Characterizing Early Experience of a Hospital-at-Home Model

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Objective

1. To describe the patients admitted during the first 90 days following implementation of a Hospital-at-Home (HaH) program
2. To characterize HaH stays and early quality and safety experience

Methods

- **Population**: Adults aged18 and older consenting to admission into a HaH program during the first 90 days post implementation in a 335-bed hospital in Florida. Patients who did not pass clinical and social needs screening were excluded.
- **Design:** Retrospective descriptive analysis of patient and encounter characteristics from April through June 2023.

Results

Table 1. Patient Characteristics

	N (n=99)	Percent (%)
Gender		
Women	46	46%
Ethnicity		
White	90	90%
Black	5	5%
Hispanic	4	4%
Other	1	1%
Payer		
Medicare	52	52%
Medicare Advantage	26	26%
Medicaid	2	2%
Commercial	19	19%

Table 2. Hospital-at-Home Encounter Characteristics

Discharge Diagnoses, n (%)		
Soft Tissue Infection	23	23%
Congestive Heart Failure	17	17%
COPD/Asthma/Respiratory Failure	13	13%
Pneumonia	11	11%
Sepsis/SIRS	10	10%
Diverticulitis/Colitis	10	10%
Other[+]	9	9%
Urinary Tract Infection	6	6%
Average Length-of-Stay, n (days)	4.4	days
Average Severity of Illness[*]	2.7	---
Serious Adverse Events, n(%)	0	0%
Mortality, n (%)	0	0%
Escalations to Brick-and-Mortar Hospital, n (%)	7	7%
Patient Experience, n (%)		
If I needed to be admitted for hospitalization in the future, I would prefer to be cared for at home[**]	60	88%
30-day Readmissions	8	8%

[+]Other includes the following: osteopenia, thoracic vertebral fracture, malignant bone pain, rhabdomyolysis, acute renal failure

[*]Severity of Illness Index refers to a classification system aimed at differentiating inpatient illness complexity and severity

[**]Only 68 of 99 patients responded to the survey, so the denominator is 68 here

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Discussion

- HaH was implemented without any significant safety event during the first 90 days. Careful planning around capacity during early implementation, development of escalation protocols, and close data monitoring are critical to successful deployment.
- Patient satisfaction to date has been high, highlighting potential value in this alternative acute care delivery model to enhance patient quality and experience.
- Our diagnosis mix adds to the growing literature of diagnoses that can be safely treated in the home.
- Establishing measurable goals and metrics for a HaH program is important to enable continuous assessment of the implementation of a new model of care.
- Future multicenter randomized trials are needed to better evaluate potential differences in outcomes achieved in HaH vs brick-and-mortar hospitalization and to inform patient selection.

Relevant Literature

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Table 1. Demographics, n (%)		
Gender		
Male	15	58%
Female	11	42%
Race		
White	24	92%
African American	1	4%
Multiracial	1	4%
Ethnicity		
Non-Hispanic	25	96%
Hispanic	1	4%
Payer		
Medicare	21	81%
Medicaid	0	0%
Commerical	2	7%
Self-Pay	3	12%

Table 2. Escalation Characteristics, n (%)		
Comorbidities		
Hypertension	21	81%
Coronary Artery Disease	10	38%
Congestive Heart Failure	12	46%
Diabetes Mellitus	11	42%
Chronic Obstructive Pulmonary Disorder	9	35%
Active Malignancy	6	23%
Chronic Kidney Disease	8	31%
Abnormal Vital Signs		
Tachycardia (HR>100 BPM)	6	23%
Hypotension (Systolic BP <90mmHg)	1	3%
Febrile (>100.4 F)	3	12%
Hypoxia (Pulse Ox <92% or new O2 Requirement)	8	31%
Discharge Diagnosis		
Severe Sepsis	10	38%
Congestive Heart Failure	6	23%
Cellulitis	3	12%
COPD Exacerbation	3	12%
Diarrhea	1	3%

1. Social Circumstances/ Concern for patient safety	3	12%	
2. Clinical decompensation based on vital signs or exam findings	20	77%	
3. Need for emergent imaging	8	31%	
4. Need for immediate consultation or surgical procedure	6	31%	
5. Patient request	1	3%	
Readmissions 30-Days	5		
Average Length of Stay (ALOS)	3.19		
Death	0		