Published in final edited form as:

Mayo Clin Proc Digit Health. 2023 September ; 1(3): 435–437. doi:10.1016/j.mcpdig.2023.06.015.

Honing in on the Hospital-at-Home Model

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An entrepreneur laid it out like this, “There are now three types of hospitals: those that are setting up hospital-at-home services due to capacity issues, those that are doing it to remain competitive in today’s payer markets, and the laggards.” Hospital-at-home or short-term care delivery within patients’ homes, is an emerging health care delivery innovation built on decades of pilots[1] and larger scale implementations in the United States and successful examples outside the United States. In the United States, hospital-at-home was historically not fiscally feasible in a fee-for-service context, but that changed in November 2020, with a Centers for Medicare and Medicaid Services (CMS) waiver in response to COVID-19–induced hospital capacity challenges, which allowed hospitals to receive full Medicare severity diagnosis-related group payment for short-term level services to Medicare beneficiaries in their homes.[2] Several diverse care providers have set up programs, either by marshaling internal operational and supply chain resources, or by partnering with well-funded startups. These providers range from health systems, such as the Mayo Clinic,[3] to insurers, such as Humana[4] and several Medicare advantage payers. Data show that Medicare’s home care reimbursement saves the payer more than half the cost of a short-term patient stay,[5] a fact that may be particularly appealing to Medicare advantage plans seeking lower costs for their patient populations. Furthermore, lower costs can also translate into lower patient copays for these services.

It is useful to contextualize the hospital-at-home care model within the continuum of home health care. Although home health can be envisaged as a range of services characterized by the location of service delivery, key differences include whether the service is additive or substitutive to care services available in traditional settings, whether they represent a part of comprehensive care or short-term or episodic care models, whether the service provider is operating under a traditional fee-for-service arrangement or risk-sharing, and the clinical complexity and level of malpractice liability. Hospital-at-home is at the extreme end of in-home health. In this perspective, we detail key challenges in this model’s execution, informed by the literature and expert interviews.

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Referral

Hospital-at-home reimbursement is dependent on the referral pathway. There are 2 common paths by which patients are referred, although there can and likely should be more. In the first path, patients are screened for suitability for hospital-at-home care when they present to the emergency department and are dispatched home before ever being formally admitted. In the second path, patients are discharged from the hospital into an ongoing hospital-at-home care arrangement, often at the tail end of prolonged hospital stays for ongoing needs, such as intravenous antibiotics or wound care. These are the only ways recognized by CMS within its hospital waiver approval.[6] The requirement that patients must already be on hospital premises deters participation and limits the full potential of the model. For example, this workflow limits the ability of service providers that are not hospitals—such as insurers, home health agencies, primary care practices, and new startups—from capturing the patient and influencing their care plan. In addition, this requirement does not solve the access-to-care problem for patients who live in rural geographies, far from a hospital system. Future eligibility criteria should allow for patients to be enrolled in hospital-at-home preemptively, such as after an in-home or clinic assessment by a provider.

Episode Definition

Given the novelty of the intervention and the limited payment mechanisms available, there is built-in vagueness and the possibility of gamesmanship in defining an eligible hospital-at-home episode. For example, a patient who needs X-rays and wound care for an ankle ulcer, fluids, and a nephrology consult for a kidney injury that may be related to dehydration, and pain control could possibly be treated as an urgent care episode at home by a care provider skilled in at-risk comprehensive home services. This same patient, should they be screened in the emergency department, could possibly qualify for an inpatient hospitalization, and so a rerouting back to the home would assume the increased gravitas and reimbursement of a hospital-at-home episode. Only the point of screening differs in these scenarios, which directly informs the payment rate. A 2021 systematic review of 9 randomized controlled trials comparing hospital-at-home interventions with hospital-based inpatient stays (with the caveat that most of these interventions studied were in Europe) found that the treatment length was longer in the home setting by 5.4 days, although the readmission risk was lower by 26%.[7] The magnitude of this difference raises concern that, in the context of fee-for-service reimbursement, hospital-at-home interventions might incentivize overuse of care services. For hospital-at-home to truly take off, there needs to be greater sophistication around episode definition, auditing and accreditation programs, and reinforcement of inclusion criteria for quality control and setting payment rates.

Choice of Executor

The natural choice for executor is often viewed as the hospital with arguments that their expertise in inpatient care, access to specialty consultants, and close ties and trust with the communities they serve position them for this extension of their services into the home. It is quite reasonable though to ask, despite the moniker, whether hospitals themselves should be the natural executors of this model, given the inherent conflicting incentives and lack

of natural expertise in this space. In fact, even the most robust hospital-at-home programs today, established by hospitals with a need to decant inpatient volumes or those participating in requisite payment models, do not enroll more than 100–200 patients per year. Part of the challenge is that hospital-at-home is a considerable investment for a hospital, and data show that only about 5 percent of Medicare discharges would be eligible for hospital-at-home, or about 15 per week for a 1000-bed hospital.[5]

Despite limitations they might have around a lack of a robust physician staffing model, some policy experts have already raised the idea that home health agencies or other startups operating exclusively in this space (Dispatch Health, Medically Home, Sena Health, among others) serving multiple local-area hospitals and representing a bottom-up payment approach may represent a better fit and achieve cost efficiencies.[8] As these third-party executors achieve such scale, they are able to move into spaces occupied by historically underserved patients—such as those with poor at-home support, language barriers, or locations farther away from nearby hospitals. This potential for scale makes the hospital-at-home model more appealing for these players.

Adoption and integration of digital health solutions, such as advancements in electronic patient-reported outcomes, machine learning risk models assessing patient risk for worsening clinical outcomes, and remote vital sign monitoring might also better define the optimal executors of this model.[9] Those players who learn how to best integrate these solutions into how they care for patients might be better able to achieve efficiency and scale by lowering their staffing costs while still being able to adequately care for patients at home.

Provider Education and Change Management

According to our expert interviews, one of the biggest challenges to executing hospital-at-home is provider education and change management. Although house calls were the predominant care delivery method for the 19th century generalist physician, today's residents rarely gain relevant experiences during training; referring a patient to the hospital and directly admitting them from the emergency department is simply easier and more straightforward.

These barriers have been detailed in other models seeking to change the site of location[10] and have been described as follows: (1) status quo bias, in which physicians persist with past models even if better alternatives exist; (2) therapeutic norm bias, in which physicians treat based on groups of patients, losing the opportunity to identify individual patients who could be optimally managed in the home; and (3) friction costs, in which physicians are discouraged from new models owing to perceived complexity, such as new ordering or documentation requirements. Program managers seeking to overcome these care biases should leverage multiple and complementary solutions—such as new components for resident and fellow education, systematized algorithms baked into the electronic medical record to flag patients appropriate for hospital-at-home, workflow improvements, and support staff that can help offload some of the work of executing these delivery innovations from physicians.

Entrepreneurs tell us that they developed entirely new curricula to help providers feel comfortable with home health care. Furthermore, gaining support from stakeholders can also be a political process. For example, news that a prominent hospital-at-home vendor was using paramedics rather than nurses in their model led to backlash from National Nurses United against such programs.[11] Episode and role definition in this new model of care will have to balance both the patients' best interests and entrenched political realities to garner support.

Although the public health emergency that facilitated the CMS short-term hospital-at home waiver has come to an end, the $1.7 trillion omnibus spending bill that became law on December 29, 2022, extended this program through the whole of 2024. For now, despite the myriad of challenges, hospital-at-home will remain a growing phenomenon, with compelling evidence that well-developed at-home treatment can be safer, cheaper, and more effective than traditional hospital care.[7]

Grant Support:

This work was supported in part by a grant from the National Cancer Institute (NCI) to the Memorial Sloan Kettering Cancer Center (P30 CA008748). Dr Daly was funded in part by a grant from the Emerson Collective.

POTENTIAL COMPETING INTERESTS

Dr Daly reports grant support from the National Institutes of Health and the Emerson Collective; participation on a data safety monitoring board or advisory board with Varian Medical Systems; and stock or stock options in Roche. The other author has report no competing interests. Dr Mullangi currently works for Tennessee Oncology and Thyme Care.

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