

CASE STUDY



Improving Patient Outcomes with Acute Hospital Care at Home

 Inbound
Health®

Background

Preliminary Analysis of Performance Outcomes

This preliminary analysis examines performance outcomes in patients discharged to the CMS Acute Hospital Care at-Home program, operated by Inbound Health, within a Minneapolis-based health system.

Demographics

The analysis included 97 patients (mean age 77 years; 48.5% men, 51.5% women). Data were available for all patients 30 days following their index hospitalization. The cohort primarily consisted of individuals with multiple chronic conditions. Notable primary diagnoses include sepsis (16.5%), heart failure (16.5%), pneumonia (13.4%), respiratory infections or failure (13.4%), kidney and urinary tract infections (9.3%), cellulitis (6.2%), COPD (6.2%), diabetes mellitus (3.1%), and renal failure (3.1%). All patients were deemed clinically appropriate for the program, and their home environments were assessed to ensure safe care delivery.

Analyzing Acute Hospital Care at Home Outcomes

Methodology

Outcomes were measured according to CMS's AHCaH quality reporting definitions.¹ A comparison cohort was matched based on diagnoses, acuity, time, and facility. This cohort consisted of 16,837 patients (mean age 67 years; 48.2% men, 51.8% women). The average case mix index (CMI) for the comparison cohort was 1.3, with an average length of stay of 3.9 days. The 30-day all-cause readmission rate for the cohort was 9.1%.

Statistical Analysis

An F-test was used to account for differences in sample sizes and assess potential variance between cohorts. A two-sample t-test with unequal variances yielded a statistically significant p-value ($p < .013$). The z-score calculated was -2.2, falling below the mean.

Outcomes

30 Day
Readmission Rate
5% Lower

Initial outcomes from the Inbound Health AHCAH program are promising. A recent analysis reported a 30-day readmission rate of just 3.2%. Patients in the program had a 5% lower 30-day readmission rate compared to matched patients, accounting for severity of illness. Additionally, the mean length of stay for program patients was 0.2 days shorter than that of the comparison cohort, reflecting improved care efficiency for patients, families, and healthcare systems.

Length of Stay
5 Days Less

for patients with sepsis recovery

Notably, the average length of stay was 3.7 days—nearly 5 days shorter than the typical stay for patients with sepsis (8.7 days).² For patients with heart failure, the length of stay was reduced by at least 1.3 days, compared to the typical stay range of 5–10 days.³ The average CMI was 1.3, indicating a cohort of medically complex patients who required considerable resources.⁴

AHCAH Program Outcomes (CMS Waiver)
Date of Service examined: 01/01/2024 - 11/30/2024

Cohort	Inbound Health	Minneapolis-Based Health System
(n)	97	16,837
Age (Mean)	77	67
Sex (m/f)	48.5%, 51.5%	48.2%, 51.8%
Case Mix Index (CMI)	1.3	1.3
LOS (Mean)	3.7	3.9
CMS 30 Day Readmission Rate	3.2%	9.1%

This analysis includes patients readmitted within 30 days within the same hospital system. Patients readmitted outside of the health system may not have been captured for this analysis.

Conclusion

These preliminary results contribute to the growing body of evidence demonstrating the effectiveness of the AHCaH program. The program appears to reduce excess national healthcare costs and lower readmission rates, particularly for high-risk conditions such as sepsis.

As healthcare costs rise and outcomes decline across the nation, industry experts are advocating for policy changes that optimize value throughout the care continuum. While further research is needed, these findings support the shift toward low-cost care settings as a means of achieving better outcomes and greater value.⁵

References

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