

KEY POINTS

1. Complex care hospitals in California are operating over capacity, creating potential safety and access issues. The Hospital at Home model is one of the best way to increase capacity to provide the right care, in the right place, at the right time.
 2. The Hospital at Home model is safe and effective. It has been replicated at over 100 hospitals across the country, and high-quality randomized controlled trials over the past decade have demonstrated equivalent or better outcomes.
 3. California hospitals are ready to implement this system if given a state pathway to do so. To date, 20 California hospitals have demonstrated to the Centers for Medicare and Medicaid that they have a safe and effective plan for administering Hospital at Home care and have therefore received waiver approval. We appreciate your advocacy and hope the myths and facts below are helpful in your considerations.
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Myth #1: Hospital at Home would reduce acute care capacity.

FACTS

1. **Hospital at Home (HaH) programs are intended to increase acute care capacity, not reduce it.** HaH is a way for complex care hospitals to offer patients the right care, at the right time, in the right place. HaH allows for less complex patients (e.g. those with simple pneumonia, skin infections, etc.) to have that option to be treated at home, freeing up brick-and-mortar hospital beds for more complex patients who need the advanced resources of a tertiary/quaternary care center. The inpatient bed shortage in California is well known. HaH offers the best opportunity to increase access and care for ALL Californians who need acute care, all the while preserving or improving clinical outcomes. Take UCSF as an example:
 - Over the last 6 months, UCSF's main adult hospital has been operating at 90-95% capacity, well above ideal capacity of 80%.
 - During the same period, 65% of Emergency Department beds have been occupied by patients who were already admitted to the hospital but waiting for an inpatient bed to become available. This phenomenon, known as "ED Boarding" creates potential patient safety concerns, leads to long ED wait times and compromises patient experience.
 - During the same period, UCSF was forced to decline over 2,000 adult transfer requests due to lack of bed availability. These requested transfers were for patients coming from community hospitals with medical conditions that were too complex to be cared for locally, requiring the specialized services and expertise at a tertiary/quaternary care center like UCSF – for example patients needing urgent transplants, ICU-level care or specialized neurology care. UCSF will not have additional brick-and-mortar bed capacity until 2030 when our new tower will be completed.

- The dramatic growth of HaH has been driven in part by the acute bed shortage caused by the COVID-19 pandemic. HaH has enabled health systems to add capacity quickly.** For example, between 23 March and 7 May, 2020, Atrium Health admitted 1,477 patients to its COVID HaH program¹, creating the equivalent of over 350 new beds. The escalation rate (subsequent admission to brick-and-mortar hospitals) was 4%, and mortality rate was 0.14%. Hospital at Home will allow California to better weather surges of COVID, and future pandemics.

Myth #2: HaH programs are unsafe for patients.

FACTS

- Randomized Controlled Trials have consistently shown better outcomes for patients treated in HaH programs.** For example, a study of 1,878 patients under the CMS Acute Hospital Care at Home waiver from November 25th, 2020 to October 27th, 2021 showed an unexpected mortality rate of 0.43% and an escalation rate back to brick-and-mortar hospitals of 7.14%.² This mortality rate is lower than rates for traditionally hospitalized patients, as is the escalation rate. A Cochrane review of HaH randomized controlled trials concluded that programs admitting patients from the emergency department to home had lower mortality at 6 months – these patients were 23% less likely to die than those admitted to brick-and-mortar.³
- Hospitalization at home has many other benefits for patients, including:**
 - Lower rates of readmissions,^{4,5,6} ED revisits,⁵ and admissions to skilled nursing facilities after hospitalization⁵
 - Lower incidence of infections and delirium⁴
 - Greater mobility and patient comfort⁴
 - Higher overall patient satisfaction⁵

¹ Sitamagari K, Murphy S, Kowalkowski M, Chou SH, Sullivan M, Taylor S, Kearns J, Batchelor T, Rivet C, Hole C, Hinson T, McCreary P, Brown R, Dunn T, Neuwirth Z, McWilliams A. Insights From Rapid Deployment of a "Virtual Hospital" as Standard Care During the COVID-19 Pandemic. *Ann Intern Med.* 2021 Feb;174(2):192-199. doi: 10.7326/M20-4076. Epub 2020 Nov 11. PMID: 33175567; PMCID: PMC7711652. <https://pubmed.ncbi.nlm.nih.gov/33175567/>

² Douglas V. Clarke, Jillian Newsam, et al. Acute Hospital Care at Home: The CMS Waiver Experience. *NEJM Catalyst* 2021. DOI: 10.1056/CAT.21.0338. <https://catalyst.nejm.org/doi/pdf/10.1056/CAT.21.0338>.

³ Shepperd S, Iiffé S, Doll HA, et al. Admission avoidance Hospital at home. *Cochrane Database Syst Rev* 2016;9:Cd007491.

⁴ González-Barrera S, Martín-Sánchez G, Parra-Jordán JJ, Fernández-Luis S, Calvo JA, Lobeira R, Yañez L, Manzano A, Carrera C, Baro J, Richard C, Bermúdez A, Ocio EM, Sanroma P. Feasibility of a Hospital-at-Home Program for Autologous Hematopoietic Stem Cell Transplantation. *Transplant Cell Ther.* 2023 Feb;29(2):111.e1-111.e7. doi: 10.1016/j.jtct.2022.11.018. Epub 2022 Nov 24. PMID: 36436783. <https://pubmed.ncbi.nlm.nih.gov/36436783/>

⁵ Levine DM, Ouchi K, Blanchfield B, Saenz A, Burke K, Paz M, Diamond K, Pu CT, Schnipper JL. Hospital-Level Care at Home for Acutely Ill Adults: A Randomized Controlled Trial. *Ann Intern Med.* 2020 Jan 21;172(2):77-85. doi: 10.7326/M19-0600. Epub 2019 Dec 17. PMID: 31842232. <https://pubmed.ncbi.nlm.nih.gov/31842232/>

⁶ Federman AD, Soones T, DeCherrie LV, Leff B, Siu AL. Association of a Bundled Hospital-at-Home and 30-Day Postacute Transitional Care Program With Clinical Outcomes and Patient Experiences. *JAMA Intern Med.* 2018 Aug 1;178(8):1033-1040. doi: 10.1001/jamainternmed.2018.2562. PMID: 29946693; PMCID: PMC6143103. <https://pubmed.ncbi.nlm.nih.gov/29946693/>

3. **HaH has the additional benefit that it may reduce the cost of care by approximately 30%.⁷**
4. **HaH programs take steps to keep patients safe in events such as power outages, heat waves, storms, etc.** Equipment provided to each HaH patient includes a backup power supply and redundant communication infrastructure. If patient's homes are impacted by a power outage or other event, we will transfer patients to the brick-and-mortar hospital using our rapid transfer bed process, and will temporarily close new admissions to the HaH program. By decentralizing the acute care infrastructure, we will make California's acute care infrastructure more resilient in the face of natural disasters.

Myth #3: HaH programs provide less care and nursing support to patients.

FACTS

1. **HaH patients can receive all of the same necessary services as patients cared for the in brick-and-mortar hospital.** Personnel including doctors, registered nurses, respiratory therapists, and pharmacists are available to provide in home and/or virtual support. In some cases, such as care by a pharmacist or case manager, there is no evidence suggesting that in-person care is superior, so those services may be provided virtually.
 - **Every patient in the HaH program has robust nursing support including access to 24x7x365 virtual nursing, multiple in-person licensed RN visits per day, and in-person visits by advance practice practitioners as needed.** The UCSF HaH program will staff a HaH command center 24x7x365 with UCSF-employed registered nurses and hospitalists trained in the HaH model of care, at the same patient to nurse ratio as patients in the bricks and mortar hospital. Patients can connect with the command center at any time at the push of a button. In addition, UCSF-employed APPs will make regular in-home visits.
 - **HaH patients may experience better continuity of care than patients in brick-and-mortar hospitals** as they may not experience as many nursing staff changes on different shifts and different days.⁸
 - **Additional staff and RNs will be recruited to staff HaH programs, so these programs should not lead to a shortage of nurses for care.**
 - **This is an area for nursing innovation in care models, nurses are at the forefront of designing patient centric safe and accessible care models**

⁷ Saenger PM, Ornstein KA, Garrido MM, Lubetsky S, Bollens-Lund E, DeCherrie LV, Leff B, Siu AL, Federman AD. Cost of home hospitalization versus inpatient hospitalization inclusive of a 30-day post-acute period. J Am Geriatr Soc. 2022 May;70(5):1374-1383. doi: 10.1111/jgs.17706. Epub 2022 Feb 25. PMID: 35212391; PMCID: PMC9307069. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9307069/>

⁸ Levine DM, Pian J, Mahendrakumar K, Patel A, Saenz A, Schnipper JL. Hospital-Level Care at Home for Acutely Ill Adults: a Qualitative Evaluation of a Randomized Controlled Trial. J Gen Intern Med. 2021 Jul;36(7):1965-1973. doi: 10.1007/s11606-020-06416-7. Epub 2021 Jan 21. PMID: 33479931; PMCID: PMC8298744. <https://pubmed.ncbi.nlm.nih.gov/33479931/>

Myth #4: HaH programs lack the breadth of services that brick-and-mortar hospitals have.

FACTS

- 1. HaH programs use carefully developed clinical and social screening criteria to only admit patients who can be safely treated at home.** It is not the goal of HaH programs to serve all patients and replicate the breadth of complex services available in brick-and-mortar hospitals. To date hundreds of HaH programs across the country have demonstrated that with careful patient selection, it is possible to predict which patients will achieve similar, and in some cases better, outcomes in a home-based acute care program compared to brick-and-mortar hospitals.
- 2. For patients who need a service not available in the home (e.g. CT scan), we will transport the patient to the hospital, and then back home.** Patients who routinely need more advanced services – for example those who are critically ill or who need daily in-person subspecialty care – are not eligible for Hospital at Home programs.
- 3. In cases of emergency, patients can connect with the HaH command center at the push of a button. HaH programs guarantee that a provider will be in the patient’s home within thirty minutes.** If in extreme cases, a HaH provider cannot arrive in time, HaH programs may activate the local 911 system. However, many HaH programs, including ours, will include local EMS personnel in rounds so that EMS responders know the patients and are familiar with their medical history. We have a rapid bed request system such that patients who need to be transferred from UCSF Hospital at Home into to the brick-and-mortar hospital have a smooth transition.

Myth #5: Cherry-picking patients allows HaH pilots to show positive outcomes that are not sustainable when programs scale.

FACTS

- 1. What is referred to as “cherry picking” is in fact, thoughtful, evidence-based, and necessary selection of patients who require acute care, but can safely be managed in a home setting to achieve the best outcomes.** This is an example of hospitals trying to provide the right care, in the right place, at the right time. Hospitals have no intention to scale HaH programs to include higher-risk patients who require the advanced services that are only available in the brick-and-mortar hospital.
- 2. Better outcomes from hospital at home programs have been demonstrated in several randomized controlled trials,⁹ suggesting that superior outcomes are due to the type of care being provided rather than because of patient selection.**

⁹ Leong MQ, Lim CW, Lai YF. Comparison of Hospital-at-Home models: a systematic review of reviews *BMJ Open* 2021;**11**:e043285. doi: 10.1136/bmjopen-2020-043285

Myth #6: HaH exacerbates racial disparities.**FACTS**

1. **A study of HaH admissions in 4 urban hospitals demonstrated that patients with Medicaid or low socioeconomic status were enrolled in HaH programs at equal rates as to brick-and-mortar, and had equivalent outcomes as high socioeconomic status and non-Medicaid patients.**¹⁰ These low SES patients may derive even greater benefit from HaH. For example, 30-day ED revisits were significantly reduced in the Medicaid HaH population.
2. **HaH providers can help advocate for better services for vulnerable patients.** When providers are physically in patients' homes, they can observe and advocate for potential non-medical needs, such as access to healthy foods, needed building repairs, etc. By intimately understanding the patient's home care environment, HaH providers can help ensure a smooth transition when the patient no longer requires acute care – this may partially explain the reduced readmissions and ED visits observed in HaH programs.

Myth #7: HaH shifts care burden to patient's caregivers and family.**FACT**

HaH program eligibility criteria exclude patients who are unsafe to remain in their homes and independently perform activities of daily living. Having a caregiver is not a requirement for enrollment into the program. While families play an important role in supporting hospitalized patients, they are not responsible for caregiving tasks such as bathing, toileting, wound care, or physical therapy. Such services will be provided as needed by providers in the HaH program.

Myth #8: It is unsafe to administer medications in a patient's home.**FACTS**

1. **Special attention is made to carefully manage medication administration.** In the UC HaH program, pharmacy services will be provided by our own inpatient pharmacy services, following established protocols. Oral medication will be administered either by nurses during their in-home visits, or virtually via visual video verification with nurses in the command center, and will follow all standard

¹⁰ Siu AL, Zhao D, Bollens-Lund E, et al. Health equity in Hospital at Home: Outcomes for economically disadvantaged and non-disadvantaged patients. J Am Geriatr Soc. 2022;1-4. doi:10.1111/jgs.17759.
<https://pubmed.ncbi.nlm.nih.gov/35363372/>

medication administration safety protocols (e.g. right dose, right route, right time, right patient). Medications that need to be given through an IV will be administered during in-home nurse visits.

- 2. Intravenous medications administered in HaH programs have been safely given in the home for decades as part of outpatient antibiotic therapy programs and by home health nurses.** HaH programs primarily administer antibiotics, fluids, diuretics, and other relatively low-risk intravenous medications that are already administered in thousands of homes across the country every day by Home Health nurses. Critics of the HaH model have cited a study suggesting increased adverse events after home infusions.¹¹ However, this study was of patients receiving biologic medications (e.g. for auto-immune diseases), which have high rates of acute infusion reactions, and would not be used in most HaH programs.

¹¹ Baker M et al. 2022. Comparison of Adverse Events Among Home- vs Facility-Administered Biologic Infusions, 2007-2017. *JAMA network open* 4.6:e2110268-e2110268.