



Advising the Congress on Medicare issues

Medicare's Acute Care Hospital at Home program

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- 1 Development and characteristics of the hospital at home delivery model
- 2 Experience of Medicare's Acute Care Hospital at Home (ACHaH) program
- 3 Considerations for future ACHaH policy

History of hospital at home

- HaH programs substitute in-home care for some or all of an inpatient stay at a brick-and-mortar hospital
- Health systems in foreign countries operate hospital at home programs
- Limited adaptation in the U.S. before pandemic; mostly pilots or small trials
- In November 2020, CMS established the Medicare Acute Care Hospital at Home program

Note: HaH (hospital at home)

Clinical focus and services offered vary across HaH programs

- Hospitals set clinical criteria and services offered based on local needs and conditions
- Programs can be organized to refer patients from a range of clinical settings, though emergency department most common
- Initiation of services can also vary
 - Early supported discharge – patient has brief stay at hospital for procedure, returns home with acute care services for recovery
 - Admission avoidance – no in-facility stay; patient begins acute care services immediately upon returning home

Note: HaH (hospital at home)

Common elements of HAH programs

Clinical population

- Clinical criteria (e.g. chronic conditions or surgical conditions)
- Require inpatient level of care
- Exclusions for patients that require intensive monitoring or are too severe
- Safe home environment

In-home clinical care

- Daily in-person visits from nurse or paramedic
- In-home physician visit (often virtual)
- Digital monitoring/remote patient monitoring
- 24/7 on-demand audio/video communication for hospital staff and patient

Ancillary and other acute care services

- Transportation
- Pharmacy/infusion
- Laboratory and radiology services
- Food/nutrition services
- Personal care services
- Durable medical equipment/medical supplies
- Other clinical services (social work, physical/speech/occupational therapy)

Geographic service area

- Typically a certain radius from the hospital
- Focus of care delivery network for in-home services
- Rapid response in emergent situations

Reviews of HAH have found some positive outcomes, but less certainty about cost savings

	Arsenault-Lapierre et al. 2021	Shepperd et al. 2016
Number of trials reviewed	16*	9*
Mortality	HaH patients comparable to usual care	HaH patients comparable to usual care
Acute care length of stay	HaH stay 5.45 days longer than usual care	Variation across trials, from 8.09 days shorter to 15.9 days longer than usual care
Readmission to hospital	26 percent lower for HaH patients compared to usual care	No difference between HaH and usual care
Patient function	No difference between HaH and usual care	Seven studies found no difference; two found better function for HaH patients
Cost of care	Not assessed	Noted costs not assessed in most studies; two studies suggested lower expenditures for HaH

*Six trials were included in both studies.

Source: Arsenault-Lapierre, G., M. Henein, D. Gaid, et al. 2021. Hospital-at-home interventions vs in-hospital stay for patients with chronic disease who present to the emergency department: A systematic review and meta-analysis. *JAMA Network Open* 4, no. 6 (June 1): e2111568.; Shepperd, S., S. Iliffe, H. A. Doll, et al. 2016. Admission avoidance hospital at home. *Cochrane Database of Systematic Review* 9, no. 9 (September 1): CD007491.

HaH trials including Medicare beneficiaries demonstrate challenges of evaluating programs

- Mount Sinai Hospital (2014)
 - CMS-sponsored Health Care Improvement Award grant
 - Challenges with staffing and recruiting patients
 - 49 percent of patients accepted HaH services
 - Unable to identify control group for quantitative analysis from administrative data
- Brigham and Women's Hospital (2017)
 - Randomized control trial (91 patients)
 - Focused on infections, heart failure, COPD, hypertension and atrial fibrillation
 - 37 percent of patients accepted HaH services
 - HaH patients had shorter length of stay, lower readmissions, and lower cost of care compared to usual care
 - HaH patients received fewer lab tests and imaging services

Source: Arsenault-Lapierre, G., M. Henein, D. Gaid, et al. 2021. Hospital-at-home interventions vs in-hospital stay for patients with chronic disease who present to the emergency department: A systematic review and meta-analysis. *JAMA Network Open* 4, no. 6 (June 1): e2111568; Gilman, B., D. Whicher, R. Brown, et al. 2020. *Evaluation of the Health Care Innovation Awards, round 2: Final report*: Mathematica. <https://innovation.cms.gov/data-and-reports/2020/hcia2-round-2-final-eval-report-sept-2020-0>.

During pandemic, CMS established Acute Care Hospital at Home program

- Participating hospitals determine clinical conditions and other program criteria for ACHaH services
- Must provide most required inpatient hospital services
- Additional ACHaH program requirements:
 - Two in-person clinician visits per day (nurse or paramedic)
 - 24/7 contact system for beneficiaries to reach hospital staff
 - Ability to dispatch clinical personnel to home within 30 minutes if necessary
 - Monthly reporting of program metrics
- Hospital receives standard IPPS payment; no additional payment if beneficiary is “escalated” from home to hospital

Note: ACHaH (Acute Care Hospital at Home)

Most hospitals approved for ACHaH had no discharges under the program

Number of reported discharges	Number of approved hospitals	Share of hospitals
No reported discharges	184	65%
At least one discharge	101	35%
All	285	100%

- Active hospitals more likely to be urban and non-profit; were also larger in size and higher occupancy

Source: MedPAC analysis of CMS ACHaH data
Note: Active hospitals had 1 or more ACHaH discharge

ACHaH discharges were concentrated among a minority of active hospitals

Facility's volume of ACHaH discharges in 2022	Number of hospitals	Share of ACHaH discharges (percent)
1-25	51	7.2
26-50	12	6.8
51-75	11	10.8
76-100	9	12.8
100 or more	18	62.5
All	101	100%

- About 6,200 total ACHaH discharges in 2022
- 18 largest programs (>100 discharges) accounted for 62.5 percent of volume

Source: MedPAC analysis of CMS ACHaH data

Characteristics of ACHaH discharges in 2022

- Most common primary diagnoses were infections and chronic conditions
- ALOS was 6.6 for ACHaH discharges, compared to 5.7 days for discharges from usual care for the same hospital and DRGs
- ACHaH discharges had lower allowable charges for some services
 - Laboratory services 23 percent lower
 - Radiology services 34 percent lower
- Lower charges may reflect lower severity of ACHaH discharges compared to usual care inpatient discharges in the same DRG

Note: ALOS (average length of stay)

Evaluating ACHaH will be challenging

- Consolidated Appropriations Act, 2023, extends program through 2024
- HHS required to submit a report to Congress by September 30, 2024, on ACHaH utilization, quality, outcomes, and cost
- Evaluation challenges:
 - Beneficiaries, when eligible, opt into the service
 - Lack of data on services provided during an ACHaH stay
 - Variation across hospitals in services provided and clinical conditions covered

Discussion: The future of ACHaH

- How should evaluators address the challenges of measuring cost and outcomes in ACHaH?
 - Quality measures for ACHaH are limited
 - Lower use of some services, but higher costs of providing care in-home
 - Medicare needs better data to evaluate the quality of care and cost of providing ACHaH services
- If extended, what steps, if any, should CMS take to better define the ACHaH care model?
 - Use of virtual visits for physician services
 - Requirements for caregiver
 - Improved data for tracking services provided and beneficiaries served



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