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Challenges and benefits of hospital-at-home care in Iran from providers and patients' insights

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Hospital-at-home (HaH) care is considered an alternative to inpatient hospitalization. This model of care can serve as an innovative approach aimed at enhancing service delivery while reducing the costs associated with hospital readmissions. The objective of this study was to explore the challenges and advantages of hospital-at-home care from the perspectives of specialists, care providers, and recipients in Iran. This qualitative study was conducted in 2024 using semi-structured interviews. The research population included specialists involved in the implementation of hospital-at-home care programs, as well as providers and recipients of these services in Iran. A total of 27 participants were selected through purposive and snowball sampling. Data analysis was performed using a latent content analysis approach. The software MAXQDA10 was utilized to extract main and subcategories. The content analysis of interviews led to the identification of 50 open codes in total. Among them, 20 codes were categorized under four main themes related to the benefits of hospital-at-home care, including improvement in care delivery, societal and cultural benefits, availability of necessary infrastructure, and cost savings. Meanwhile, 30 codes were classified under seven main themes related to the challenges of hospital-at-home care, including decision-making and policy challenges, time and space limitations (spatial and temporal limitations), legal and ethical challenges, societal and cultural barriers, service delivery constraints, human resource-related challenges, and economic difficulties. The findings of this study highlight both the advantages and challenges of hospital-at-home care in Iran. Given these results, planning by healthcare system managers and policymakers to assess and address the obstacles facing this model of care is crucial. In this regard, several concrete recommendations can be made to enhance the effectiveness of hospital-at-home services. These include adjusting service tariffs to realistic levels, allocating a designated government budget, expanding legally authorized HaH centers, training and developing a skilled workforce, and providing incentive mechanisms such as financial incentives for service providers.

Keywords Hospitals, Hospital-at-home care, Home care services, Healthcare policy, Delivery of health care, Qualitative research

In response to population aging, long waiting lists, rising healthcare costs, and limited budgets, both developed and developing countries are actively exploring innovative approaches to improve care delivery and reduce hospital readmissions[1]. One such approach is home healthcare, which has emerged as an expanding sector within health systems, aiming to replace expensive and specialized hospital care with cost-effective home-based care[2]. Globally, "Hospital at Home", a specific form of home healthcare where hospital-level care and treatment are provided at the patient's residence, has been recognized as a safe and effective alternative to inpatient admission[3].

Hospital-at-Home Care is a healthcare delivery model that provides acute, hospital-level medical care to patients in their own homes, under the supervision of medical professionals, as a substitute for traditional inpatient hospitalization[4]. This model aims to deliver comparable clinical outcomes while enhancing patient comfort and reducing costs[5]. During the home care process following hospital discharge, a patient who has been hospitalized is released once the acute phase of their illness has passed and they have reached a relatively stable condition, as determined by the treating physician. The patient must consent to the transition to home-based care[6].

Hospital-at-home care possesses distinct characteristics that set it apart from other healthcare services[7]. Unlike traditional care, which requires patients to visit a facility, home hospital care brings providers to the

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patient's residence, limiting the provider's control over the care environment[8]. Several factors contribute to the expansion of such services. First, the increasing elderly population, along with a growing number of chronically ill and disabled individuals living in the community, necessitate alternative care models[9,10].

Second, limited access to alternative healthcare services due to geographic dispersion and regional disparities accelerates the adoption of home care models[11,12]. Patient and family preferences, as well as the willingness of insurers and providers to support home-based care, further drive this trend[11,12].

Despite the growing success of hospital-at-home care in countries like Singapore and New Zealand[3,13], the implementation of this specific model in Iran remains underexplored. While Iran's healthcare system has introduced regulations for post-discharge home hospital care, it is still a relatively new and evolving service. Few studies have examined the unique challenges and advantages of this model in the Iranian context, where specific cultural, economic, and social factors must be considered. This research seeks to fill this gap by exploring both the challenges and benefits of hospital-at-home care in Iran.

In Iran, home hospital care is often limited to individual medical procedures, such as wound dressing changes and intravenous therapy, rather than a comprehensive assessment and management of the patient's overall care needs[14]. Unlike more developed systems, such as those in Singapore, where care coordinators identify patients suitable for home care and help manage the transition from hospital to home[13], Iranian healthcare providers are still developing the infrastructure and systems needed to implement such models effectively.

Studies indicate that patients generally prefer receiving care at home as it is associated with better recovery, independence, and personal control[15]. Furthermore, a growing body of research suggests that hospital-at-home models can be highly cost-effective[8,9]. Despite this, Iranian healthcare policymakers and providers still face significant challenges in adopting these models due to socio-economic and cultural barriers[6,14]. Therefore, this study was conducted to explore the challenges and benefits of hospital-at-home care services in Iran. The findings of this study can provide evidence-based insights into the advantages and obstacles of home hospital care, contributing to the expansion of knowledge and awareness in this domain. Additionally, the results can assist healthcare system managers and policymakers in planning necessary measures to enhance the effectiveness of such services, ultimately leading to improved healthcare delivery.

Methods

Study design

This study was a qualitative study conducted in 2024 using a latent content analysis approach as both the research design and data analysis method, to gain an in-depth understanding of the challenges and benefits of hospital-at-home care from the perspective of the study participants. Since qualitative research is a systematic method designed to describe experiences and interpret meanings within social organizations, this study also employed a qualitative approach. The purpose of using a qualitative method in this study was exploratory, aiming to investigate a relatively new and under-researched area of care delivery. The study was conducted in Tehran, Iran, where all interviews and data collection took place.

The present study was guided by the principles of latent content analysis as described by Graneheim and Lundman, which provided a structured approach to interpret the underlying meanings within participant narratives[16].

Importantly, the study used a semi-structured interview format with open-ended questions, allowing participants to express their views and elaborate on their experiences freely. This format enabled the researchers to probe deeper into responses using follow-up exploratory questions such as "how," "why," and "in what way," thereby facilitating depth and richness in the data.

Participant selection

The study population consisted of three distinct groups:[1] healthcare center managers working within Iran's healthcare system,[2] providers of home care services (nurses, physicians, and support personnel), and[3] recipients of hospital-at-home care. Given that qualitative research does not emphasize statistical estimation or large-scale sampling but rather prioritizes the richness and relevance of the sample in relation to the research objective, a purposive snowball sampling method was employed. The study utilized the key informant strategy, meaning that participants were selected based on their relevance to the research rather than through random sampling techniques. To achieve this, the researcher engaged with healthcare center managers, home care providers, and recipients of hospital-at-home services. In addition to conducting interviews with them, the researcher identified individuals with the most extensive knowledge of hospital-at-home care and proceeded to interview them accordingly.

Inclusion criteria were defined separately for each group as follows:

Healthcare managers: at least 5 years of relevant managerial experience in hospital, treatment, or insurance settings; direct involvement in the planning, implementation, or oversight of home care services.

Service providers: at least 3 years of experience delivering hospital-at-home care services; current employment in a relevant healthcare organization.

Service recipients: currently receiving or having received hospital-at-home care for at least one month; aged 18 years or older; cognitively and physically capable of participating in an interview.

Exclusion criteria included: lack of consent to participate, inability to complete the interview due to time constraints or communication difficulties, and absence of any relevant experience with hospital-at-home care.

The final sample size consisted of 27 participants (9 managers, 10 service providers, and 8 recipients. The saturation point was reached after 27 interviews, as no new themes emerged from the data, ensuring that the sample size was appropriate for addressing the research objectives.

Development and pilot of the interview guide

The interview guide was developed based on the existing literature on hospital-at-home care and the research questions. It was designed as a semi-structured guide incorporating open-ended questions to ensure flexibility and allow for the emergence of unanticipated themes. The initial version of the guide was piloted with a small group of participants (n = 4) who were not part of the final study sample. Feedback from the pilot interviews was used to refine and adjust the questions for clarity and relevance to the main study population. The pilot phase also allowed the research team to evaluate and improve their interviewing technique to ensure depth, neutrality, and responsiveness during data collection.

Data collection

Data collection was conducted through open-ended, in-depth (semi-structured) interviews carried out by one of the researchers (PN), who had prior experience and training in conducting qualitative interviews. The interview format consisted of three main sections. The first section introduced the research and explained the purpose of the interviews. The second section gathered demographic and background information about the interviewees. The third section comprised key questions focused on participants' familiarity with hospital-at-home care processes, as well as the challenges and benefits associated with it.

The number of primary questions in the third section varied depending on the participant group:

Healthcare managers and policymakers were asked 10 questions.

Service providers were asked 7 questions.

Service recipients were asked 8 questions.

Contrary to a fully structured format, the interviews employed open-ended prompts designed to encourage participants to reflect on and describe their experiences in their own words. Follow-up questions and probing techniques were used flexibly and adaptively based on each participant's responses.

The location and timing of the interviews were determined by the participants, ensuring flexibility on the part of the researcher. Each interview lasted an average of 30 min.

The data collection process was based on an inductive approach, allowing categories and themes to emerge from participants' narratives rather than being predefined. This approach enabled the researchers to gain deep insights grounded in the actual experiences and perspectives of participants.

Data analysis

Latent content analysis was employed to analyze the data[14]. The analytical process began with multiple rounds of listening to each interview and thoroughly reading the transcribed text. Open coding was used to identify key phrases and segments of meaning within the content. This was followed by axial coding to group related codes into subcategories and categories. Subsequently, based on continuous comparisons of similarities and differences among the open codes, they were categorized into similar clusters. Codes sharing commonalities were grouped into the same category, forming subcategories. Finally, by merging related categories, the core themes were extracted.

MAXQDA10 software was utilized to manage and organize the data. The software played a crucial role in the coding process and in identifying and visualizing the emerging themes. It was used to facilitate the categorization of codes and the organization of themes, ensuring a systematic approach to data analysis.

Although the study participants included both service providers/recipients (with lived experiences) and subject matter experts (with technical perspectives), the data analysis approach remained within the framework of latent content analysis. This method focuses on interpreting underlying meanings across all participant narratives—whether experiential or expert-based—rather than adopting a phenomenological approach that centers exclusively on individual lived experiences. As such, the methodological stance prioritized thematic abstraction over phenomenological description.

Trustworthiness

The study employed several strategies to ensure the trustworthiness of the findings, following the widely recognized criteria proposed by Lincoln and Guba for evaluating qualitative research: credibility, transferability, dependability, and confirmability[17,18].

Credibility

The researcher maintained effective communication with participants and shared transcriptions of interviews for member checking, allowing participants to confirm the accuracy of the data. Additionally, peer debriefing was conducted, wherein colleagues reviewed the data and findings for validation. Prolonged engagement with participants and data, as well as triangulation of perspectives from different participant groups (managers, providers, recipients), further enhanced credibility.

Transferability

To enhance transferability, the study provided a clear explanation of its objectives, methodology, and findings. Thick descriptions of the research context, sampling strategy, and participant characteristics were included to enable readers to assess the applicability of the findings to other settings.

Dependability

To enhance dependability, the research process was thoroughly documented, and an audit trail was maintained, including field notes, coding records, and methodological decisions. This allowed for transparency and consistency throughout the study.

Confirmability
The researcher aimed to minimize personal biases during the data collection and analysis process. Reflexivity was practiced by regularly reflecting on how personal assumptions might influence the interpretation of data. Documentation and storage of all materials ensured that findings could be traced back to their sources.

These measures collectively ensured a rigorous qualitative process aligned with the trustworthiness criteria outlined by Lincoln and Guba.

Ethics approval and consent to participate

This study was approved by the Ethics Committee of Iran University of Medical Sciences under the reference number IR.IUMS.REC.1401.583. Ethical considerations were strictly followed by providing a clear and detailed explanation of the study's objectives and obtaining written informed consent from participants. Furthermore, confidentiality was emphasized, and compliance with the Helsinki Declaration was ensured for the ethical participation of interviewees in the study.

Results

A total of 27 participants took part in the study, including 9 healthcare center managers, 10 home care service providers, and 8 recipients of hospital-at-home care. The average work experience of the interviewed managers and service providers was 19.60 years and 18.28 years, respectively. Participants' ages ranged from 30 to 65 years, with diverse educational backgrounds including high school diploma (recipients of hospital-at-home care), bachelor's, and master's degrees. Job titles varied from nursing and hospital internal manager to head of insurance organization, providing a broad perspective on home-based hospital care. Table 1 presents the demographic characteristics of the study participants (Table 1).

The findings led to the identification of 50 open codes, including 20 codes related to the benefits and 30 codes related to the challenges of hospital-at-home care (Fig. 1).

Rather than merely listing participant quotes, the analysis highlighted patterns and connections among statements. For example, phrases such as "reducing waiting time" and "proper follow-up on treatment" were merged into a broader category reflecting systemic improvements in care delivery, illustrating how participants perceived hospital-at-home care as a mechanism to streamline patient management and continuity of care. Similarly, codes related to "patient and family support" and "reduced patient and family anxiety and stress" were combined under "societal and cultural benefits," showing that home-based care not only addresses medical needs but also strengthens the psychosocial environment for patients and families. This iterative process of comparing, contrasting, and grouping codes led to the development of four main themes for benefits: improvement in care delivery, societal and cultural benefits, availability of necessary infrastructure, and cost savings (Table 2).

In parallel, seven main themes emerged regarding challenges. Open codes such as "lack of insurance coverage," "legal and ethical concerns," and "staff resistance" were grouped into categories that reflect broader systemic, organizational, and societal obstacles, including decision-making and policy challenges, time and space limitations, legal and ethical challenges, societal and cultural challenges, service delivery constraints, human resource-related difficulties, and economic difficulties. These thematic groupings provide a deeper understanding of the barriers by linking individual experiences to structural and policy-level factors rather than presenting quotes in isolation (Table 3).

In Tables 2 and 3, selected excerpts from the interviews are presented to illustrate key themes. To maintain confidentiality while providing clarity regarding the source of each perspective, participants are identified using

No	Variable	Category	N
1	Role	Nursing Manager	3
		Hospital Internal Manager	2
		Hospital Treatment Manager	2
		Head of Insurance Organization	2
		Service Provider	10
		Service Recipient	8
2	Gender	Male	11
		Female	16
3	Age	30–45	9
		46–55	12
		56–65	6
4	Education level	High School Diploma*	6
		Bachelor's Degree	10
		Master's Degree	11
5	Duration of care**	< 1 month	3
		1–3 month	4
		> 3 month	1

Table 1. Demographic characteristics of the study participants. *The high school diploma qualification pertains to service recipients. **The period during which the recipients had received care.

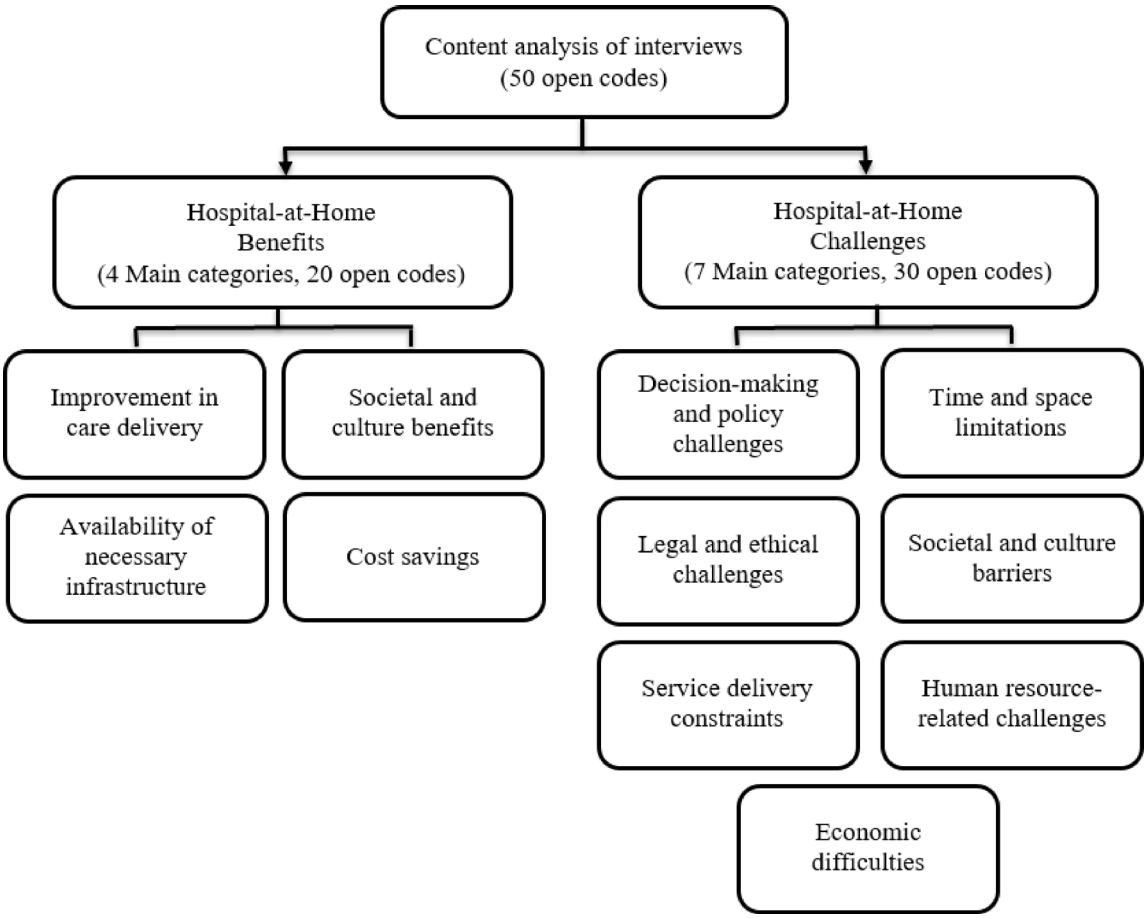

Fig. 1. Benefits and challenges of home-based hospital care from the perspective of managers, service providers, and recipients.

codes. Specifically, participants with codes 12, 13, 17, and 18 represent service recipients; those with codes 4, 7, 9, 11, 15, 21, 22, 23, 24, and 27 represent service providers (such as nurses, physicians, and care staff); and participants with codes 1, 2, 5, 6, 8, 10, 14, 19, and 26 represent managers or policymakers. This categorization allows readers to clearly distinguish between the views of different stakeholder groups. This coding enables readers to differentiate perspectives across stakeholder groups while ensuring confidentiality.

Discussion

The findings of this study revealed that, according to the interviewees, hospital-at-home care is considered an important part of the healthcare system, with both advantages and challenges. Beyond identifying categories, participants' narratives reflected the deeper meanings they associate with care at home, such as autonomy, dignity, and relational connectedness between patients, families, and providers. The analysis of data from interviews conducted with specialists in the field of hospital-at-home care resulted in the identification of four main categories related to its benefits, which include "improvements in care delivery, community and cultural benefits, availability of required infrastructure, and cost savings," with 20 subcategories. Additionally, seven main categories related to challenges were identified, including "decision-making and policy challenges, time and space limitations, legal and ethical challenges, community and cultural challenges, service delivery constraints, human resource challenges, and economic difficulties," with 30 subcategories. While the descriptive presentation of benefits and challenges provides a broad overview, this discussion aims to critically reflect on these findings in the context of existing literature and explore contrasting perspectives.

Importantly, the perspectives of three distinct participant groups-policymakers, service providers, and recipients-are considered separately to provide a more nuanced understanding of the findings and inform practical recommendations.

Benefits

Among the benefits highlighted by the participants were the reduction in patient hospital stays, decreased bed occupancy, and reduced workload of hospitals. Interpretively, these benefits were often framed by participants as enhancing patient autonomy and reducing the stress associated with institutional care, suggesting that home-based care is valued not only for efficiency but for its impact on the patient's lived experience. Offering home care services and providing frequent follow-up can lower the likelihood of disease recurrence and re-

No	Main category	Category	Code
1	Improvement in care delivery	Reduced waiting time	When a patient can receive the necessary care at home, there is no longer a need to wait in long hospital queues, which can also reduce hospital-acquired infections. (P-20)
		Proper follow-up on treatment process	When a patient receives the necessary care at home and alongside their family, the chances of recovery increase, as they may otherwise contract hospital-acquired infections and face additional complications. (P-22)
		Reduced complications related to patient transfer	In my opinion, when a patient receives care at home—provided the care is of good quality—there is no need for frequent hospital visits. This is a benefit! It prevents the continuous transfer of patients to hospitals, which can have multiple complications for both the patient and the hospital. (P-11)
		Reduced hospital stay duration	Home-based hospital care can help reduce hospital stay durations, leading to greater satisfaction for both the patient and their family. (P-12)
		Lower risk of hospital-acquired infections	When a patient can receive necessary care at home, they do not need to stay in long hospital queues, which can reduce the risk of hospital-acquired infections. (P-20)
		Improved patient and family satisfaction	Honestly, I am very pleased that I do not have to travel to the hospital in this crowded and traffic-heavy city and can instead receive my care at home with my loved ones. (P-13)
		Reduced risk of disease recurrence	Home-based hospital services are tailored to each patient's specific needs, which can make treatment faster and more effective, reducing the likelihood of disease recurrence. (P-15)
		Lower risk of rehospitalization	Receiving medical services at home—provided the patient is regularly followed up by service providers, receives their medications on time, and their family is adequately trained—can play a crucial role in preventing hospital readmission. (P-4)
		Hospital bed availability	From my perspective, providing hospital care at home not only improves patients' quality of life but also reduces the strain on healthcare systems by freeing up hospital beds and preventing hospital blockages. (P-14)
		Reduced hospital workload	One of the benefits of home-based hospital care is the reduction of excessive hospital workloads, which also helps lower stress and anxiety among healthcare staff. (P-19)
		Improved quality of services	When a patient receives the necessary care at home alongside their family, they tend to receive better-quality services and have a higher chance of recovery, as they avoid hospital-acquired infections and other complications. (P-22)
2	Societal and cultural benefits	Lower risk of disease spread in society	In my opinion, utilizing home-based hospital care can help prevent the spread of certain diseases in the community, as patients remain at home instead of traveling to and from hospitals, reducing the risk of transmission to others. (P-5)
		Enhanced patient and family well-being	Since the patient receives necessary services at home, this improves their well-being and that of their family while also reducing their stress and psychological pressure. (P-17)
		Improved health literacy for patients and families	Home-based hospital care may enhance patients' and families' health literacy because they become directly involved in the treatment process, and family members take on a role as service providers. (P-26)
		Establishing a culture of patient support	When a patient receives essential services at home, in a psychologically positive environment where they feel safe, loved, and supported by their family, home-based hospital care can foster a culture of patient support. (P-8)
		Reduced patient and family anxiety and stress	Receiving necessary care at home is more satisfying for me. Just being out of the hospital environment makes me feel more comfortable and less stressed. (P-13)
3	Availability of necessary infrastructure	Availability of technological infrastructure	Currently, our country has suitable infrastructure for effectively implementing home-based hospital care. A brief review of technology in this field shows that we have strong potential for such programs. (P-14)
		Availability of research and study infrastructure	One key factor that should not be overlooked is research and studies in healthcare. A positive aspect of home-based hospital care is that, both nationally and internationally, significant research has been conducted on this type of care, which health policymakers should leverage. (P-10)
4	Cost savings	Reduced patient and companion costs (e.g., transportation)	Bringing the patient home for necessary care can reduce costs such as transportation expenses, lower traffic congestion, and prevent the spread of diseases in the community. (P-6)
		Reduced hospital costs	When patients receive the necessary care at home, there is less need for hospital beds, which reduces the significant financial burden on the healthcare system for establishing and maintaining these facilities. (P-4)

Table 2. Benefits of home-based hospital care from the perspective of managers, service providers, and recipients.

hospitalization. The findings of Weerahandi et al., Xiao et al., and Linertová et al. support these results, showing reduced readmission rates among home care patients[19–21]. It seems that post-discharge education for patients, their companions, and caregivers, along with raising awareness about the importance of follow-up treatments and addressing all healthcare needs by healthcare teams, are potential factors that may contribute to reducing readmission rates. However, some studies have reported mixed outcomes, with certain patient groups experiencing similar or even higher readmission rates due to variable home care quality or patient conditions[22,23], indicating that context and implementation quality critically influence outcomes.

From the perspective of service recipients and their families, early discharge and receiving care at home enhanced their comfort, reduced their exposure to hospital infections, and improved satisfaction with care. Service providers, on the other hand, noted the increased opportunity for personalized and holistic care at home, which can lead to better therapeutic relationships and outcomes. Policymakers emphasized the potential for cost savings and system efficiency through reduced hospital strain and improved resource allocation. In this regard, the findings of Paskudzka et al. regarding post-discharge phone consultations indicated that these services were satisfactory for most patients, who felt comfortable and secure[24]. Moreover, the findings of a study conducted in New Zealand in 2004 indicated that the acceptance and satisfaction of patients and families with home care services were significantly higher than those with hospital care[25].

Another benefit mentioned by the interviewees was the reduction in costs. Participants interpreted lower costs not only as economic savings but also as enabling more equitable distribution of healthcare resources. In this regard, research conducted in the United States in 2019 found that patients eligible for hospital-at-home care incurred lower costs compared to hospitalized patients under the U.S. Medicare system[26]. Palmer et al.[27] also demonstrated in a retrospective cohort study in Canada that home care was associated with cost savings for both

No	Main category	Category	Code
1	Decision-making and policy-making	Lack of adequate and desirable supervision of unauthorized home hospital care centers	Although the home hospital care program is inherently a good plan, it requires precise policy-making; for example, what supervisory infrastructure do we have to control unauthorized centers? Is there proper supervision of these centers? From what I observe in practice, unfortunately, no, there is insufficient supervision of these centers (P-1)
		Lack of necessary support for home care programs from sources of power	The number of home hospital care providers in Tehran (the center of Iran) is very low, let alone in other cities! The government still doesn't have a clear plan for covering other patients for home care in other cities across the country, and to some extent, this type of program is not defined in these cities (P-7)
		Lack of insurance coverage	Health services are among those services that require insurance coverage and support for the community. Therefore, if we want to succeed with the home hospital care program across the country, we must pay serious attention to the role of insurance companies, which has not yet effectively happened (P-14)
		Lack of precise and clear definition of roles and responsibilities	One of the criticisms and actually challenges of home hospital care is that we don't have a precise and clear definition of the roles of everyone involved in the care, from doctors to the patient's family. What exactly should the family provide to the patient at home, and what services are they allowed to provide? What about the doctor and nurse? (P-4)
		Misalignment of plans and programs with international standards	Another challenge in this field of care (home hospital care) is the adherence to global standards. We have designed a program, but the issue up for debate is whether its content aligns with international standards and current criteria? How are conditions during execution? In implementing the home hospital care program, we are still far from global standards! (P-6)
		Lack of seriousness from policymakers in the home care program	It is unfortunate that valuable programs such as home hospital care, which can complement and improve hospital services, are not receiving the attention they deserve from senior managers and policymakers in the health system (P-19)
		Constant changes in decision-makers and managerial instability	Not only for the home hospital care plan, but for all health system programs, instability and frequent changes in managers, especially senior managers, is a serious threat! A plan starts and continues a bit, and then our managers change, and the plan is halted! (P-22)
		Lack of accurate supervision over the home care program	Like many health-related programs that unfortunately lack adequate supervision over their implementation, home hospital care also lacks precise, clear, predefined supervision (P-1)
		Insufficient support for home care centers	When there is no seriousness from senior health system managers regarding the implementation of home hospital services, it is natural that we won't have much support for this program (P-19)
2	Time and space limitations	Weak time management	A challenge that we, as providers of this type of care, sometimes face is time management, from when we are dispatched to the patient's home until we provide the necessary services and must return to our workplace (P-21)
		Unequal geographical coverage of home hospital care	Geographical access to home hospital care is unfair, and not all people in our community have acceptable geographical access to this type of care (P-15)
		Frequent visits to the patient's home	One of the challenges of hospital care at home is the time required from healthcare providers! In some cases, especially in special cases, the healthcare team must frequently visit the patient's home, which requires a significant amount of time and demands effective time management. (P-9)
3	Legal and ethical challenges	Ethical and legal issues	One of the major challenges of home healthcare plans is the weakness in laws, regulations, and legislation. If something unfortunate happens to a patient at home, who is responsible? If the patient's family has a complaint, where and from whom should they file a complaint, and how can they defend their rights? (P-8)
		Illegal and unauthorized home care centers	One of the biggest problems in healthcare systems worldwide, including ours, is the issue of illegal and unauthorized centers in healthcare. We also face this issue in home hospital care. For example, there are cases where healthcare providers direct patients from the hospital to their homes to continue treatment and profit financially from it! (P-1)
		Heavy responsibility towards the patient and their family	The healthcare team seeks to transfer patients to home care who require simple services and are less at risk. But the challenge arises when the hospital wants to send an ICU patient, who has been hospitalized for a long time, home, and complications arise at home—who bears the responsibility? (P-11)
		Sending staff from the hospital without a legal framework	We have a problem with sending healthcare staff from the hospital to the home. We still don't have a clear legal framework for sending staff to the home without causing legal issues. How the staff should be sent, with what means, and what resources to use, is not clearly addressed in the law. (P-9)
4	Societal and cultural challenges	Communication challenges between hospitals and home care centers	In general, communication between hospitals and home healthcare providers is not in good shape. If we want to provide high-quality care at home, communication is one of its basic requirements. (P-4)
		Resistance from patients and their families	Another challenge we face in home hospital care is resistance from the patient and their family, which can stem from various reasons. One reason is the fear the patient and their family have, thinking that the hospital wants to send them home to reduce their workload, which is not the case at all. (P-10)
		Low knowledge and awareness of the patient and their family about healthcare providers	One of the issues in home hospital care is the low knowledge of patients and their families when communicating with service providers. Communication requires transferring information from the provider to the patient and their family to increase their knowledge and empowerment. Unfortunately, due to reasons like language differences and information asymmetry, this communication doesn't always develop well. (P-2)
5	Service delivery constraints	Differences in service quality	One of the goals of healthcare systems is equitable access to services with the best quality. When it comes to hospital care at home, we need to ask whether the quality of these services is consistently good across all service providers. In my opinion, the answer is no! Not all centers provide high-quality services, which can be seen as inequity in access to quality services. (P-8)
		Lack of access to patient files by home care centers	A significant challenge in home hospital care is the lack of access to the patient's treatment history in the hospital. Many home healthcare centers, due to weak communication with hospitals, don't have sufficient access to patient files, which can lead to low-quality care or even unnecessary services. (P-23)
		Lack of comprehensiveness in service packages (hospital care at home)	A challenge we face with the home hospital care plan is that it lacks the necessary comprehensiveness as one of the performance measurement criteria. These services do not cover a wide range of healthcare needs and sometimes cannot do so. (P-24)

Continued

No	Main category	Category	Code
6	Human resources-related challenges	Resistance from healthcare staff, especially doctors	Some healthcare workers and service providers are not interested in visiting patients at home to provide services. This is especially true for doctors. Doctors prefer the patient to visit the hospital and receive their services there. (P-27)
		Shortage of home care nurses	To provide high-quality hospital care at home, we need skilled and trained staff, especially doctors and nurses. However, there is a shortage of doctors and nurses throughout the country, even in hospitals, so it's even harder to use this limited capacity for home care programs. (P-2)
		Problems with training home care providers	Training the healthcare staff responsible for providing hospital care at home is a major challenge. The staff who are supposed to provide hospital services at the patient's home must be highly skilled because the home environment differs from the hospital. In the hospital, there is access to all tools and expertise, but at home, we face limitations in these areas. That's why I say the staff providing the service must be well-trained and capable of managing the situation. (P-15)
		The secondary job aspect of home care providers	An important issue we observe in home hospital care is that the healthcare staff and providers who offer these services treat home care as a secondary job, which can impact the quality of services. (P-19)
7	Economic difficulties	Lack of financial motivation for healthcare staff	Providing hospital care at home requires time and frequent visits to the patient's home. This necessitates providing additional financial incentives for the healthcare staff providing these services. However, acceptable financial rewards have not been provided for these staff members. (P-7)
		Lack of financial resources	Support from higher organizations like the Ministry of Health for the home care program is short-term, with no strategic or long-term vision in this regard! At one point, the Ministry of Health announced financial support for the home care program. What happened? A budget was allocated for a short period, and in less than two years, the budget was depleted, and the program faced challenges. (P-4)
		Unclear tariffs (unclear pricing)	The pricing for the home care program is not transparent! In my opinion, the tariffs set for these services are unrealistic! (P-10)
		Shortage of necessary equipment	In healthcare centers, there is better access to equipment, resources, medications, and supplies, and patients and their families prefer to have the patient hospitalized and receive services there. If the patient needs a specific test or imaging service at the moment, they can quickly receive it at the hospital, something that is not available at home. (P-18)

Table 3. Challenges of home hospital care from the perspective of managers, providers, and recipients.

the patient and the hospital. Additionally, findings from another study in the U.S. indicated that home care costs for elderly patients were significantly lower compared to hospital-based care[28]. Yet, it is important to recognize that cost-effectiveness can vary widely depending on local health economics, insurance coverage, and resource allocation, which calls for cautious generalization of these findings across different settings.

The interviewees also referred to improvements in the quality of home care services. In this context, Ghaderi et al.[29] showed that the average effectiveness of home care was higher than the average effectiveness of hospital admission. In interpreting this finding, the reason can be attributed to the allocation of more time by healthcare staff to patients, which not only results in better service delivery but also provides psychological comfort for patients. This highlights the importance of personalized care in home settings but also raises questions about workforce capacity and training that warrant deeper investigation.

Challenges

Regarding the identified challenges, from the perspective of policymakers, these findings underscore the need for clear governance, regulatory frameworks, and sustainable financing models. Service providers highlighted the absence of clear tariffs, lack of coordination with insurance companies, and the difficulty of providing care in uncontrolled home environments. Recipients emphasized poor public awareness and lack of cultural preparedness as key obstacles to effective home care.

One of the major challenges identified was policy-making and planning deficiencies for the provision of these services. In this regard, the findings of Shahsavari and colleagues revealed that policy-making methods could impact the delivery of health services to clients[30]. According to the study by Jarrin and colleagues, creating a database for home care, designing better care systems, developing managers at all levels, and addressing payment and policy issues are among the matters that should be considered to improve the quality of home care services[31]. The study by Daliri and colleagues indicated that the most effective interventions are those that focus on the collaboration between secondary and primary care by combining a specific post-discharge strategy[13]. However, this study adds critical insight into the instability of decision-makers and inconsistent supervision, issues less explored in previous research, suggesting a need for more robust governance structures.

The illegal and unregulated operation of home care centers was another key concern, echoing Alai et al.[32]. This issue remains under-addressed globally, and comparative analysis reveals that countries with clearer regulatory frameworks tend to report better care integration and safety, underscoring the necessity for legal reforms tailored to local contexts.

Another challenge in hospital-at-home care mentioned by the participants was the lack of sufficient financial resources and budgets. The budget allocation in the healthcare system is a very important and challenging issue. The way the budget is allocated to various organizations, programs, and actions reflects the government's concerns and mindset towards solving the problems and issues in this field. In this regard, the study by Vali-Zadeh and colleagues identified several economic problems in providing home care services, including the high cost of hospital-at-home services, ineffective financial policies to support social workers and patients, the lack of coverage for care service costs by insurance organizations, the high cost of non-rentable medical equipment, and insufficient funding for home care service providers to offer technology-based services[33].

Another challenge in hospital-at-home care, according to the participants in this study, was the failure to accurately define tariffs (unclear tariffs). Pricing healthcare services is one of the most important economic tools affecting access, efficiency, and the quality of health services. The participants in this study believed that

tariffs for hospital-at-home care services had not been correctly defined, which could significantly impact the economic motivations of home care providers. This issue is influenced by factors such as the providers' travel to the patient's home, the time span different from hospital services, and the types of services and care needed at the patient's home. The results of a 2020 study in the United States indicate that the use of home care services has been increasing during the COVID-19 pandemic. Moreover, the findings of this study revealed that reforming payment systems to allow patient discharge for home care services is putting pressure on hospitals[34].

Cultural and social barriers, including limited patient and family awareness and communication gaps, were raised by participants. They suggested that the patient's family might not have adequate knowledge when interacting with the healthcare staff. This lack of awareness could lead to challenges in relationships between service providers and recipients. A study conducted on nurses working in hospital-at-home care centers revealed that the nurse providing home care should be qualified to conduct comprehensive care assessments, meaning they should be able to thoroughly assess the patient, the family, and the patient's home to manage care effectively[14]. The findings of the study by Hestevik and colleagues in 2019 emphasized the importance of evaluation and planning, information and education, preparing the home environment, involving the elderly and caregivers, and supporting self-management in discharge and post-discharge care processes. Additionally, the study stressed that better communication between the service recipient, hospital providers, and home care providers is required to improve care coordination and facilitate recovery at home[15]. This study's surface-level treatment of cultural challenges could be enriched by a comparative analysis of how different cultures affect acceptance and adherence to hospital-at-home programs, as well as strategies to overcome resistance rooted in cultural beliefs.

Overall, this study extends previous research by interpreting the experiential meanings attached to hospital-at-home care, showing how personal, social, and systemic dimensions intersect. These insights emphasize the importance of considering participants' sense-making processes when designing, implementing, and evaluating home-based care programs.

Contribution to literature

This study contributes to the literature by offering a comprehensive, multi-perspective examination of hospital-at-home care benefits and challenges within a specific healthcare context, highlighting governance instability, regulatory gaps, and nuanced socio-cultural factors often overlooked in prior research. By integrating views of managers, providers, and recipients, it emphasizes the complex interplay between systemic, economic, and interpersonal factors that shape home care implementation.

Limitations and future directions

One of the major limitations of this study is its qualitative design, which may result in findings that are not easily generalizable across different cultural and geographical contexts, due to the influence of specific circumstances and the personal characteristics of the participants. The decision to use qualitative methods was intentional, as the aim of this study was to gain an in-depth, contextualized understanding of the benefits and challenges of hospital-at-home care from the perspectives of multiple stakeholders, which is best achieved through qualitative inquiry. Quantitative methods were not employed because the phenomenon under investigation required rich, descriptive data rather than numerical measurement at this stage of exploration. However, to enhance the generalizability and robustness of findings, future research is encouraged to employ mixed-methods approaches and longitudinal quantitative designs across diverse settings. These can help validate and build on the insights generated by this study. Moreover, in-depth exploration of cultural and legal barriers using comparative and cross-cultural methodologies would significantly advance understanding and inform more context-sensitive policy development.

Conclusion

The findings of this study support the view that hospital-at-home care services provide valuable benefits, such as reduced hospital burden, enhanced patient satisfaction, and improved care outcomes. At the same time, they reveal significant challenges that hinder the effective implementation of these services, including policy, financial, legal, and cultural barriers. We agree with the perspectives of our participants that hospital-at-home care can be a vital complement to conventional hospital services if properly supported by policy and infrastructure. Based on the findings, it is recommended that policymakers, healthcare administrators, and relevant stakeholders take targeted actions to address these challenges and optimize the delivery of hospital-at-home care.

Policy recommendations

To establish a solid foundation for the successful implementation of hospital-at-home care, it is crucial to begin with comprehensive planning that defines key elements such as target populations, service packages at different levels, service delivery processes, standardized tariffs, and an appropriate organizational structure. Once these components are outlined, the government must prioritize actions such as ensuring proper budget allocation, defining payment systems, coordinating with insurance companies, and facilitating collaboration with other healthcare organizations.

Workforce development

An essential step is to ensure the availability of a skilled workforce, including training and professional development for healthcare providers. It is critical to create incentive mechanisms to retain qualified staff and address the workforce-related challenges identified in the study.

Infrastructure and logistics
For hospital-at-home care to be sustainable, the necessary infrastructure must be expanded. This includes ensuring the availability of medical equipment, enhancing communication and data systems, and improving access to healthcare technologies in patients' homes.

Implications for future research
The findings of this study suggest several areas for future research. For instance, more studies could explore the long-term effects of hospital-at-home care on patient outcomes and healthcare costs. Additionally, further research could focus on the integration of digital health tools to support hospital-at-home services and improve patient monitoring. Research into the socio-cultural barriers and facilitators for implementing hospital-at-home care, especially in diverse cultural settings, would also be valuable.

Data availability
All the data is presented as a part of tables. Additional data can be requested from the corresponding author.

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Author contributions
HAG and PN designed the study and prepared the initial draft. PN contributed to data collection and data analysis. HAG, JA, and PA have supervised the whole study and finalized the article. All authors have read and approved the manuscript.

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Declarations

Competing interests
The authors declare no competing interests.

Ethics approval and consent to participate
This study is approved by the ethical committee of Iran University of Medical Sciences with the number of IR.IUMS.REC.1401.583. All the methods were performed in accordance with the relevant guidelines and regulations.

Consent for publication
Not applicable.

Additional information
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