviewed healthcare professionals propose specialised education for HITH staff, focusing on both digital and face-to-face professional care skills. One part of the HITH model of this specific study was telemedicine-supported self-monitoring and video consultations. Some healthcare professionals were unsure how to build a professional relationship with virtual patients and were concerned about the lack of face-to-face interaction and the risk of missing patients' symptoms and signs, which are well-known concerns also reported in other studies of telecare and video consultations (Guise et al., 2014; Nordtug et al., 2022). However, patients and healthcare professionals perceived

video consultations as more private and undisturbed than hospital consultations, where other patients or colleagues might be in the same room (Cerdan de las Heras et al., 2023).

Training and education of HITH teams should be tailored depending on whether the staff comes from the primary sector (locally rooted health actors such as general practitioners, pharmacies, and home care) or secondary sector (centrally organised hospitals) (Larsen, 2012). Many healthcare professionals from the primary sector have experience with care in patients' homes; however, they might not have experience with hospital-level treatment. On the other hand, healthcare professionals from the secondary sector have experience with hospital-level treatment, but maybe not with home visits. Cohesion, stability, and continuity in the treatment of patients and collaboration between sectors are crucial to ensure the best patient and work experience (Klarare et al., 2017).

HITH services can create new dynamics between patients and healthcare professionals. The patient and relatives have more responsibility for their treatment and monitoring than in the case of in-hospital treatment. While some patients might postpone contacting healthcare professionals when in need of assistance (Elkjær et al., 2023), it may be stress-provoking for health professionals to rely on patients' timely and correct self-monitoring and treatment (Cerdan de las Heras et al., 2023). It might also affect the professional power dynamics when the healthcare professional is at work but also somehow a guest in the patient's home. This duality in the role of the healthcare professional leads to the question of who makes the decisions in the home and for the treatment. Thus, aligning expectations between the patient and the healthcare professionals is necessary to secure a safe and smooth experience (Rasmussen et al., 2021; Cerdan de las Heras et al., 2023).

Theme 4: Social Network - Relatives, Patients, and Relationships

HITH shifts much of the responsibility of monitoring and treatment from healthcare professionals to patients and their relatives, often disrupting their everyday lives. Whether a patient is hospitalised in or out of the home, illness in the family affects the family and other social relationships. Additionally, HITH might pose specific challenges for patients without strong and healthy social networks. Where and what are the particular demands of the patient's social network associated with HITH?

Relatives and Care Responsibilities

Bringing the hospital home might enhance patients' and relatives' caregiver burden and responsibilities. Responsibilities of the relatives include care of the patient's personal needs, which is time-consuming (Kurita et al., 2024) and might not only transform the everyday life in the home, as previously discussed, but also afflict the personal relationships involved in providing the care that would otherwise belong to hospital staff. Relatives of HITH patients should consent and be well-prepared to take on the role of caregiver. Additionally, the patients should have the autonomy to decide which relatives to involve and to what extent (Elkjær et al., 2023). However, it might be difficult to keep information from relatives or not involve them

if they live in the same home. In this regard, children pose a specific challenge. The minimum age of family caregivers should be considered, as well as whether HITH is a safe environment for children. The involvement of children in treatment, either as patients or as relatives, is complex. The adults in the family and the healthcare professionals should consider how HITH might affect children in the home.

Self-monitoring and increased responsibility for treatment by patients and relatives may give them a feeling of being more in touch with their illness and a better understanding of the tests and measures (Cerdan de las Heras et al., 2023). However, some patients and relatives experience guilt if they, for example, miss a scheduled treatment (ibid.). A study of tele-homecare found that patients were satisfied with home hospitalisation, but their partners felt anxious about the responsibility delegated to them (Dinesen et al., 2008). When relatives play a more prominent role in the care and treatment of HITH patients, it is important to ensure their safety, confidence, and rights. Unpaid carers are especially exposed to stress, long-term burnout, and ill health as they typically take on a lot of different emotional and practical tasks, often without guidance from professionals. Safety risks for unpaid and paid carers can be mitigated with proper support, training, and appropriate technologies (O'Hara, 2023; Vincent & Amalberti, 2016).

Missing or Unsafe Social Networks

It is vital that healthcare professionals understand the social network of patients and help them define who should and should not be involved in the treatment (Elkjær et al., 2023). Some patients might not have a strong or safe social network. Single-inhabitant homes pose particular - but also highly diverse - challenges. For vulnerable people living alone, HITH can potentially result in increased isolation of homebound patients as the home environment becomes 'uninviting' for guests and visitors. A Danish study of elderly adults receiving home care shows that people living alone experience anxiety at the thought of falling or contracting acute illness and having no one to help them call the hospital (Elkjær et al., 2023); this could be the case for HITH-patients as well. Patients with limited social networks might not ask for help before it is crucial. However, homecare visits can increase the patient's sense of security (Ibid.). Social networks can extend beyond a patient's immediate family and close friends to neighbours, local communities, and volunteers. Thus, it could be fruitful to consider the care responsibilities of HITH from a community perspective (Nelson et al., 2021).

HITH can also contribute to a worsening of conditions for patients and vulnerable family members in homes with a history of violence and abuse. Being away or able to leave the home might be a strategy for surviving an abusive relationship. Some patients have fragile relationships that may break from the strain of being tied to the home as a patient or caregiver.

Transdisciplinary Observations across Themes

Our transdisciplinary and multi-perspectival approach to HITH has highlighted and nuanced various, sometimes conflicting, benefits and challenges, enabling us to identify potential

themes for future research in HITH. Across the four themes described above, it becomes evident that it is important to include nuances and differences between patients, families, and homes when researching HITH. Future research should consider different kinds of patients (health condition, age, gender, education, digital literacy et al.), social networks (living alone, living with children, vulnerable relationships, communities, and volunteers et al.), and homes (social housing, urban or rural housing, small or spacious housing et al.) as the experience of HITH will most likely vary considerably given these different circumstances. Furthermore, the duration of the hospitalisation at home will likely influence the impact and the adjustments required of the home and its inhabitants. Consequently, existing inequities might increase; for example, patients not skilled in working with digital devices might find telemedical-assisted treatment challenging or even inaccessible if the technologies are unavailable in their language (Wong et al., 2025). Meanwhile, other inequities might decrease; for example, patients living far away from the hospital might find treatment more accessible when hospitalised at home. Arguably, HITH can be an equitable way of utilising and distributing healthcare resources so that those who need or prefer in-hospital care the most will receive it. With HITH, those who can care for themselves, for example, through self-monitoring at home, could leave more resources for in-hospital patients. However, this raises a slew of new questions: Will a broad implementation of HITH result in the hospital being only for disadvantaged patients; what are the effects of this imbalance on patients' experiences and treatment and healthcare professionals' working conditions and professional status?

Ultimately, when developing HITH solutions, it is important not to "copy" in-hospital care and treatment into the home but to rethink it in the context of the home and its nuances to avoid one-size-fits-all solutions. We suggest transdisciplinary and holistic approaches to HITH to avoid excluding some types of patients from this opportunity. More support and creative solutions might be necessary, to successfully enable the healthcare sector to deliver HITH care and treatment to disadvantaged patients living in homes with limited space and social networks. Collaboration and knowledge exchange across disciplines, sectors, and contexts are vital to tackle these challenges. Even in a small country like Denmark, there are differences across the country in the organisation and delivery of healthcare. Sharing experiences across the country and improving collaboration between hospitals, municipalities, patients, and relatives would be advantageous.

Conclusions

This commentary proposes four themes for future transdisciplinary research on HITH: 1) HITH Definitions and their Implications; 2) The Home - Materiality, Atmosphere, and Everyday Life; 3) The Professions - the Home as a Workplace for Healthcare Professionals; and 4) Social Networks - Relatives, Patients, and Responsibilities. Numerous practical and implementation issues remain to be addressed; however, simultaneously, we recommend conducting transdisciplinary research centring on the social and functional dimensions of the home as a setting for hospital-level care and treatment.

The transdisciplinary composition of the author group is a significant strength of this commentary, allowing us to view HITH from many different perspectives and bring the many nuances and integration of knowledge shown above to the core. Due to our different knowledge-leading interests, this commentary has touched upon various HITH-related issues, including spatial and design challenges, care relationships, responsibilities, equity, healthcare professionals, definitions, and technology. We advise future research groups to work transdisciplinary with questions related to HITH to focus on holistic and integrated problem-solving, carry out better explanatory and exploratory work, engage in dialectic thinking, reach more stakeholders, and get inspired to confront questions that may not otherwise have occurred (Stock & Burton, 2011). Despite the best intentions of establishing a diverse and inclusive group of workshop participants and commentary authors, transdisciplinary configurations run the risk of selection bias (Käfer et al., 2024). Many of the authors have previous social and professional connections, and thus, we have probably overlooked relevant participants from outside our network. Furthermore, the authors of this commentary mainly work and reside in and around larger cities in Denmark, mainly the capital, Copenhagen. Likely, experiences with HITH from Denmark's less densely populated areas are different. These factors are important to consider when establishing new research teams.

Need for Future Research

In future research on HITH, it is important to establish a shared understanding and use of concepts across disciplines and sectors to consider the wide range of implications. In addition, it is important to agree on the desired goals of HITH in terms of not only healthcare but also the social, practical, and mental conditions of patients, relatives, and healthcare professionals. Establishing such goals and their connection to HITH definitions will strengthen research and implementation.

We recommend that future research on HITH consider the home's functional, material, aesthetic, sensory, and everyday aspects. When implementing HITH, it might be necessary to move away from the inherent principles and designs of the traditional hospital and adopt an approach that allows individuals to maintain their practices, habits, and feelings of home while receiving treatment at home. Different actors, including healthcare professionals, architects, patients, and relatives, should be involved in the design of such an approach to create a safe and intact space suitable for home treatment while at the same time respecting the distinct domestic choices, habits, routines, and practices of patients and relatives. Architects should be involved in this dialogue to ensure that more adaptable interiors are designed from scratch. Essentially, these actors should establish a shared understanding of what a home is and should be and reflect on the implications of moving the hospital into the home.

More research into private homes as a workplace for healthcare professionals is required to determine what infrastructure, technology, and safety are needed for HITH. This knowledge can contribute to the reorganisation of hospital-level care when moving into private homes and the development of new approaches to logistics, collaboration, and competencies. HITH will likely actively involve healthcare professionals from different sectors as well as patients and

relatives in the care and treatment at home. This constellation requires collaboration, alignment of expectations, and training of involved parties. We suggest that future transdisciplinary research pays attention to the dynamics and collaboration between care providers (professionals and relatives alike) and care receivers when treatment and care are delivered in the home.

Identifying a patient's potential support to ensure safe and adequate care and treatment in the home is essential. Research into the effect of HITH on the patient's social network and the burden and responsibility posed on relatives is necessary. Future research in HITH should focus on how caregivers can be supported as valuable resources, ensuring that the care tasks related to treatment do not become a burden that ultimately impacts their health and quality of life. Furthermore, considering how patients with limited or vulnerable social networks can be supported, potentially drawing on neighbours, local communities, and volunteers as part of a care network for HITH patients is crucial. Patients and homes are different, and not all homes will be suited for HITH for many different reasons. Focusing on patients' and relatives' specific situations is essential to ensure equitable access to HITH.

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