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·专家述评·

Hospital at home：from international evidence to a China-oriented pathway—building an integrated hospital-community-home model for respiratory home hospitalization coordinated with cloud outpatient care，with evaluation of clinical safety，environmental footprint，social benefit，and economic value

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［**Abstract**］ **Objective** To synthesize the international evidence, implementation models, and barriers related to Hospital at Home (HaH), and to propose a China-oriented pathway for respiratory HaH by integrating family bed services, internet hospitals, internet-based medical services, Internet Plus Nursing Services, and community health services. Contemporary evidence suggests that HaH has evolved beyond a simple substitute for inpatient admission and is increasingly understood as a composite model of hospital-level acute care delivered outside the hospital through remote monitoring, virtual review, in-home nursing, home-based treatment, and rapid escalation pathways. **Methods** This review draws on recent systematic reviews, randomized trials, real-world studies, implementation research, and national and local policy documents. The analysis focuses on conceptual boundaries, the international evidence base, key respiratory indications, digital infrastructure, nursing and community coordination, and multidimensional evaluation across clinical safety, environmental footprint, social benefit, and economic value. **Results** Among appropriately selected patients, HaH appears comparable or superior to conventional inpatient care with respect to mortality, readmission, patient experience, functional recovery, and some cost-related outcomes. Respiratory conditions, particularly post-exacerbation management of chronic obstructive pulmonary disease, home oxygen therapy, home noninvasive ventilation, post-pneumonia transitional care, and intensified post-discharge follow-up, represent high-priority and operationally feasible scenarios for HaH. China already has several institutional components relevant to HaH, including family bed services, internet hospitals, internet-based diagnosis and treatment, Internet Plus Nursing Services, and community health services. However, these components remain only partially connected and require specialty-led integration, digital coordination, nursing execution, and community continuity to form an operational, evaluable, and scalable pathway. Environmental gains should not be assumed; instead, transport, hospital bed utilization, household energy use, consumables, waste, and digital infrastructure should all be assessed within a full-pathway framework. **Conclusions** HaH has developed into a model of hospital-level care outside the hospital that integrates remote monitoring, virtual rounds, in-home nursing, home-based treatment, and rapid escalation and referral. For China, the key issue is not whether HaH is conceptually feasible, but how existing institutional mechanisms can be reorganized into an integrated hospital - community - home pathway for respiratory care. Future implementation should be evaluated across four domains: clinical safety, environmental footprint, social benefit, and economic value.

［**Key Words**］ hospital at home; home hospitalization; respiratory disease; family bed services; internet hospital; Internet plus nursing services; environmental footprint; social benefit; economic value

1　Introduction

Population ageing, multimorbidity, and increasing pressure on inpatient capacity are challenging the sustainability of acute care models centered on physical hospital beds. Some patients in the acute or subacute phase no longer require intensive in-hospital monitoring, yet still need relatively close specialist review, medication adjustment, oxygen support, nursing interventions, and symptom surveillance. At the same time, repeated hospital attendance and recurrent admissions increase bed occupancy and system strain while also imposing substantial transport, caregiving, productivity, and

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daily-life costs on patients and families[1-4].

Against this background, Hospital at Home (HaH) has moved from an exploratory "substitute for admission" model towards a broader reorganization of hospital-level care delivered in the home[1,3,5-9]. Its defining feature is not early discharge alone, but the delivery of time-limited, proactive, and continuous hospital-level care in the home through combinations of remote monitoring, virtual wards, cloud-based clinical orders, in-home nursing, home treatment, and escalation pathways[1,6-9]. Recent systematic reviews and randomized trials suggest that, in carefully selected populations, HaH can achieve outcomes similar to or better than those of conventional inpatient care with respect to mortality, readmission, patient experience, and selected economic outcomes[1,3-7].

Respiratory medicine is among the most promising specialties for HaH implementation. Acute exacerbation of chronic obstructive pulmonary disease (COPD), recovery after pneumonia, home oxygen therapy, noninvasive ventilation, sleep-disordered breathing device management, and supportive care after lung cancer treatment all share features that make them well suited to this model: a clear need for intensified post-discharge management, measurable home monitoring parameters, and high value from specialty-led continuity of care[10-17]. Importantly, China is not developing HaH from an institutional vacuum. Family bed services, internet hospitals, internet-based diagnosis and treatment, Internet Plus Nursing Services, and community health services already provide a policy and organizational foundation for out-of-hospital care[18-21].The central question, therefore, is not whether China can implement HaH, but how these existing components can be integrated into a locally feasible pathway led by specialists, supported by digital platforms, operationalized through nursing services, and sustained by community-based continuity of care[22-27].

This article reviews the conceptual basis, international evidence, respiratory application scenarios, implementation requirements, and evaluation framework of HaH, and proposes an integrated hospital - community - home model for respiratory home hospitalization coordinated with cloud outpatient care, with the aim of informing future Chinese practice and research[1-40].

2 Main text

2.1 Conceptual evolution and terminological boundaries of Hospital at Home The evolution of HaH reflects a broader shift in healthcare delivery from location-based to capability-based models of care. Earlier forms of HaH were typically framed as either admission avoidance or early supported discharge, with the principal aim of transferring selected patients from hospital to home for time-limited treatment, thereby reducing inpatient bed use, limiting hospital-associated complications, and improving patient experience[1,4]. The 2024 Cochrane update defined admission avoidance hospital at home as the provision of active hospital-level treatment at home for patients who would otherwise require acute inpatient admission[1].More recently, the 2025 BMJ Open scoping review argued that HaH should no longer be understood as a single substitution strategy, but rather as a composite service model integrating remote monitoring, virtual care, command platforms, in-home nursing, home treatment, and rapid escalation capability[3].

This shift is important because HaH should not be defined solely by where care is delivered, but by what level of care is delivered and how it is organized. What determines whether HaH is truly present is not whether the patient is physically at home, but whether hospital-comparable assessment, treatment, monitoring, risk recognition, and escalation support can be delivered safely in that setting[1,5-6,9].A 2021 systematic review and meta-analysis in JAMA Network Open found that hospital-at-home interventions for patients with chronic disease presenting to emergency departments were associated with outcomes comparable to or better than those of inpatient care[4]. Randomized trials have also shown that home hospital models may reduce overall costs, increase physical activity, and improve aspects of patient experience, while remote physician review can be non-inferior to in-home physician review under defined conditions[5-6]. Taken together, these findings

support the view that HaH has evolved from an extension of post-discharge support into a reconfiguration of acute hospital-level care in the home[1,3,9].

However, important variation remains in how HaH is defined across studies and health systems, limiting comparability and wider implementation[1,3,9]. The Cochrane framework distinguishes between admission avoidance hospital at home, in which patients who would otherwise be admitted receive hospital-level care directly at home, and early discharge hospital at home, in which patients are discharged earlier after initial stabilization and continue hospital-level care at home[1]. The 2025 BMJ Open review similarly highlighted the need for more consistent definitions to improve both evidence synthesis and policy translation[3].

Related terms include virtual ward, home hospital, advanced care at home, and hospital-level care at home[1,5-9]. In many settings, virtual ward refers primarily to remote surveillance, virtual review, and platform coordination, and does not necessarily meet the full threshold of hospital-level substitution[1,9]. By contrast, home hospital and hospital-level care at home more explicitly imply relocation of key acute inpatient functions into the home[5-9]. A 2024 systematic review in BMC Medicine showed that many interventions labelled as virtual wards or hospital-at-home are in fact complex multicomponent interventions, and that effectiveness depends substantially on whether they include in-home execution, continuous monitoring, and rapid escalation capacity[9]. In this article, HaH is therefore defined in a relatively strict sense as a hospital-led, time-limited, hospital-level model of care delivered in the home to patients who would otherwise require admission or continued inpatient management, rather than routine teleconsultation or general home nursing[1,9,22-24].

2.2 International evidence base At the level of overall feasibility, the evidence base for HaH is now relatively mature[1,3-4]. The 2024 Cochrane review and the 2021 JAMA Network Open systematic review both concluded that, among appropriately selected patients, HaH is a viable alternative to inpatient admission and is at least non-inferior across several major outcomes[1,4]. The 2025 BMJ Open scoping review suggested that the field has now moved beyond asking whether HaH can work, and towards more practical questions concerning scale, standardization, and implementation barriers[3].

An important complementary review from npj Digital Medicine further argues that HaH in the USA has evolved from an admission-substitution model into a digitally enabled acute care ecosystem that integrates remote monitoring, virtual clinician review, home-based services, and escalation capability, while also underscoring that future scale-up depends on payment reform, operational standardization, and platform integration[33].

Randomized evidence has reinforced these conclusions. In a 2020 trial published in Annals of Internal Medicine, hospital-level care at home was associated with lower total costs, greater physical activity, and a favorable trend in readmissions compared with usual inpatient care[5]. A 2022 randomized trial in JAMA Network Open further found that remote physician visits, within a home hospital model, were non-inferior to in-home physician visits with respect to safety and patient experience, though this does not imply that in-person clinical capacity can be eliminated[6]. A subsequent 2025 trial in rural settings suggested that hospital-level care at home was also feasible outside metropolitan environments and was strongly preferred by patients, although delayed initiation may reduce potential gains in cost and readmission[7]. These findings underscore that timing of initiation and pathway design may be as important as the model itself.

Patient acceptance is generally favorable, but it is not universal[2,20]. A systematic review of reasons for refusing hospital-at-home identified several recurrent concerns, including safety of home-based care, caregiver burden, unsuitability of the household environment, and uncertainty about available hospital support[20]. This suggests that HaH should not be evaluated solely in terms of admission substitution or health service outcomes. Patient preference, caregiver experience, and home suitability should also be considered central implementation and outcome

domains[2,20].

Implementation research has further shown that current barriers to HaH are less often purely clinical and increasingly organizational. Key challenges include identifying suitable patients, coordinating multidisciplinary teams, ensuring efficient home-based service delivery, redesigning workflows, supporting nursing practice, and establishing viable reimbursement pathways[2-3,8-9,20]. A 2025 commentary in JAMA Network Open noted that attempts to scale HaH beyond original research settings frequently encounter questions about limited eligible population size, inefficient cross-disciplinary home visiting, and high dependence on local organizational capacity[8]. As a result, robust clinical evidence alone is insufficient. Sustainable HaH implementation also requires parallel development of delivery models, quality assurance systems, and payment mechanisms[2-3,8,18].

2.3 Core components of HaH Safe HaH depends first on appropriate patient identification and risk stratification. Suitable patients generally need to have relatively stable or stabilizing conditions, vital signs that can be monitored safely at home, manageable comorbidity burden, a home environment compatible with treatment delivery, available caregiving support, adequate digital access, and a clear pathway for rapid escalation when deterioration occurs[1,8-10]. High baseline risk does not necessarily preclude HaH, but it does require greater monitoring intensity and lower thresholds for hospital transfer. High-quality HaH programmers are therefore likely to require a combination of electronic prescreening, rule-based triggers, and multidisciplinary clinical review, rather than relying only on individual bedside judgment[1,8-10].

Equally important, HaH should be understood not as transferring the patient home alone, but as transferring hospital-level functions into the home. A mature HaH package should include remote physician review, in-home nursing, medication management, provision of intravenous or nebulized treatment when indicated, vital sign monitoring, access to urgent laboratory testing or imaging, 24/7 response to abnormalities, escalation and referral pathways, and training for patients and caregivers[5-6,9-10]. Without these core functions, the model is better described as remote follow-up than hospital-level care at home[5-6,9].

Digital infrastructure is fundamental to HaH rather than optional. Remote monitoring, virtual review, data integration, and alert systems provide the operational backbone for hospital-level care outside the hospital. Reviews of home-based physiological monitoring indicate that continuous or near-continuous monitoring may improve safety, support decision making, and facilitate earlier recognition of deterioration, although alarm burden, technological usability, and workflow integration remain important limitations[9]. At a minimum, the digital platform for HaH should include remote monitoring devices, virtual review or cloud outpatient functionality, task coordination systems, and rules for data return and risk alerting. In China, the most natural institutional vehicle for this digital infrastructure is the internet hospital and internet-based medical service platform[22-24].

A 2024 systematic review in npj Digital Medicine examined 29 studies from 16 countries and found that remote patient monitoring during transitions from hospital to home showed positive effects on patient safety and adherence, improved mobility and functional status, and a downward trend in readmission, length of stay, outpatient visits, and non-hospitalisation costs[34]. These findings reinforce the view that digital monitoring is not a peripheral add-on to HaH, but a core enabling infrastructure. In parallel, a 2023 npj Digital Medicine review on surgical home hospital programs suggested that remote patient monitoring, risk prediction models, and interoperable virtual platforms may help identify patients better suited to home-based hospital-level care and anticipate complications, indicating that AI-enabled risk stratification may become increasingly important as HaH expands across specialties[37].

Among all operational elements, in-home nursing and multidisciplinary coordination are particularly decisive. Without in-home nursing, HaH risks being reduced to telemonitoring. Without multidisciplinary coordination, continuity in medication adjustment, rehabilitation, nutrition, symptom management, and caregiver support is difficult to sustain. International experience therefore

indicates that the central challenge is not only whether clinicians can see patients remotely, but whether hospital work can be reproduced safely and reliably in the home[2-3,20,23-24].

2.4 Priority respiratory indications Respiratory medicine is one of the specialties in which HaH is most likely to achieve early operational maturity. Transitional care after acute exacerbation of COPD is currently one of the best-supported scenarios. Previous systematic reviews and Cochrane analyses have shown that selected patients with COPD exacerbation may be managed through early discharge or hospital-at-home pathways with outcomes that are similar or superior to those of inpatient care in relation to readmission, quality of life, and patient preference[10-17]. In practice, this means that respiratory HaH may often be most effective not as direct discharge from emergency departments, but as early transfer to intensified home-based management following short inpatient rehabilitation.

Home oxygen therapy, home noninvasive ventilation, and remote ventilation follow-up provide a critical capability base for respiratory HaH. Oxygen therapy requires far more than equipment delivery; it involves assessment of indications, titration of flow, home safety education, adherence review, and evaluation of therapeutic response. The American Thoracic Society guideline on home oxygen therapy provides a structured framework for these processes[13]. Noninvasive ventilation likewise requires attention to timing of initiation, parameter adjustment, alarm thresholds, adverse event surveillance, and remote interpretation of usage data. In populations such as obstructive sleep apnoea, obesity hypoventilation syndrome, and COPD with hypercapnia, a pathway combining devices, remote monitoring, and structured cloud outpatient review is operationally meaningful[10-13,17].

Pneumonia recovery and short-term post-infectious support form another important transitional category. Not all patients with pneumonia are suitable for admission avoidance HaH, but a subset of patients who are clinically stabilised yet still require oxygen therapy, antimicrobial completion, and symptom monitoring may be particularly suitable for intensified home-based management[5-7]. Such pathways may reduce bed occupancy while maintaining continuity of care.

Supportive care after lung cancer treatment is another relevant application. Patients with lung cancer frequently experience dyspnoea, nutritional decline, pain, infection risk, and adherence challenges after discharge. A combined HaH and cloud outpatient model may strengthen outpatient symptom monitoring, improve continuity of supportive care, reduce avoidable hospital visits, and support earlier detection of deterioration[3,19].

Respiratory HaH should also be framed not only around acute safety, but around recovery and function. For many patients, post-discharge outcomes are influenced not only by medication continuation but also by declining physical activity, poor rehabilitation adherence, and functional deterioration. Incorporating pulmonary rehabilitation, nutritional support, exercise guidance, and symptom self-management into HaH may therefore extend hospital-level care into the recovery period in a clinically meaningful way[10,16].

For respiratory medicine, a multidisciplinary community respiratory team reported in npj Primary Care Respiratory Medicine was associated with a reduction in emergency admissions while managing chronic respiratory illness at home with extensive use of remote consultations, supporting the practical value of an integrated hospital - community - home pathway for respiratory HaH[38]. Looking further ahead, a 2025 Cell Biomaterials perspective proposed that COPD home care may move beyond passive monitoring toward continuous sensing, automated decision-making, and closed-loop oxygen delivery, highlighting a possible future direction for intelligent respiratory HaH[39].

2.5 A China-oriented pathway: from parallel policy modules to an integrated specialty model China's starting point for HaH is not the creation of an entirely new service architecture, but the integration of existing policy and care delivery components. In 2018, national regulations formally established the policy basis for internet-based diagnosis and treatment, internet hospitals, and telemedicine. These regulations emphasized that online care should be anchored to physical medical institutions, with clear professional

accountability and coordination between online and offline service capacity[22]. This policy architecture suggests that China is not well suited to a purely platform-based HaH model detached from hospitals. Rather, it is more compatible with hospital-led care pathways supported by digital platforms and delivered into the home.

Within this architecture, Internet Plus Nursing Services provides a critical operational bridge. National pilot policies launched in 2019 and expanded in 2020 brought in-home nursing, digital scheduling, and structured home-based interventions into a more formal regulatory framework, particularly for older adults, post-discharge patients, and people in rehabilitation[23-24]. This is highly relevant to HaH because procedures such as catheter care, dressing changes, medication guidance, specimen collection, rehabilitation support, health education, and recognition of deterioration depend on reliable nursing execution in the home. Without such capacity, remote monitoring alone cannot deliver hospital-level treatment.

Shanghai offers a particularly relevant local institutional interface. The 2025 Shanghai Standards for Family Bed Services define family bed services as standardised medical care provided in the home for people who require continuous treatment but have genuine difficulty attending medical institutions because of self-care limitations or impaired mobility[26]. The 2025 municipal health work plan also calls for strengthening community inpatient services and expanding family bed and home nursing support for older adults under contracted care[27]. Together, these policies suggest that family bed services in Shanghai are moving from a narrow adjunct to chronic care towards a broader platform capable of supporting continuous medical care at home, which aligns closely with the service logic of HaH.

From this perspective, the China-oriented pathway does not lie in replicating Western organizational forms, but in integrating family bed services, internet hospitals, internet-based diagnosis and treatment, Internet Plus Nursing Services, and community health services into a coordinated specialty pathway rather than leaving them as separate policy modules. In such a pathway, tertiary-hospital specialty teams would be responsible for patient identification, risk stratification, clinical planning, and escalation decisions; internet hospital and cloud outpatient platforms would provide digital coordination, data return, and clinician - patient communication; Internet Plus Nursing Services would support in-home execution and selected treatment tasks; community health services would provide longer-term continuity, rehabilitation, and chronic disease follow-up; and family bed services would serve as the policy vehicle for time-limited continuous treatment. This is not a simple administrative aggregation of existing policies, but a functional reorganization of service delivery within current regulatory boundaries[22-27].

For respiratory medicine, this integrated pathway is particularly practical. Home management of respiratory disease depends not only on remote consultation, but also on continuous physiological and symptom data, oxygen and ventilation parameters, education about equipment use, rehabilitation support, and timely reporting of abnormalities. A hospital - community - home closed loop can therefore transform respiratory HaH from a fragmented digital service into a specialty-led system of continuous care. If this model is further combined with theoretical work on metaverse medicine, new quality productive forces in medicine, and medical GPT, it may also enable broader use of digital twins, decision support, intelligent interaction, and multimodal data integration for patient education, risk prediction, and cross-setting coordination[28-32].

Recent regulatory commentary also suggests that healthcare at home should not be understood as a mere outward extension of devices, but as a system-level issue involving interoperability, equitable access, regulatory pathways, and service integration[36]. This perspective is highly relevant to China, where the key challenge is not the absence of isolated policy modules, but how to connect hospital, community, home, data, and payment mechanisms into an operational continuum.

2.6 Multidimensional evaluation of value The most frequently reported HaH outcomes remain mortality,

readmission, and emergency department return, but these metrics alone are insufficient to capture the full value of the model. Randomized trials and systematic reviews indicate that HaH can achieve comparable results to inpatient care across several major outcomes, and evidence of greater physical activity suggests that functional recovery should be considered alongside survival and readmission[4-7]. For respiratory patients in particular, hospital-free days, exercise tolerance, rehabilitation adherence, symptom burden, and quality of life may be more directly informative indicators of whether patient-centred continuous care has actually been achieved.

Environmental footprint is another important but underdeveloped dimension. It is often assumed that HaH is environmentally preferable because it reduces inpatient stay and travel to hospital, but that assumption is too simplistic. A 2024 commentary in npj Digital Medicine argued that HaH may indeed offer environmental benefits, but these need to be measured rather than presumed[19]. A meaningful assessment should include at least six elements: reduced travel by patients and family members, changes in hospital bed and building energy use, increased household electricity consumption, additional travel by visiting staff, changes in consumables and packaging, and the energy burden associated with digital devices and platforms. Without a full-pathway and life-cycle perspective, HaH may simply shift emissions from hospital infrastructure to households and logistics systems rather than reducing them overall[19,21].

A 2024 perspective in npj Digital Medicine further cautioned that the environmental promise of HaH should not be assumed a priori: transportation substitution, household energy consumption, consumables, waste processing, and digital infrastructure all need to be incorporated into lifecycle assessment before claims of greener care can be made[19].

Social benefit is similarly more complex than increased comfort alone. Implementation studies and patient refusal reviews show that HaH may improve patient preference and experience, but may also redistribute labor and caregiving burden to households[2,20]. Social evaluation should therefore include patient experience, caregiver burden, time costs, productivity loss, service equity, and digital inclusion. In China, this is particularly important for older adults, people with disability, those with limited digital literacy, and households with fewer resources. If these dimensions are neglected, HaH may benefit only relatively advantaged groups and fail to improve overall care equity[2,20].

Economic value also requires a broader perspective than simple hospital accounting. A 2025 economic analysis in JAMA Network Open suggested that an all-virtual home-based acute care model may be advantageous from the payer perspective, but not necessarily from the provider perspective in the absence of appropriate reimbursement mechanisms.[18]. This highlights a central issue for HaH scale-up: not only whether it saves money, but whose costs are reduced, whose costs increase, and how payment is aligned. A more useful framework would therefore distinguish at least four economic perspectives: the hospital, the payer, the household, and society. This distinction is particularly relevant in China, where narrow provider-side accounting could obscure gains or burdens experienced by households in transport, caregiving, work absence, and home-based equipment use[18].

2.7 Implementation barriers and future priorities

Despite growing evidence for safety and feasibility, several barriers continue to limit broader adoption of HaH. The first is patient selection and the definition of safety boundaries. Decisions about who should be enrolled, when HaH should start, and when escalation back to hospital is required are central to both safety and scalability. Overly broad inclusion may increase risk, whereas overly conservative selection may reduce the size and impact of the eligible population[1-3,8].

The second major barrier is caregiver support and the digital divide. Many patients do not object to home-based care in principle, but are uncertain whether their household can manage the additional responsibilities it creates. Limited digital literacy, constrained caregiver time, restricted home space, complex equipment, and uncertainty about how to respond to deterioration may all undermine implementation[2,20]. Future HaH pathways therefore

need to incorporate caregiver training, home suitability assessment, user-centred technology design, and tailored support for patients and families with limited digital capability.

The third barrier concerns payment and regulation. International experience suggests that HaH moves from innovation to routine service only when reimbursement systems are able to recognise and fund hospital-level care delivered outside hospital walls. China already has regulatory foundations in internet medical care, Internet Plus Nursing Services, and local family bed arrangements, but has not yet established a unified reimbursement framework for HaH as a defined model of care[22-27]. In the near term, specialty-based pilots built on existing family bed, internet hospital, and nursing service mechanisms may therefore be more realistic than immediate national roll-out. Such pilots should generate evidence not only on clinical outcomes, but also on payment design, quality assurance, and cost allocation.

Future research should focus on at least six priorities: pragmatic large-scale trials to improve external validity; standardised reporting frameworks to improve comparability; AI-assisted patient identification and risk stratification; standardised life-cycle assessment of environmental footprint; family-friendly pathway design with explicit caregiver support; and real-world implementation and payment studies adapted to Chinese institutional conditions. The 2025 BMJ Open scoping review highlighted precisely these evidence gaps, making them especially relevant for future respiratory HaH research in China[3,19,21].

At the same time, the digitalization of HaH creates new safety and governance requirements. A 2024 scenario analysis in npj Digital Medicine showed that a ransomware attack on a HaH platform could disrupt monitoring continuity, clinical response, and service reliability, implying that cybersecurity and digital resilience should be treated as core quality domains rather than technical afterthoughts[35]. In addition, a 2026 observational study of a virtual hospital model for low back pain found no significant reduction in admissions but did report fewer 30-day emergency department re-presentations and better physical function, suggesting that newer virtual hospital models may create value even when full admission substitution is not achieved[40].

3 Conclusion

Hospital at Home has evolved from a narrow substitute for admission into a broader model of hospital-level care outside the hospital, combining remote monitoring, virtual review, in-home nursing, home-based treatment, and rapid escalation pathways. For carefully selected patients, available evidence supports its overall feasibility in terms of clinical safety, patient experience, and selected resource-use outcomes. Respiratory medicine, given its measurable home monitoring parameters, relatively established foundation in home oxygen and ventilation, and strong need for post-discharge intensification, is well positioned to serve as a priority field for HaH development in China[1,3-7,10-17].

For China, the central issue is not whether HaH is theoretically possible, but how existing institutional components—family bed services, internet hospitals, internet-based diagnosis and treatment, Internet Plus Nursing Services, and community health services—can be reorganised into an integrated hospital - community - home pathway for specialty-led continuous care. HaH should not be judged solely by readmission rates or headline costs. Its longer-term value will depend on concurrent evaluation of clinical safety, environmental footprint, social benefit, and economic value. Only through such a multidimensional framework can HaH move from isolated pilots to standardised, scalable, and institutionally sustainable practice, and become a meaningful direction for the transformation of respiratory continuous care in China[18-27].

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