

Acute Care at Home

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**Mount
Sinai**

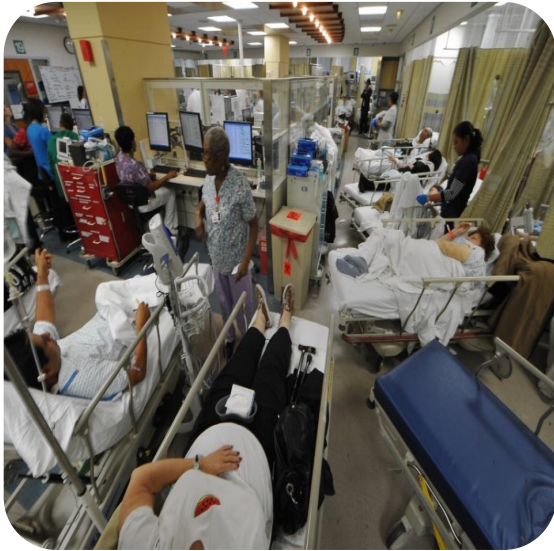
Objectives

- ▶ Understand the Hospital at Home model
- ▶ Summarize the history and evolution of Hospital at Home

- ▶ Ms SS is a 94 year old woman with HTN, HLD, Diabetes, Heart Failure (EF 45%), RA, chronic back pain who was brought to the hospital for falls at church.
 - ED: She was found to have acute exacerbation of heart failure needed IV diuretics and oxygen support.
 - In the ED, she did not get her usual medications and did not like the food in the ED.
 - The first night in the ED, patient became delirious and wasn't able to sleep.
 - Her friends were not able to visit her in the ED.
 - Ms S lives with a daughter and attends church regularly. She has strong social support through the church

*She has waited in the ED for >36hrs for an inpatient bed when the Hospital at Home team first asked to evaluate her.

Typical Episode of Acute Illness in the United States



Admission

- Crowded
- Long wait time
- Risks of hospital-acquired conditions



Acute Care

- Away from loved ones and familiar environment
- Risks of hospital-acquired conditions (delirium, falls, ulcers, infections, etc)



Post-Acute

- Institutionalized
- Risks of acquired conditions

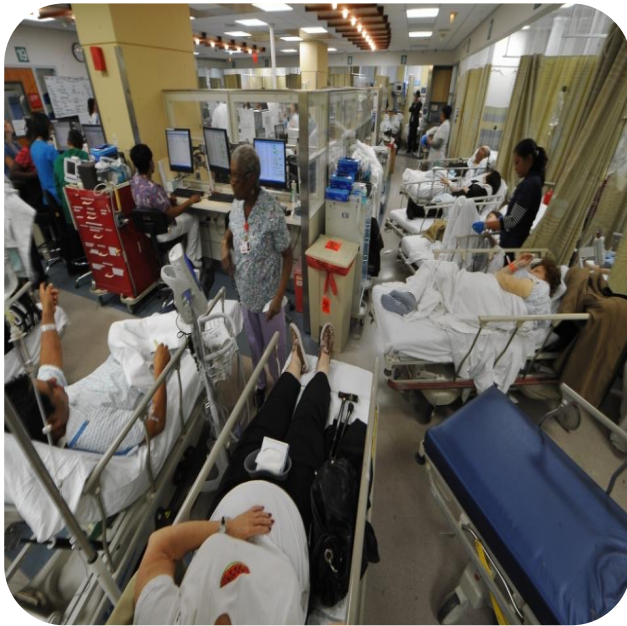


Imagine the alternative...



- Hospital care is brought to patients in the comfort of their environment and around family!

Hospital at Home (HaH)



Admission



Acute Care
(at Home)



Post-Acute
(at Home or outpatient)

Not a new concept!

Hospital at Home



What is Hospital at Home

- ▶ A care delivery model that delivers clinical services that are traditionally delivered in brick-and-mortar hospital in patient's home.
- ▶ Hospital substitution

Hospital at Home (HaH)

Typical Services

- IV medications – antibiotics, fluids, Lasix, etc
- At least daily labs
- Supplemental oxygen (NC), nebulizer treatments
- X-rays, U/S, EKGs (+ advanced imaging through MSH round-trips)

- Twice daily nursing visits
- Daily physician tele-visits
- 24/7 access to clinical team
- Tele-visits with consulting specialists
- Ancillary services -> PT/OT, SW, care coordination

Eligibility Criteria

- Require acute hospitalization
- NYC boroughs except Staten Island
- Insurance agnostic
- “Safe home” (running water, electricity, refrigeration)
- (Most) Patients are admitted from the hospital ED or the floors.

Ineligible:

- Unsafe home environment for patients and/or staff
- Unhoused/sheltered/SNF

COVID

CHF

Cellulitis

Pneumonia

UTI/Pyelo (ESBL)

Colitis

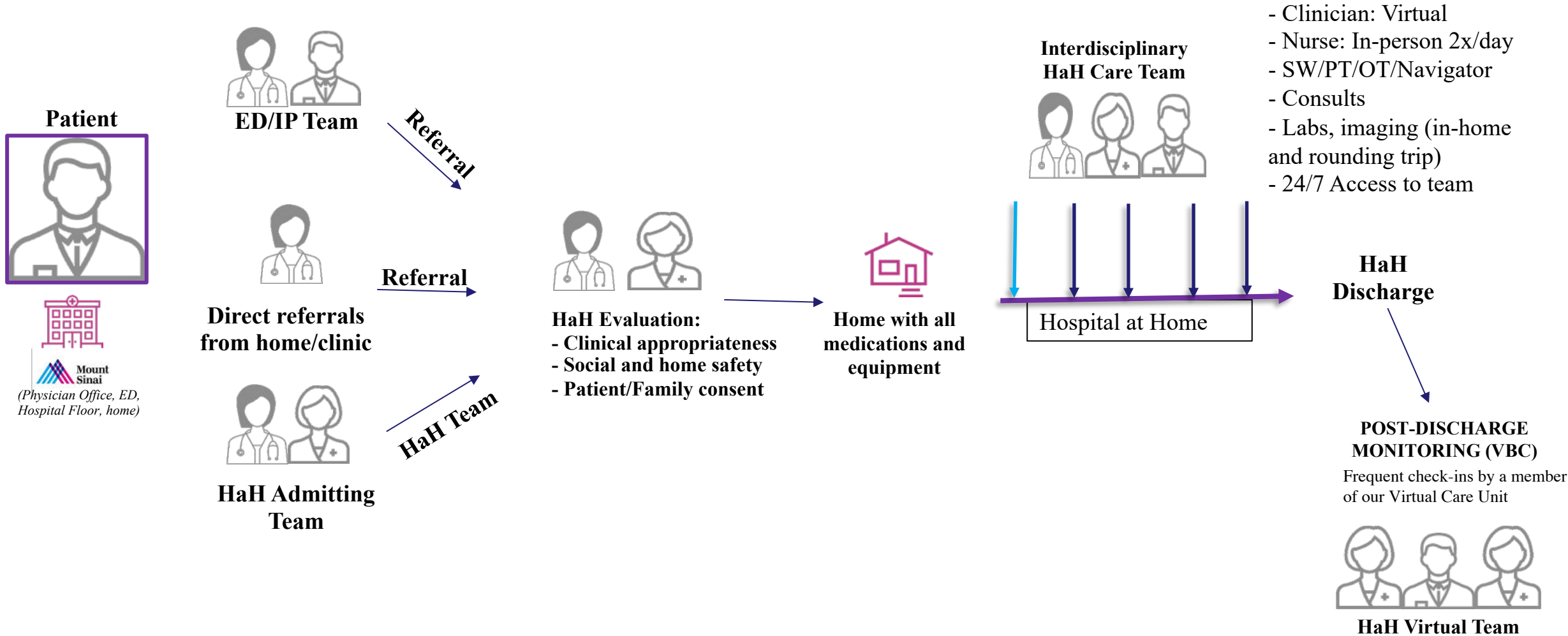
COPD/asthma

Bacteremia

AKI

Rhabdomyolysis

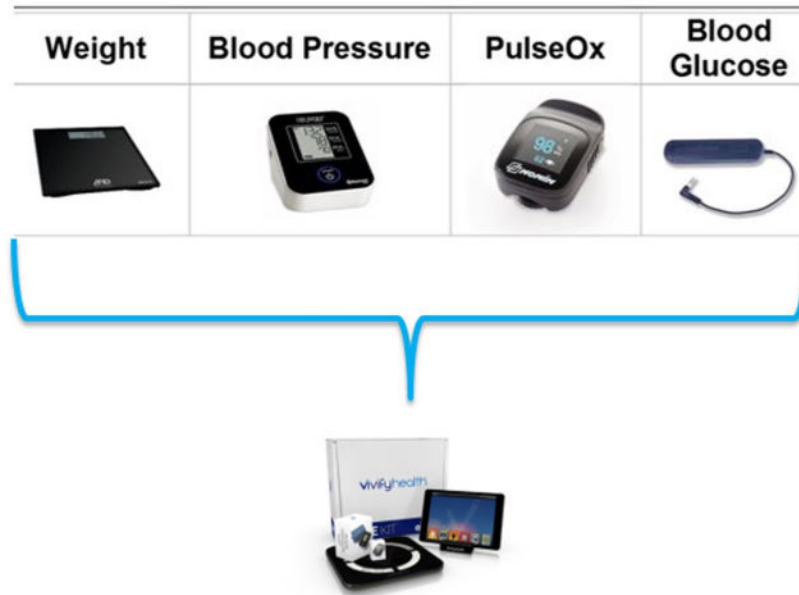
The Hospital at Home Journey



Most Hospital at Home admissions are from the Emergency Room or on hospital units

Providing care in the home

- ▶ Patients are sent home with package
 - Video monitoring kit
 - Inpatient medications
 - Other equipment necessary for care: neb machine, oxygen concentrator, DMEs – commode, Foley, raised toilet seats, grab bars, cane, wheelchair, etc



Eko Digital Stethoscope

Hospital at Home Clinical Capabilities

Treatments **CAN** be provided

- IV medications
 - Diuretics
 - Antibiotics
 - Fluids
 - Other IV infusions
- Labs (as inpatient)
- Tests – Xrays, U/S, ECG, TTE
 - Round trip to MSH for advance imaging as needed
- Respiratory treatments (eg. nebs treatments)
- Supplemental oxygen up to 6 liters
- Established CPAP/BiPAP patients
- Tele-consult with subspecialists
- Engage with patients' outpatient docs

***Criteria evolve over time

Treatments **CAN'T** be provided

- IVP/IM opioids
- Blood transfusions
- New CPAP/BiPAP or NIPPV
- Drips: heparin, insulin or cardiac drips
- Continuous monitoring or >q8h checks:
 - Bladder irrigation
 - NGT to suction
 - Neuro checks
 - TPN

A Recent Case

- ▶ Ms SS is a 94 year old woman with HTN, HLD, Diabetes, Heart Failure (EF 45%), chronic bronchitis on RA, glaucoma/diabetic retinopathy, chronic back pain who was brought to the hospital for falls at church. She was found to have acute decompensation heart failure and acute renal failure.
- ▶ Hospital Day #2 - Patient was transferred from the ED to Hospital at Home for further treatment.
 - Patient continued to receive IV diuretics, daily lab work, and monitored by the clinical team until she reached her stable status.
 - While on HaH, patient was seen by PT and OT 3 days a week
- ▶ HaH Day #4 – Patient was discharged from the Hospital at Home service to receive home PT and continue her usual daily home attendance service.

*Note, Ms S was incredibly happy to continue her hospital care in her home where she got to see her friends and attended virtual church services with her friends and family.

Examples of Hospital at Home patients..

Mr. M is a 82-year-old man with moderate dementia, HTN, CAD, CHF who presented to the ED with several days of shortness of breath, fevers and cough. Patient was found to have pneumonia sepsis and acute renal failure. He was given 3LNC O2, fluid and IV ceftriaxone and Azithromycin in the ED.

He was admitted to Hospital at Home (HaH) on the same day to continue treatment of pneumonia. He received IV antibiotics, fluid and physical therapy while on HaH service. His symptoms improved and he was able to go off oxygen on HaH day #5. He was discharged from acute phase of HaH to be monitored by the service for the next 30-day period.

Ms C is a 36 yo woman with IDDM and HTN presented with 1 day of severe flank pain, dysuria and fevers. She was found to have pyelonephritis/complicated UTI. She received IV ceftriaxone and got blood and urine cultures.

Her pain improved and she felt better after about 10HRs in the ED. She was admitted to Hospital at Home to continue to IV antibiotics, fluid resuscitation, pain control and having cultures monitored. Her cultures eventually grew E coli that was sensitive to an oral antibiotic. She was discharged on Hospital Day #4.

*Of note, she had a middle-school child who needed her home; she reported not having family or friends to help caring for son. HaH service sent temporary HHA service to assist mother and young son until she was better and discharged from our service. She was incredibly thankful for being able to be home with her son.

Hospital at Home

a brief literature review



Hospitalization at Home: Johns Hopkins – 2005

Comparative Study > Ann Intern Med. 2005 Dec 6;143(11):798-808.

doi: 10.7326/0003-4819-143-11-200512060-00008.

Hospital at home: feasibility and outcomes of a program to provide hospital-level care at home for acutely ill older patients

Bruce Leff¹, Lynda Burton, Scott L Mader, Bruce Naughton, Jeffrey Burl, Sharon K Inouye, William B Greenough 3rd, Susan Guido, Christopher Langston, Kevin D Frick, Donald Steinwachs, John R Burton

- Better clinical outcomes
 - Lower LOS
 - Less hospital complications
 - No significant differences in mortality
- Less costly

	HaH N169	Brick & Mortar N289
Acute LOS (days)	3.2	4.9
Falls	2	6
Incidence of delirium	12 (9%)	42 (24%)
Sedatives use	27 (16%)	85 (30%)
Nosocomial Infection	1	6
Death	0	7
Cost \$	5081	7480

Ann Intern Med 2005; 143: 798-808

Hospitalization at Home Mount Sinai

Original Investigation

August 2018

Association of a Bundled Hospital-at-Home and 30-Day Postacute Transitional Care Program With Clinical Outcomes and Patient Experiences

Alex D. Federman, MD, MPH¹; Tacara Soones, MD, MPH²; Linda V. DeCherrie, MD^{1,3}; et al

- Better clinical outcomes
 - Lower LOS
 - Lower readmission
 - Less likely to be institutionalized post-acute
- Better patient experience!

	HaH N=295	Control N=212	P value
Acute LOS (days)	3.2	5.5	<0.001
Readmission, all cause	8.6%	15.6%	<0.05
ED visits, all cause	5.8%	11.7%	<0.05
Highest overall experience rating	68%	46%	<0.001
Discharge to Skilled Nursing Facility	1.7%	10.4%	<0.001

Hospitalization at Home

is what patients want!



HaH Patients Report >90% Satisfaction with the service!

***Hospital at Home uses the modified Press Ganey Questions

Some recent feed back from patients ... from qualitative survey

I am very grateful to the Mount Sinai hospital staff for offering me hospitalization at home. This is an excellent treatment alternative. You can be at home with your family and at the same time receive the necessary treatment at the highest level. The doctor checked my condition every day. Nurses came 2 times a day to treat me. I highly recommend hospitalization at home for everyone.

We were extraordinarily impressed with the superb treatment that we received at home. The thoroughness was extremely impressive, and people who came couldn't've been more professional, and kind, or we were, in every way deeply satisfied, and profoundly impressed with the service, thank you.

The team is an amazing one. It was for me so wonderful an experience. I'm really thankful to [REDACTED] and the doctors [REDACTED] for their genuine kindness and meticulous care.

Best program ever! For a very elderly patient being treated at home made all the difference in the world.

I am so grateful to have had this option. As a new mother, I couldn't imagine having to stay in the hospital for over a week away from my family. The nurses were professional, attentive, and compassionate. It was helpful to be able to check in with the doctors via video call. I appreciate that all involved listened to my concerns and made sure to address them with testing and necessary medication. Overall, this is a great service for those who are eligible to receive hospital care at home.

I had the most amazing experience with the Doctors and Nurses. I never imagine how great and satisfying this service is from the start to the end. I am so fortunate to experience such. Thank you so much for giving me the opportunity to indulge in such great care.

I will recommend this home program because it is comfortable, they come twice a day and check you and it is very, very nice and you are in the comfort of your own home... it's very good and if I have to get it again I will get it again. I hope that I don't get sick or nothing but if that happens I will like to do that. I take care in my own home, it's very good. Thank you.

I felt extremely comfortable with the home care and the nurses and doctors were very supportive and professional. They were all very informative with my care regimen directives I thank them all for their support in getting me well again.

In Summary: The Hospital at Home care is

- ▶ High Quality
- ▶ Cost Effective
- ▶ Highly patient-centered (high patient satisfaction)

(It also fosters a happy workforce and is potentially a driver for health equity).

Thank you!

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