We are called to make a healthy difference in people's lives.

NAACOS: Fall 2021 Conference

Hospital at Home 2.0: Best Practices from the Field

Essentia Health

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Today's Agenda

- Welcome and Introduce the Panel
- Where are we at today with Hospital at Home Programs
- Best Practices: What have we learned from the panel
  - Debbie Welle-Powell, Chief Population Health Officer, Essentia Health Facilitator
    - Doug Clark, MD, Medical Director, Medically Home and former CMS H@H Director
    - Pamela Saenger, MD Clinical Director, Mount Sinai at Home
    - Mag VanOosten MD, Medical Director UnityPoint at Home

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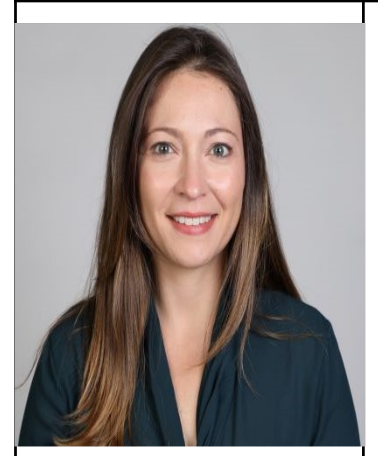
Speakers

	Debbie Welle-Powell is the chief population health officer at Essentia Health. She leads Essentia's is $2.4B transition from a primarily fee-for-service model of care to focused on value and risk-based population health. Her team is responsible for aligning the Health System's clinical and economic transformations in support of Essentia's vision to be the leading health system in Minnesota, Wisconsin and North Dakota. This includes fostering telehealth, care management and clinical redesign to ensure that high-value care is delivered across the Health system and working with payers and employers to establish new economic models that support value-based care such as telemedicine, chronic and complex care, remote patient monitoring and Hospital at Home programs. As a seasoned executive, she led the strategic and market activities for accountable health readiness while developing innovative products, services, and technologies.
	**Pamela Saenger, MD, MPH** Lead Provider, Mount Sinai Hospitalization at Home and Assistant Professor of Medicine, Icahn School of Medicine at Mount Sinai. She has been an Attending Physician in the Hospitalization at Home (HaH) program at Mount Sinai since 2017. She graduated from the Icahn School of Medicine at Mount Sinai and completed her residency in Internal Medicine at Mount Sinai. Her work within the HaH program has focused on quality improvement, protocol development, and the launch of HaH pilots for post-surgical and oncology patients. Clinical and research interests include identifying barriers to HaH care and exploring further adaptations of the HaH model.

Speakers

	Doug Clarke, MD, MBA is a practicing Internal Medicine physician and leads Medically Home's new Community Paramedicine venture. Doug spent 5 years as a hospitalist with time at a small hospital in rural Virginia and on faculty at the Medical University of South Carolina, and he continues to see patients weekly at a free clinic in Baltimore. After earning an MBA from the Kellogg School of Management at Northwestern University, he joined the Center for Medicare and Medicaid Innovation as a Medical officer, where he wrote and enacted the Acute Hospital Care at Home waiver, which he led through July 2021.
	Mag VanOosten, MD joined UnityPoint at Home in June 2016 as VP, Chief Clinical Officer with her focus on driving performance through collaboration and sharing of best practices between home care affinity groups and creating a clinical environment in which collaboration is valued and excellence in clinical care, education, and research is promoted. In 2018 she was promoted to President and Chief Clinical Officer, leading UnityPoint at Home Clinical and Business Operations. Prior to joining the UnityPoint at Home Senior Executive Team, Mag served in several key executive roles throughout the country in Home Care, Hospice, Palliative Care, Infusion Therapy, HME, and Public Health industries.

Working Definition Hospital at Home

- Fundamental redefinition of Inpatient Care
  - Not an expansion of home care
- Inpatient care at home – with admission and discharge requirements and criteria
- Integrated Platform
  - Combines Remote Patient Monitoring with virtual appointments, periodic in-home visits to create patient centric care experience
  - Care model supported by workforce readiness, supply chain infrastructure and clinical protocols to ensure seamless integration with a clinician's operations

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Industry Forces

Market and Policy

- COVID and PHE
- Evolving consumer preferences
- Shift from volume to value
- Partnerships with health systems and payers
- Shift towards holistic care and prevention

Technology in Healthcare

- Shift towards telemedicine
- Advancements in continuous monitoring

Brief Background of Home Hospital Care in the U.S.

- Hospital at Home developed at Johns Hopkins in 1990s, with home care shown to be at least as safe for lower acuity presentations of qualified inpatient admissions
- Health Care Innovation Award given to Mount Sinai which ran a case-control study from 2014-2017 and showed better patient outcomes and ratings of care with home care compared to inpatient hospitalization
- Based on Mt. Sinai's study, the Physician-Focused Payment Model Technical Advisory Committee (PTAC) recommended that the Center for Medicare and Medicaid Innovation (CMMI) implement a home hospital care model
- Randomized controlled trial by researchers from Brigham and Women's hospital published in 2019 showed reduced cost, health care use, and readmissions in its home hospital care group compared to controls
- **Overall,** when patients are properly screened, a significant body of research shows home hospital models provide care that is valued more highly by patients and results in at least equivalent safety outcomes

Recent Safety Outcomes in Academic Medical Centers

Johns Hopkins

- Decreased death
- No difference in ED visits, readmissions, SNF admissions in 30d
- Decreased Length of Stay
- Decreased urinary catheter use
- Decreased delirium
- Decreased chemical restraints and sedative medication use

All findings significant to $p < .05$ unless otherwise indicated. Prospective quasi-experiment model used, N=455.

Mt. Sinai

- No difference in death rates
- 1% escalated to ED, 12.2% escalated to inpatient hospital
- Decreased ED visits, readmissions, SNF admissions in 30d
- Decreased Length of Stay
- Decreased urinary catheter use
- Improved patient experience and communication scores
- Pain management ratings worse

All findings significant to $p < .05$ unless otherwise indicated. Case-control study used, N=507.

Brigham

- No unplanned deaths in 30d
- 30d readmission 7% (23%)
- No patients required escalation to ED or hospital
- Any Safety event rate 9% (15%)
- No inappropriate medication use (10% control)
- Increased Length of Stay
- Less time spent sedentary or lying down (tracked with patch)
- Falls, Delirium similar

Study designed to evaluate cost and quality metrics were secondary outcomes. Randomized Controlled Trial used, N=91. (Values in parentheses represent control percent for comparison)

Why did CMS Act?

- Announced Waiver Program on Nov 25, 2020
- Significant challenges to the capacity of health care systems across the country
- Supports models of at-home hospital care throughout the country that have seen prior success in leading hospital institutions and networks
- Last the duration of the Public Health Emergency

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CMS Acute Hospital Care at Home Wavier Details

- What is being waived
  - **§482.23(b)** and **(b)(1)** of the Hospital Conditions of Participation, which require nursing services to be provided on premises 24 hours a day, 7 days a week and the immediate availability of a registered nurse for care of any patient

- Who is affected
  - Not a blanket waiver
  - Individual waiver requests at the hospital/CMS Certification Number (CCN) level
    - Individual requests from hospitals are evaluated by CMS

- Growing number of systems implemented Hospital at Home: 148 hospitals across 68 systems in 32 states approved since August 9, 2021

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Walk through Waiver Process

Start here:

- CMS Online Portal: https://qualitynet.cms.gov/acute-hospital-care-at-home
- Also found in CMS press release on CMS.gov

Home /

Acute Hospital Care at Home

Acute Hospital Care at Home Individual Waiver Only (not a blanket waiver)

CMS is accepting waiver requests to waive **§482.23(b)** and **(b)(1)** of the Hospital Conditions of Participation, which require nursing services to be provided on premises 24 hours a day, 7 days a week and the immediate availability of a registered nurse for care of any patient.

Waiver requests will be divided into two categories based on a hospital's prior experience. Hospitals must submit the waiver request for individual CMS Certification Numbers (CCNs), not entire systems. For those hospitals which have provided at home acute hospital services to at least 25 patients previously, an expedited process will be conducted and include hospital attestation to specific existing beneficiary protections and reporting requirements. The immediate goal with this group is to allow experienced hospitals to rapidly expand care to Medicare beneficiaries. These hospitals will be required to submit monitoring data on monthly basis.

For those hospitals which have treated fewer than 25 patients or have never provided at home acute hospital services, a more detailed waiver request will be required which emphasizes internal processes that prove capability of treating acute hospital care at home patients with the same level of care as traditional inpatients. This group will consist of some hospitals which are part of a larger, experienced health system, as well as hospitals without any prior experience that are not part of a health system with experience. These hospitals will be required to submit monitoring data on a weekly basis.

Click to begin the waiver request process

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Required Hospital Services

You are required to provide or contract for these services:

- Pharmacy
- Infusion
- Respiratory Care including oxygen delivery
- Diagnostics (lab and radiology)
- Monitoring with at least 2 sets of vitals daily
- Transportation
- Food services including mail delivery as needed by the patient
- Durable Medical Equipment
- Physical, Occupational and Speech Therapy
- Social work and care coordination

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Clinician Requirements

Meets the minimum required frequency of personnel visits, defined as:

- Once daily for MD/APP, can be remote after the initial in-person History and Physical Exam performed by the admitting MD/APP consistent with hospital policies
- At least once daily in-person or remote RN visit who develops a nursing plan consistent with hospital policies
- At least two in-person daily visits by either an RN or Mobile Integrated Health Paramedics, depending on the established nursing plan

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Emergency Response

Meets emergency response times for each patient:

- Immediate, on-demand remote auto connection with an Acute Hospital Care at Home team member who can immediately connect either an RN or MD to the patient
- In-home appropriate emergency personnel team to the patient's home within 30 minutes. This can be provided by 911 or emergency paramedics.

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Patient Admissions

Agrees to limit Acute Hospital Care at Home to patients admitted from an Emergency Room or inpatient hospital who can be safely treated in their homes using a published set of selection criteria or one that has been developed internally or adapted based on your experience

- Admissions only from an Emergency Room or inpatient hospital
- Hospitals will use a defined patient selection criteria developed internally or externally – this can be Interqual or Milliman

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Reporting

Agree to track 3 metrics and report them to the Chief Medical Officer, Chief Nursing Officer, or Chief Executive Officer of your hospital. CMS will contact this executive directly with any concerns about reporting or quality.

1. Unanticipated mortality during the acute episode of care
2. Escalation rate (transfer back to the traditional hospital setting during acute episode)
3. Volume of patients treated in this program

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Other Considerations

Local safety committee will review reporting measures prior to submitting reports to CMS

- Similar to Mortality and Morbidity team, but dedicated to AHCaH

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Screened for trauma/psych exclusions

ED calls triage Hospitalist per usual protocol

Acute Hospital Care at Home team assesses patient for eligibility, interest, and consent

Phlebotomy, Xrays done as needed

1. Patient arrives in ED
2. ED attending makes decision to admit patient
3. ED attending and Hospitalist attending agree patient meets preliminary inclusion criteria
4. Hospitalist performs History and Physical Exam and writes admission orders
5. Patient transferred home by ambulance or taxi with appropriate acute care services set up including home oxygen, respiratory services, IV medications via infusion pump
6. Nurse visits in-person twice daily. MD visits at least once daily via telehealth when nurse is present or in person. MDs available 24/7 and can direct available paramedics for urgent eval at all times
7. Hospitalist makes decision to discharge when patient appropriate
8. Post-discharge plans include coordination of care with patient's primary care physician and any specialists, rehab, home nursing, or testing that is needed

Douglas V. Clarke, Jr., MD MBA

NAACOS Fall 2021 Conference

September 30, 2021

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Agenda

1. Medically Home
2. Tech Enablement
3. Expanding high-quality care in the home
4. Deep Dive – Paramedic Enablement

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Medically Home At a Glance

Building the World's First Virtual Hospital

1,500+ hospital substitution patients and 1,200+ ED/urgent care substitution patients treated over the last 6 months

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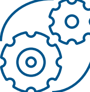
The Medically Home Operating Model

Designed for High Acuity Care at Home



Purpose-Built for High Acuity

The Medically Home chassis – the platform, supply chain, clinical operations model, and payer systems – were purpose-built to enable high acuity care (SOI 2 & 3 patients) across a range of DRGs (e.g., COPD, CHF, Cellulitis, Pneumonia, Sepsis) covering up to 30% of admissions

Chassis Enables Scale and Broad Use Cases

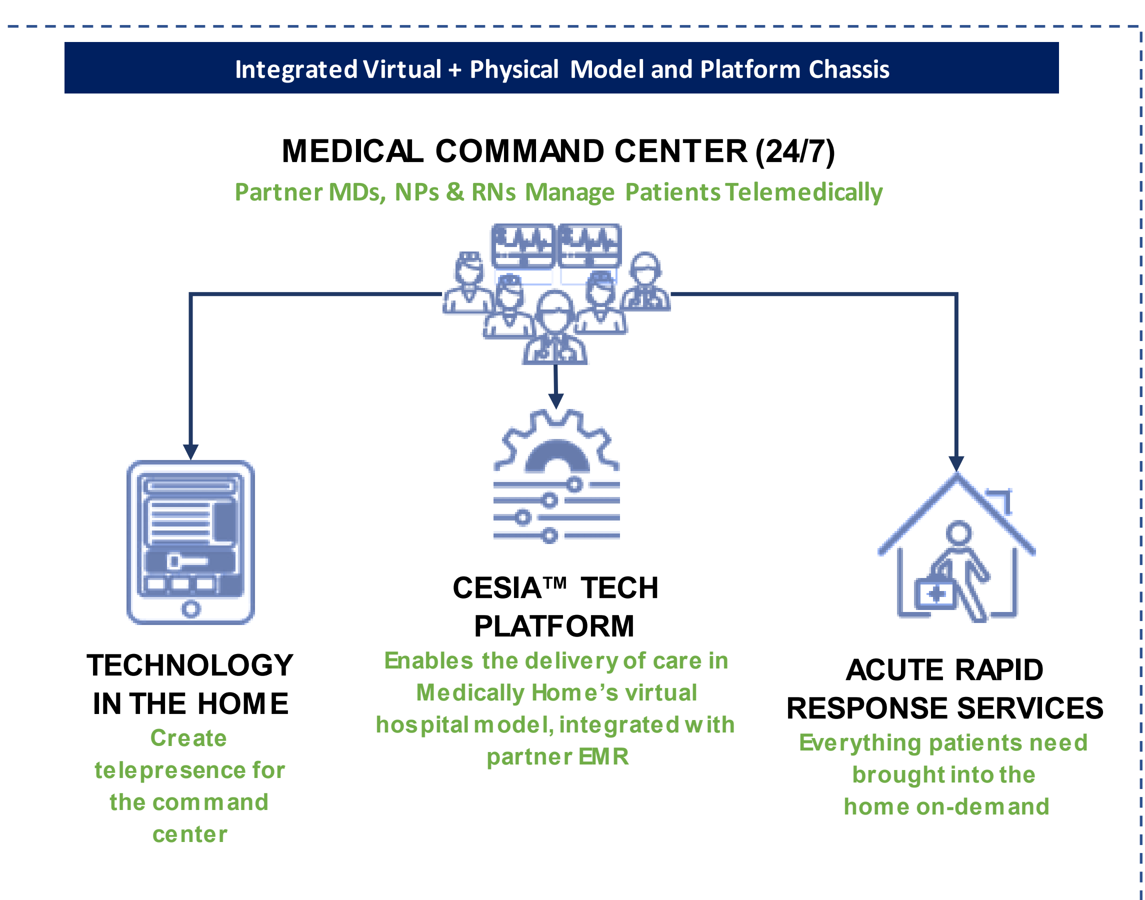
High-acuity focus enables a program to achieve scale by serving a wide array of inpatient needs. The Medically Home chassis can extend to other use cases along the continuum such as ED substitution, episode prevention, and supportive oncology.

Partner with Health Systems

We focus on enabling physicians and nurses to care for patients with the tools, technology, and complementary in-home services to replicate the care the patient would have received in the brick-and-mortar hospital.

Proven Results

Our published clinical trial and experience across partnerships with leading health systems confirms the model quality, safety and savings, including reducing cost by 20-30%, improving outcomes, and improving patient experience.



More Care Over a Longer Period of Time

Arbitraging out the fixed cost burden of hospitals enables a much longer care period that seamlessly integrates acute care with post-acute (restorative) care

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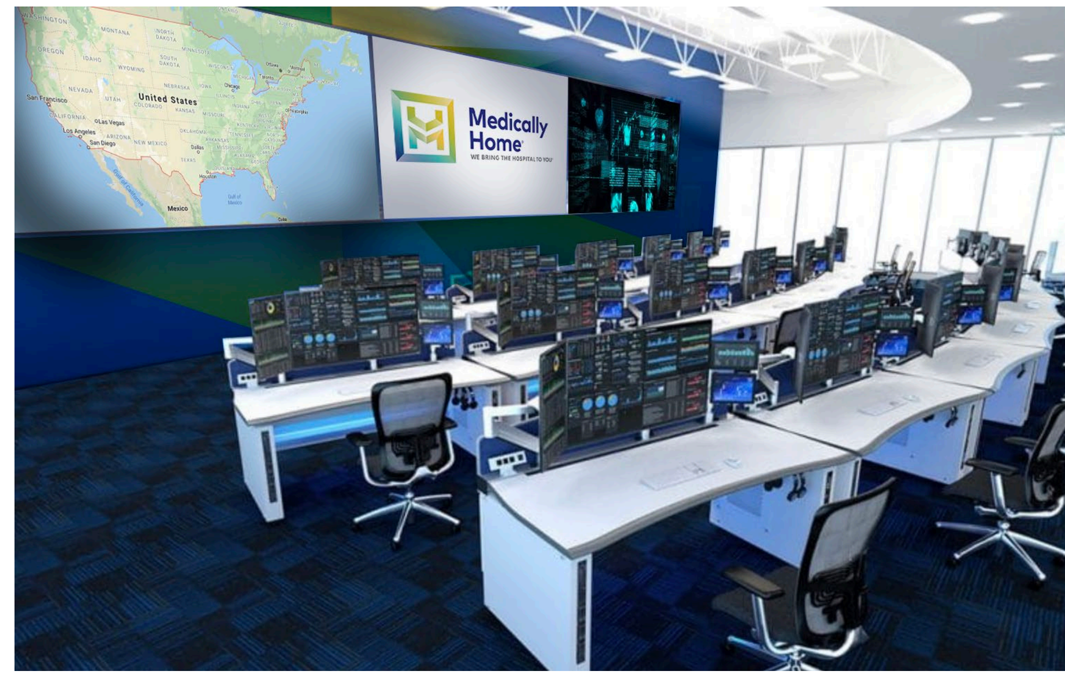
The Medical Command Center



Medical Command Center Key Attributes

- Designed for high acuity care at home
- 24/7/365
- Staffed by MDs/NPs, RNs that can support high acuity care at home
- Tethered to clinicians dispatched to home
- Purpose-built software (Cesia™) enabled
- Seamless team during acute and restorative phases

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Acute Rapid Response Services

Everything patients need brought to the home on-demand

STAT IV Access/Meds

Skilled Nursing and Therapies (PT/OT)
Behavioral Health
Nutrition

STAT LABS Access/Meds
- Mobile phlebotomist
- Stat analysis

In home services partners tethered to command center physician and RN

Local Advanced Practice Providers (APPs)
- Day 1, Day 3, PRN in-person visit
- Command Center support/integration

STAT Mobile Imaging
- Xray
- Echo

Paramedicine:
- Triage
- IV Access
- Lab draw/drop and/or iStat
- ECG, Ultrasound
- Fluids/Antibiotics
- Oxygen

Centralized Physician Specialty Consults

Leverage internal services where available (e.g., pharmacy, lab) and complement with third party services managed by Medically Home

Integration and Control Function
- Model-specific service level & skill requirements
- Service partner credentialing and training
- Network-wide capacity management & load balancing
- Quality tracking & performance management
- Invoice administration (reconciliation, payment)

The Cesia™ Platform

Complements partner EMR to Enable Delivery of Care in the Virtual Hospital Model

Turns provider orders from the EHR into rapid actions in the community

Reliable, redundant connections with special patient safety features and an elder-friendly interface

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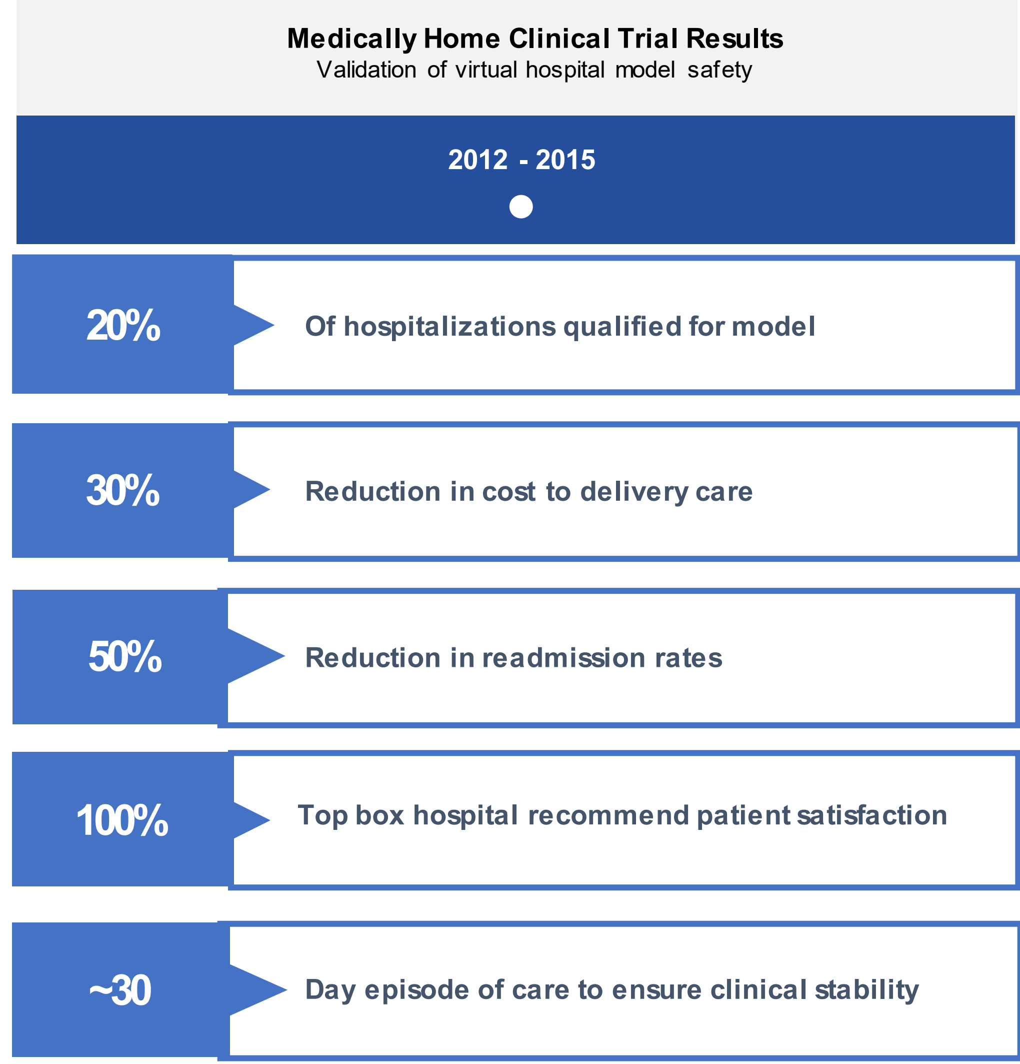
Representative Sample of Medically Home Outcomes



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Value Opportunity

- Improved **clinical quality and patient experience**
- Create additional **bed capacity**
- **Grow market share** with **minimal capital spend**
- **Capture share of post-acute revenue** with 30-day episodes
- Develop an **innovative care model** that **reduces** the overall **total cost of care**
- **Decreased readmissions** by 50-75%

Unit Economics

Arbitrage Out Hospital Fixed Costs

~25-30% Cost Savings

75% Reduction in Readmissions

While lower cost to the payer, the 30-day episodic model often represents higher total reimbursement to the health system by capturing SNF and other post-acute revenue that often flows outside of the health system (e.g., hospital DRG = $11K; but bundled payment =$15K for 30-day episode also covering SNF care equivalent)

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Expanding Care in the Home

- Acute Substitution
- ED in Home
- SNF Substitution
- Transfusion Medicine
- Pediatrics
- Oncology
- Episode Prevention

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Medically Home®

Deep Dive - Paramedics

Background

- Highly trained medics looking for work that allows them to practice at the highest scope of their training – includes use cases like **advanced primary care** and **population health**
- Presence in rural and underserved areas
- Key field clinician and technical arm in the home

Challenges

- Medic supply is different than other aspects of the supply chain
- Variability and ramp up cost to local medic groups

Future

- Standardization of skillsets and training
- Enablement of true primary care team extension into the patient's home
- Changing the focus of care from the office or hospital to the patient's home via the medic
- Medically Home tech allows smaller provider groups to easily incorporate into workflows

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Thank You

Doug Clarke, MD MBA
dclarke@medicallyhome.com

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UnityPoint Care at Home Clinic: Hospital to Home Ambulatory Bundles

NAACOS 2021 Fall Conference: Best Practices in Hospital at Home

09.30.2021

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UnityPoint Health System Profile

People – they're our sweet spot. They're what we care about most and why we do what we do.

At UnityPoint Health® we provide care in nine regions throughout Iowa, western Illinois and southern Wisconsin in our hospitals, clinics and home health settings. We are dedicated to making it easier to live well.

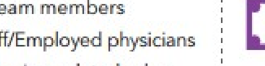
Mission: Improve the health of the people and communities we serve

Vision: Best outcome, every patient, every time®

unitypoint.org

20 Regional Hospitals
480+ Clinics serving our communities#
19 Community Network Hospitals

7 Affiliated Community Mental Health Centers
14 Home Health Locations
4 Accredited UnityPoint Health Colleges



33,008 Team members
1,169 Staff/Employed physicians
12,113 Nursing-related roles
4,361 Volunteers

$299.7M Community impact
Service area of 2,350,188 people
392,372 ACO covered lives+

21,536 Births
103,150 Surgeries

$4.6B Total projected revenue

1,210,120 Unique patients seen across our clinic, home care and hospital settings
1,011,294 Unique patients seen in clinics
543,696 Unique patients seen in hospitals
21,192 Unique patients seen in home care

8,435,649 Total patient visits
4,638,365 Clinic visits
3,253,646 Hospital visits *(outpatient and inpatient)*
543,638 Emergency visits

624,520 Home health visits
429,526 Home care
185,074 Home hospice
9,920 Pediatrics

Statistics, outside of facility counts and team members which are updated at time of publishing, are based on the 2019 calendar year unless noted below.
+ Doesn't include Medicaid MCOs or Medicare Advantage ACOs
# Clinic is defined as a physical address and suite.

Updated March 2021

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UnityPoint Health® | System Map

In Nine Regions

- 20 UnityPoint Health Hospitals
- Communities served by 480+ Clinics*
- 19 Community Network Hospitals
- 14 Home Health Locations
- 7 Affiliated Community Mental Health Centers
- 4 Accredited UnityPoint Health Colleges
- Insurance presence across all UnityPoint Health markets

*Clinic is defined as a physical address and suite.

Wisconsin
Iowa
Missouri
Illinois
MADISON
DUBUQUE
SIOUX CITY
FORT DODGE
WATERLOO
CEDAR RAPIDS
QUAD CITIES
CENTRAL IOWA
CENTRAL ILLINOIS

UnityPoint Health

MAP 001 03/02/21 CS

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Business Model: Ambulatory Options of Care

Aim:

- Develop proactive ambulatory-based, alternative care options to reduce our patients' need for ED, Hospital, & SNF utilization
  - Moderate to High Risk, Need, Utilization Population

- Deliver improved quality (safety), experience, & economic outcomes through innovative home-based care suite of services

- ED, Hospital, SNF "replacement" Models for qualified Patients
  - Proactive & Preventative – Self-Management Capability
  - Urgent & Interventional – Averting Escalations to ED / Hospital
  - Serious Illness Management – Needs Assessment, Care Goals, Symptom Management, & Health Crisis Aversion
  - Post Acute, Rehabilitative, & Recovery – Averting transitions or escalations to SNF Facilities

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Layers of Home-Based Medically Necessary Service - Optimizing Quality & Economic Outcomes:

Hospital to Home (2-hour response time): Home-based hospital care model to manage acute events, for qualified patients, to avert the need for hospital facility care

Primary Care at Home (4-hour response time): Home-based urgent care model to manage urgent events, for qualified patients, to avert the need for ED facility care

Ambulatory Care Bundles: Integrated, interdisciplinary home-based model to provide proactive, urgent and interventional response, for qualified patients, averting ED/Hospital events

Palliative Care at Home (Serious Illness Management): Integrated, interdisciplinary home-based model to provide needs assessment, goals of care planning, complex symptom management, and health crisis aversion, for qualified patients, optimizing the patients' priorities for healthcare

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Layers of Home-Based Medically Necessary Service - Optimizing Quality & Economic Outcomes:

Skilled Nursing Facility at Home (Post Acute Management): Integrated, interdisciplinary, home-based model to provide clinical rehabilitative & recovery, for qualified patients, averting traditional SNF events

CMS Next Generation ACO Benefit Enhancement Waivers (Proactive and Preventative care management):

- PDHV - Post Discharge Home Visits (Eff. 01/01/2016)
- CMHV - Care Management Home Visits (Effective 01/01/19)
- Cost Sharing Waiver (Effective 01/01/19)

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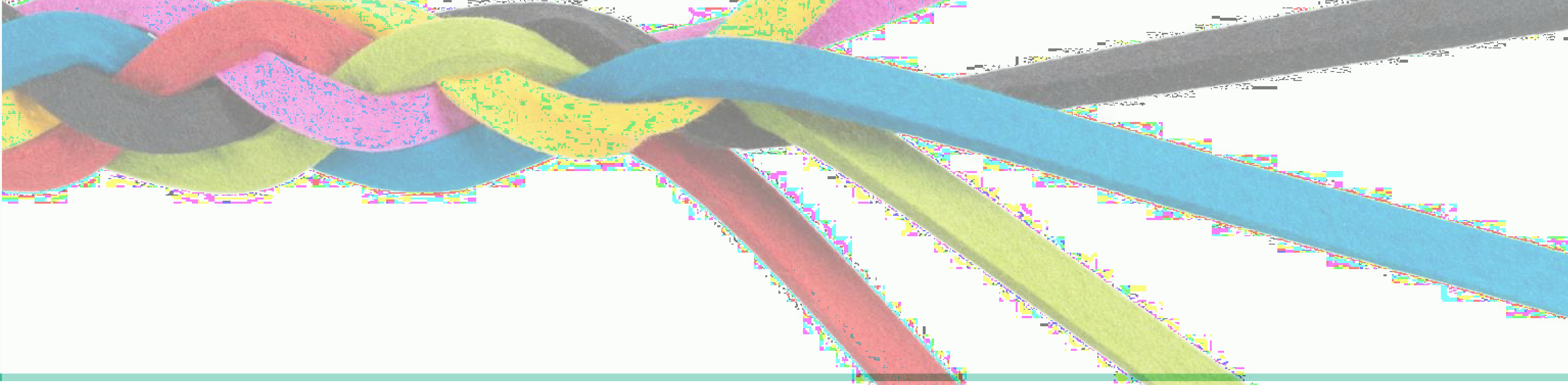
UnityPoint Care at Home Services: Expansion across the Health System

- Demonstrating transformational care delivery model feasibility
- Collecting & sharing meaningful data
- One Team – Shared Strategy (Pull versus Push)
- Sustainably deploying Ambulatory Models of Care



Optimizing EBP and Best-Known Practices

- **Key Stakeholder Education**
  - Educational Documents
  - ACO Provider clinics – Partner in the Home

- **Key Home-Based Practices**
  - Observational Assessments / Medication Reconciliation
  - Motivational interviewing & coaching (Patient's meds, food, routine, equipment)
  - My Action Plans – The Aim of Successful Self-Management
  - Advanced Care Planning – Understanding Patients' Goals of Care
  - CAPC – Clinical Practice Guidelines for Quality Palliative Care

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Care at Home Outcomes:

QI Intervention: Introduced 30-Day Ambulatory Care Bundle on October 1st 2019

n(161)	Outcome Target	HTH Baseline (Pre-intervention)	HTH w. PCaH 30-Day Bundle (**Post-Intervention)**
Data Range		09/18 – 09/19	10/19 – 08/21
Number of patients served		59	161
7-Day ED Escalation Rate	≤ 10%	8.5%	1.9%
7-Day Hospital Admit Escalation Rate	≤ 10%	6.8%	6.3%
30-Day ED Escalation Rate	≤ 15%	27.1%	6.0%
30-Day Hospital Admit Escalation Rate	≤ 13%	22.0%	12.6%

Data Source: UPH Analytics Report-YTD February 2021 | Todd Richard VP Pt Access

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Anticipated Cost Savings: Averting Escalation of Care

Averted ED/Hospitalizations	
Total Patients	161
Averted ED visits	73
Averted Hospitalizations	114

Averted Costs	
Averted ED Visits	$ 42,267
Averted Hospitalizations	$ 861,954
Total	**$ 904,221**

Definitions

7 Day Admission	**Percentage of HTH patients admitted into the hospital within 7 days of admission into HTH**
30 Day Admission	Percentage of HTH patients admitted into the hospital within 30 days of admission into HTH
60 Day Admission	Percentage of HTH patients admitted into the hospital within 60 days of admission into HTH
7 Day ED Visit	Percentage of HTH patients visiting the ER within 7 days of admission into HTH
30 Day ED Visit	Percentage of HTH patients visiting the ER within 30 days of admission into HTH
60 Day ED Visit	Percentage of HTH patients visiting the ER within 60 days of admission into HTH

ED: ED aversion is logged (counted) if the medical provider (CaH/HTH, PCP, Specialist) identifies they would have referred (sent) the patient to the ED, if not for the Primary Care at Home (PCaH) ambulatory referral option for urgent (within 4 hrs) & intervention Provider level services.

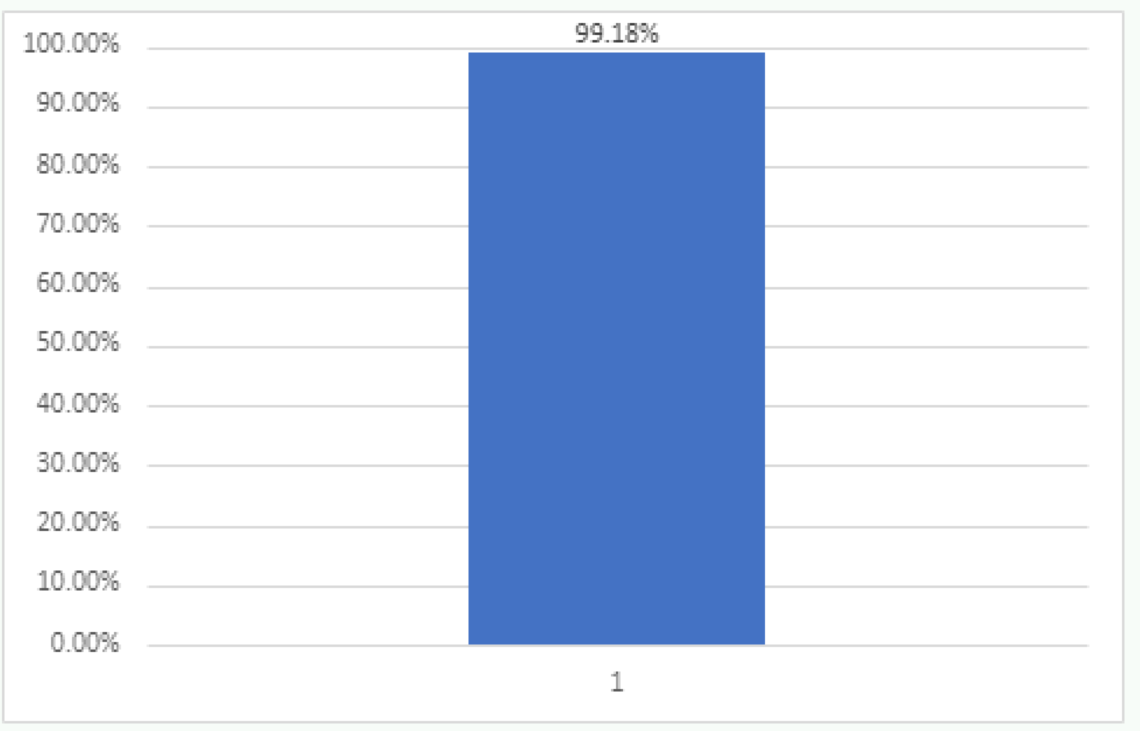
Hospital: Hospital aversion is logged (counted) if the medical provider (CaH/HTH, ED, PCP, Specialist) identifies they would have referred / Admitted the patient to Inpatient (IP), if not for the Hospital to Home (HTH) ambulatory referral option for acute (within 2 hrs) & intervention Provider level services

Data Source: UPH Analytics Report-YTD August 2021 | Todd Richard VP Pt Access

Hospital to Home Patient Experience

Using a scale from 0-10, where 0 is the least and 10 is the greatest rating, what would you give for the care you received while enrolled in Hospital to Home?

Patients Served = 161
Survey Response Rate (38%) (n61)
Top Rating = 99.18%



Data Source: UPH Analytics Report-YTD 08.2021 | Todd Richard VP Pt Access

Advice for ACOs

- **Comprehensive suite of services**: Provide alternate options of care to avert the patient's need to escalate to high-cost levels of care

- **Ambulatory Bundles**: Optimizing the current UPH Network while filling the care gaps without adding redundancy

- **Strong Analytics**: Demonstrate model feasibility, share meaningful data, and monitor model sustainability

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Delivering the WOW!

UnityPoint Accountable Care Announces $41.9 Million in Shared Savings

Jan 18, 2021 08:12AM • By Med Magazine

To enhance quality and reduce unnecessary costs in 2019, UAC enacted the following methods, among others:

- Developing the UnityPoint Health ambulatory division "Care at Home" service line and the IntelliCenter, to develop several new home-based care opportunities and expand existing Next Generation ACO Model Benefit Enhancements.

o The Next Generation ACO Model Post-Discharge Home Visit (PDHV) Benefit Enhancement allows licensed clinicians from the UnityPoint Health Care at Home team to provide a visit at a beneficiary's home under supervision from a physician, providing flexibility right after a Medicare beneficiary is discharged from the hospital. In 2019, this Benefit Enhancement was used for nearly 1,500 UAC beneficiaries.

Hospitalization at Home 2.0

Where we are, where we're going

Pamela Saenger, MD, MPH
Lead Provider, Hospitalization at Home
Assistant Professor, Icahn School of Medicine at Mount Sinai
pamela.saenger@mssm.edu

No conflicts of interest or financial disclosures

Dr. Saenger is a full time employee of the Icahn School of Medicine, which in turn has an ownership interest in a joint venture with Contessa Health, a venture that manages acute care services provided to patients in their homes through prospective bundled payment arrangements. Dr. Saenger has no personal financial interest in the joint venture.

Goals

- Hospital at Home (HaH) – the big picture
- HaH at Mount Sinai – where are we now?
- HaH at Mount Sinai – where are we going?
- Challenges and lessons learned

Hospital at Home overview

Defining Hospital at Home

"… a *substitutive* HaH delivers acute hospital-level care in a patient's home in lieu of acute hospital admission"

1) treatment at home of an acute condition of a severity that normally requires hospitalization
2) treatment that requires hospital-type technologies or hospital-level care
3) acceptance of responsibility by the hospital or health system for the acute care episode; HaH patients retain inpatient status
4) provision of pharmaceuticals, pathology, radiology, and other services, which are delivered according to standards commensurate with inpatient status and appropriate to the patient's level of medical acuity
5) physician care, provided by identified HaH doctors with 24-hour coverage
6) direct nursing care, provided at home with 24-hour coverage
7) care that is provided in a coordinated manner similar to that in an inpatient hospital ward
8) consent to treatment by patients

Cheng, Montalto, Leff 2009

All photos with patient permission

Hospitalization at Home: what does the evidence show?

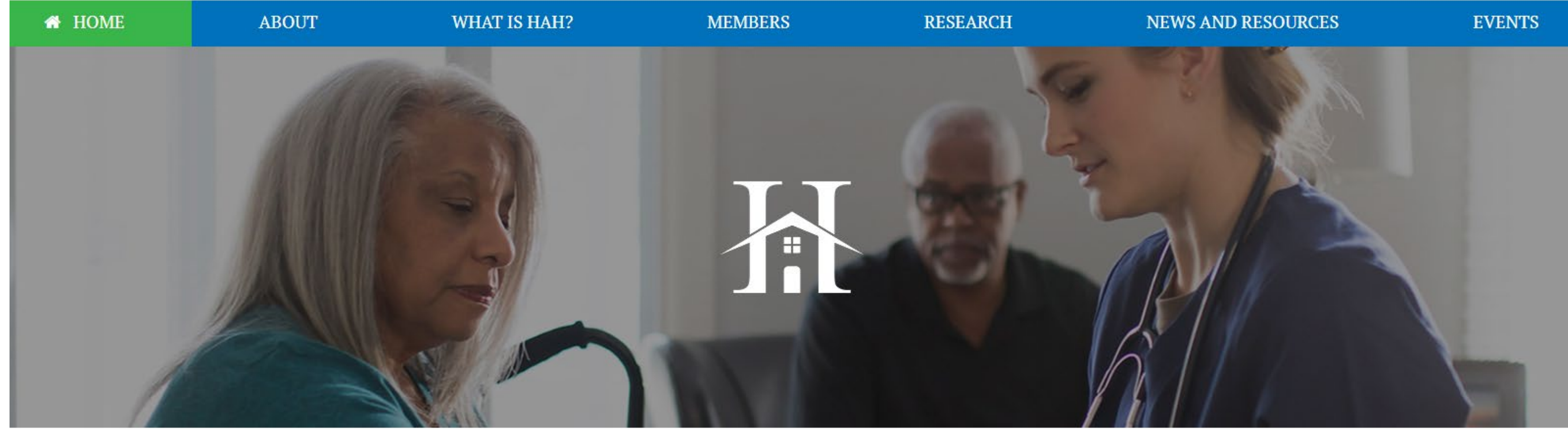
When compared with inpatient hospitalization:

- Similar or better clinical outcomes
- Fewer complications
- Shorter lengths of stay
- Fewer 30-day ED visits
- Fewer 30-day hospital readmissions
- Fewer discharges to SNFs
- Higher patient satisfaction
- Less caregiver stress
- Lower costs of care
- Better sleep?
- More physical activity?

Montalto 1996, Wilson 1999, Caplan 1999, Skwarska 2000, Campbell 2001, Nicholson 2001, Hernandez 2003, Ricauda 2004, Tibaldi 2004, Ram 2004, Harris 2005, Leff 2005, Corwin 2005, Leff 2006, Leff 2007, Ricauda 2008, Leff 2008, Leff 2009, Shepperd 2009, Tibaldi 2009, Frick 2009, Caplan 2012, Cryer 2012, Vianello 2013, Summerfelt 2015, Conley 2016, Cai 2018, Federman 2018, Levine 2020, Leong 2021, Shepperd 2021, Levine 2021, Mooney 2021

North American professional society

Hospital AT Home
USERS GROUP



SUPPORTING GROUNDBREAKING INNOVATIONS IN HOSPITAL AT HOME

As its name suggests, Hospital at Home programs make acute, hospital-level care available to adults and particularly older adults where they live, rather than in a traditional hospital setting. Interest in hospital at home and its patient-centered and cost-effective approach to improving outcomes, particularly for vulnerable patients, has exploded recently. The Hospital at Home Users Group was formed to build on this excitement.

hahusersgroup.org

International professional society

VIRTUAL PLATFORM ABOUT PROGRAM REGISTER RESOURCES SPONSORSHIP & EXHIBITION

Transforming Health Care

In today's environment, Hospital at Home is not just an opportunity to improve the delivery of health care, it is our responsibility. Providing high-quality, cost-effective and safe care for patients, hospital at home is the way of the future.

VIRTUAL

whahc.kenes.com

COVID-19 and Medicare waiver

- November 25, 2020 Medicare agreed to reimburse for Hospital at Home the same as an inpatient stay for the duration of the Public Health Emergency

73 systems, 173 hospitals in 33 states - as of 9/22/2021

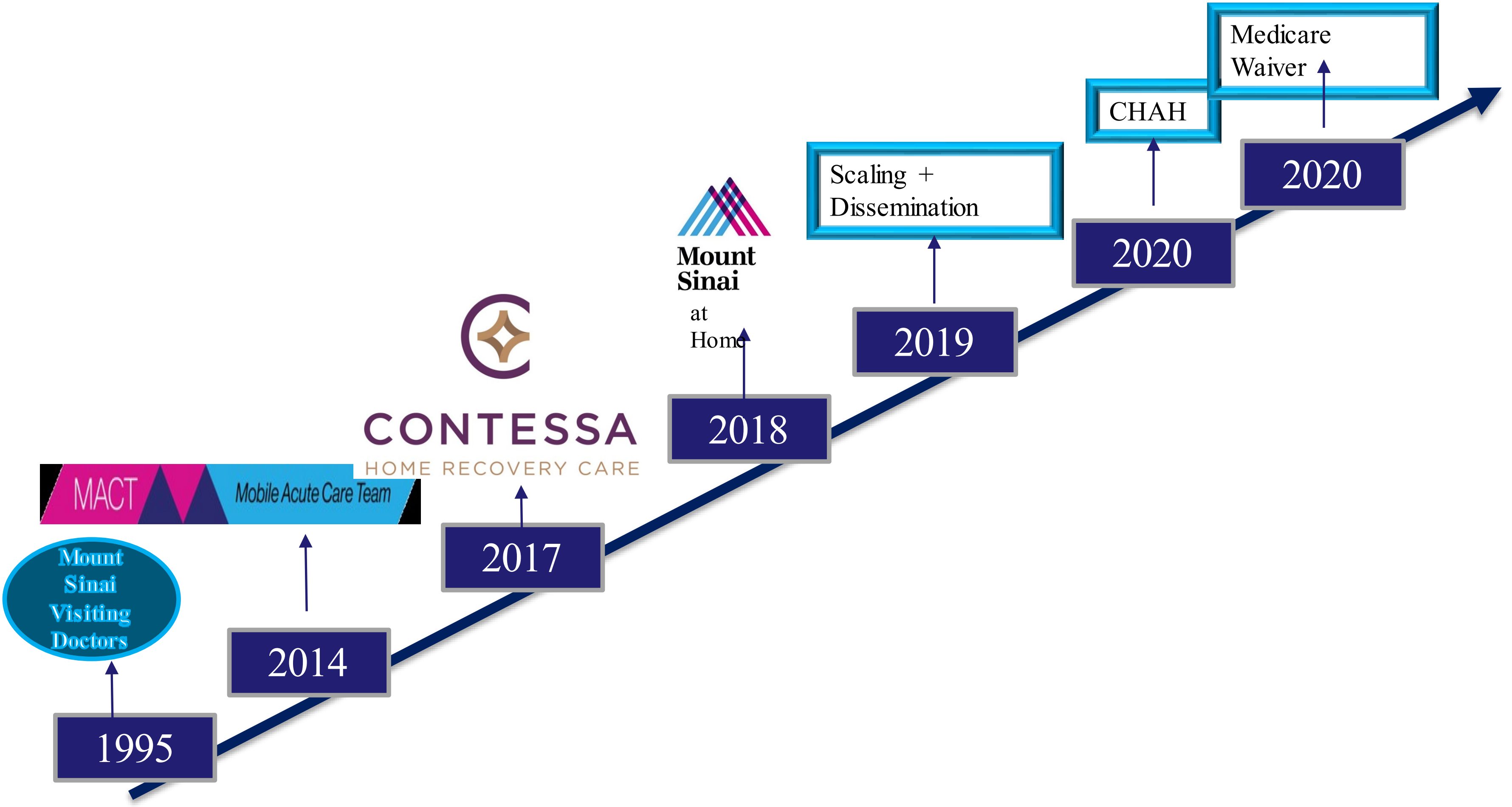
Mount Sinai:
Where are we now?

Mount Sinai Health System

- 8 hospitals with 13 free standing joint venture centers
- 7,300 physicians
- 43,000+ employees
- 154,662 admissions
- 3926 beds

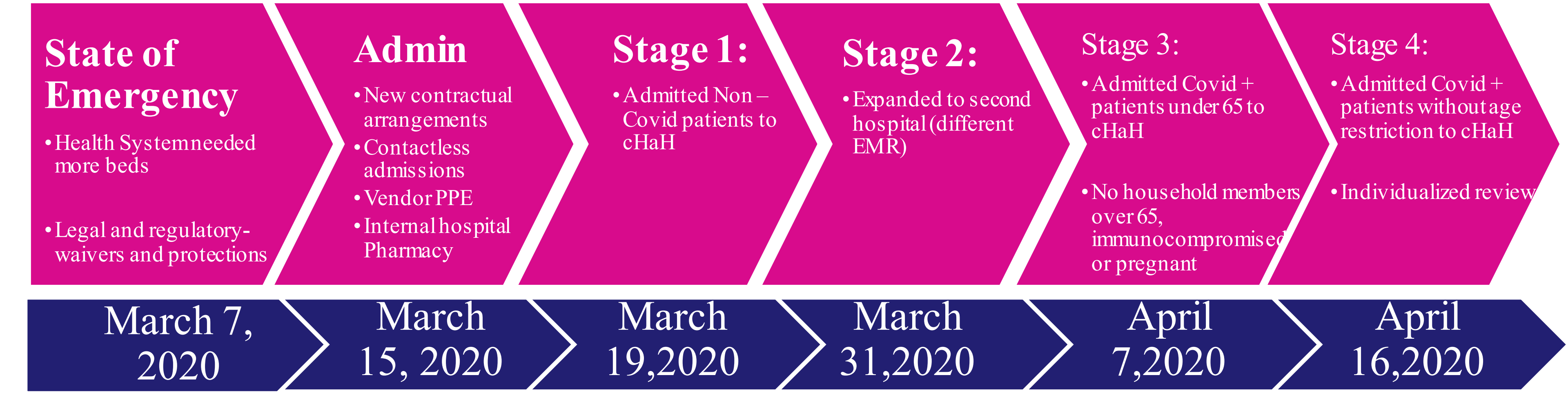
- Medicare ACO – 50,000 attributed members
- 450,000 attributed members in all contracts

Slide: Linda DeCherrie

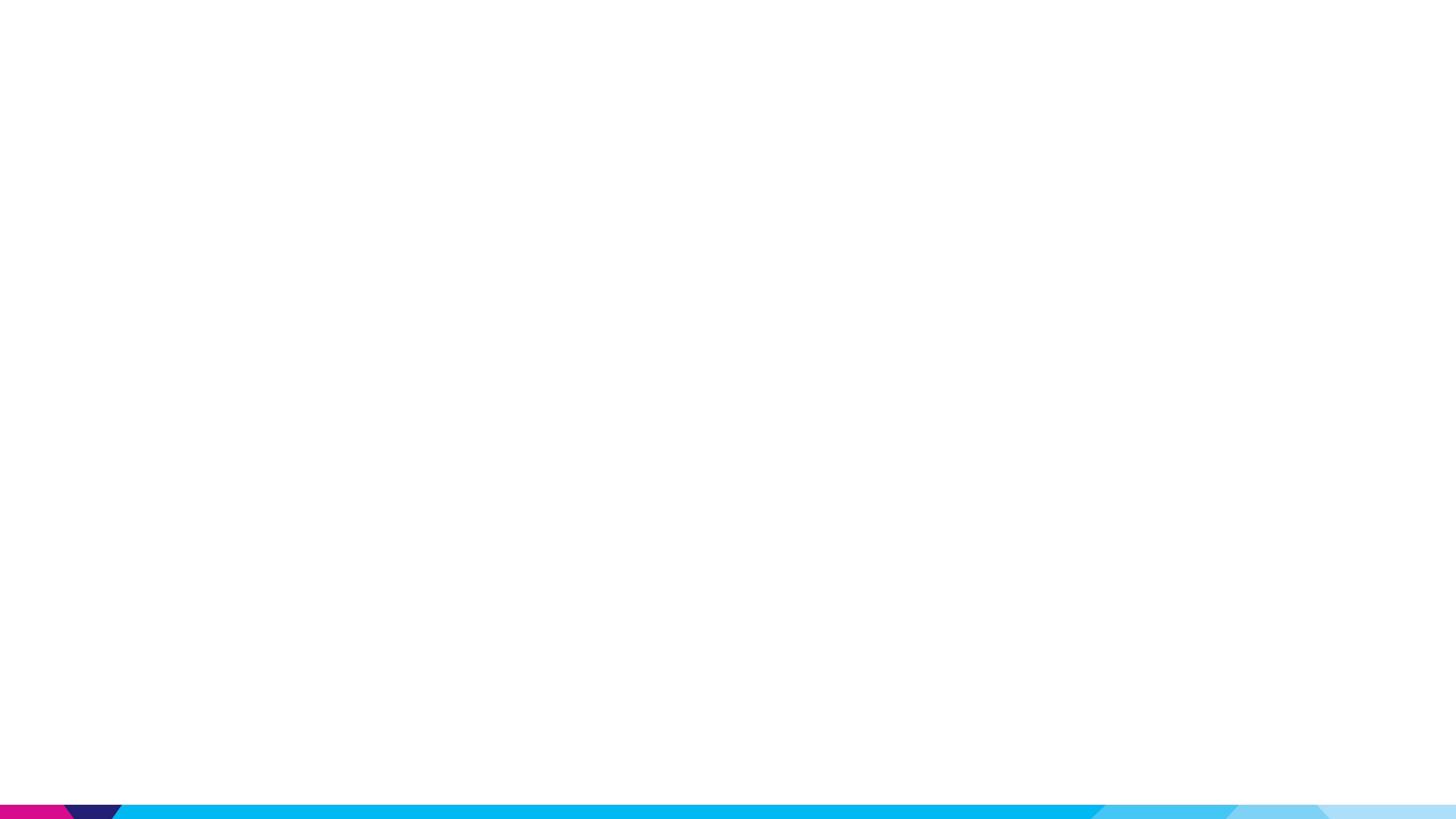


Slide: Linda DeCherrie

Completing Hospitalization at Home (cHaH)



Slide: Linda DeCherrie



Clinical Quality Council

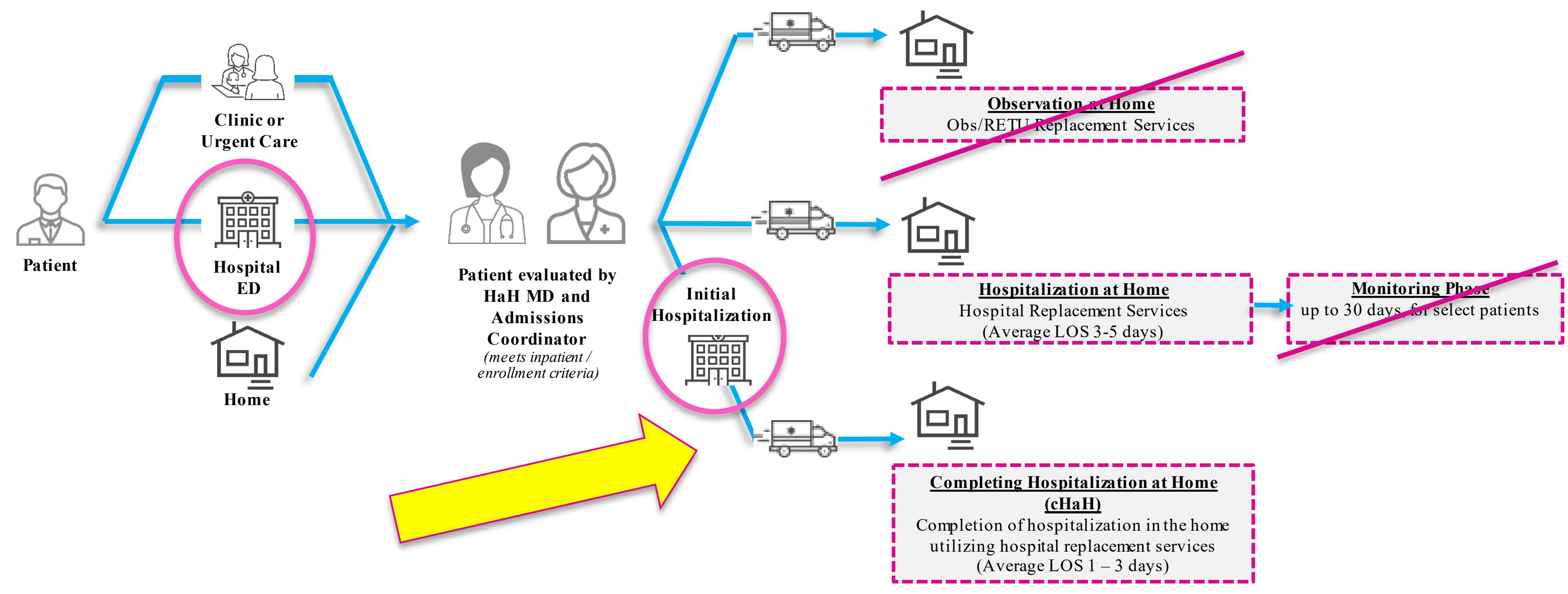
- Meets quarterly
- Health System Leadership from Department of Medicine, Hospital Medicine, Quality
- Metrics include:
  - Falls with injury
  - New pressure ulcers
  - New infections
  - Med rec completion
  - ED escalations
  - Hospital readmissions
  - Care plan on discharge, handoff to health plan care managers
  - PCP follow-up within 7 days
  - Patient satisfaction

Pathways to Hospitalization at Home in the Mount Sinai Health System

Target population:

- Appropriate insurance
- Live in catchment area
- 18+
- Require hospital-level care

CLINICAL MODEL



Admission

Eligibility and home situation reviewed

Transport home

RN visit w/in 2hrs of arrival home

Acute Care (3-5 days)

Hospital-level services in the home

2 in-person RN visits daily

Follow-up visits scheduled

Plus phase (up to 30 days)

Remote VS monitoring

Transitional care

Urgent visits as needed

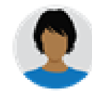
Admitting Clinician

Admissions Coordinator

Acute RN

Home Hospitalist or Nurse Practitioner

Care Coordinator


PT/OT/SLP

Social Worker

Phlebotomist

Ancillary Network Partners Trained on HaH Model

- Ambulance transport
- Diagnostics (EKG, TTE)
- DME
- Imaging: X-ray and ultrasound
- Infusion pharmacy
- Community Paramedicine

What can we do the home?

- Labs (CBC, BNP, PT/INR, cxs, viral swabs)
- Diagnostics: imaging (X-ray, ultrasound, doppler), EKG, TTE
- Supplemental O2 up to 5 L/min via NC
- Established CPAP/BiPAP
- Nebulizer treatments
- IV fluids/diuretics/antibiotics (push/infusion, programmed pump)
- Foley care, intermittent catheterizations
- Wound vacs
- Drains, chest tubes, NG tubes to gravity
- Established peritoneal dialysis
- PIV/Midline/PICC care/infusion
- Transport to clinic for e.g. transfusion

What can't we do in the home?

- O2 requirement >5 L/min via NC, HFNC
- Initiation of CPAP/BiPAP
- Drips (cardiac/heparin/insulin)
- IVP/IM narcotics, PCAs
- Blood transfusion in the home
- Continuous telemetry monitoring
- Continuous pulse oximetry
- Continuous bladder irrigation
- NG tubes to suction
- Frequent neuro checks
- IV anti-virals/biologics/iron/albumin

Daily care

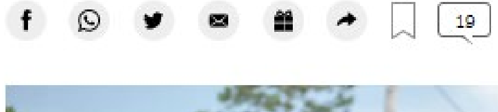
- 2 RN visits daily in the home
- Daily provider visit (NP or MD, telemedicine/in-person)
- Remote RN available by phone during day

Urgent/after hours issues

- Unscheduled urgent visits during the day
- HaH MD on call 24/7
- Ability to do urgent evaluation 24/7 by EMS. Coordinated with HaH MD; HIPAA compliant video call with paramedic during visit

A Covid-19 Lesson: Some Seriously Ill Patients Can Be Treated at Home

To ease pressure on hospitals, Northwell Health brought medical workers, oxygen tanks and intravenous equipment into patients' homes. Now Florida is taking cues.



When Joan Murray of Westbury, N.Y., a retired registered nurse, came down with Covid-19, she insisted on fighting the illness at home. "The last place I wanted to be was the hospital," she said. Johnny Milano for The New York Times

Adapting a Hospital-at-Home Care Model to Respond to New York City's COVID-19 Crisis

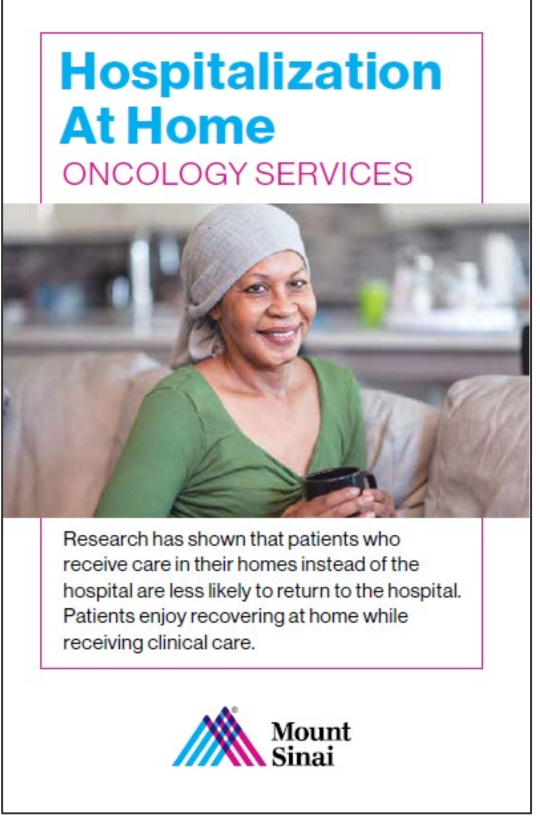
JAGS 2020. Heller DJ, Ornstein KA, DeCherrie LV, Saenger P, Ko FC, Rousseau CP, Siu AL

Table 1 Clinical Characteristics of Patients Admitted to the CHaH Program

Total N	24 patients
Mean age (SD)	60.8 y (16.5)
Sex (%)	10 female (42%); 14 male (58%)
Mean CHaH length of stay (SD)	3.1 days (1.3)
Admitted for COVID-19 disease specifically (%)	12 (50)
Escalation of care (%)	2 (8.3)

Abbreviations: CHaH, Completing Hospitalization at Home; SD, standard deviation.

HaH and Oncology



Hospitalization At Home
ONCOLOGY SERVICES

Research has shown that patients who receive care in their homes instead of the hospital are less likely to return to the hospital. Patients enjoy recovering at home while receiving clinical care.

Mount Sinai

Hospitalization At Home

Mount Sinai's Hospitalization at Home allows you to recover from your cancer treatment in the comfort of home. Your care team will monitor and care for you at home just as they would in the hospital.

Your cancer doctor will let you know if you are a good candidate for this option of care. If so, we will transfer you home after your cancer treatments are complete.

2

Hospitalization at Home includes:

- A daily visit from a doctor or nurse practitioner
- Two daily visits from a registered nurse
- 24/7 telephone access to your care team
- Bloodwork monitoring
- Delivery and setup of any equipment you may need
- Diagnostic imaging in the home
- 24/7 availability of a paramedic visit to the home
- Access to a Recovery Care Coordinator who will coordinate your care and communicate with your doctors and care team
- A computer tablet that allows a Recovery Care Coordinator to monitor your vital signs, such as heart rate, temperature, and blood pressure
- Support from social workers
- Help with scheduling your Mount Sinai follow-up appointments

What to expect:

- A social worker will check your home for safety before you go home.
- An oncology team member will provide you with education about nutrition and cancer care before leaving the hospital.
- You will likely transfer home the day after your cancer treatments are complete.
- An experienced registered nurse will visit you on the day you start Hospitalization at Home. Your nurse will ensure you have everything you need and answer your questions.
- Your Hospitalization at Home clinical team will care for you at home daily.
- If you need a transfusion or if you develop a fever, you may be transferred to the Oncology Unit located in The Mount Sinai Hospital.
- Physicians are available 24/7. Contact your physician if you need immediate medical attention and they will determine the best plan of action.
- Your Hospitalization at Home team will communicate with your cancer team to keep them updated on your progress.

3

- solid oncology
- multiple myeloma
- lymphoma

Where are we going?

Increased use of telemedicine

What do we need to make it work?

In the home:

- Skilled RNs who are trusted eyes, ears, hands
- Technology that works reliably

In the hub or hospital:

- Technology that works reliably
- Providers who are
  - dedicated/available
  - comfortable with telemedicine

…when appropriate

	In-person	Remote
Complexity	High	Low
Stability	Less	More
Tasks	Multiple	Few
Hearing (despite headphones)	Poor	Adequate
Pandemic	Fizzling	Raging
Exam	Fluctuating	Static
Service needs	Lighter	Heavier
Cognition	Confusion	Clarity

Grid by David Levine, MD, MPH, MA

Remembering that in-person visits can offer a wealth of information

Expanding HaH to new patient populations

- Post-surgical
- Oncology
  - Bone marrow transplants
  - Certain chemo regimens
  - Blood transfusions
- Complex medicine patients
  - TID RN/paramedic visits if needed
  - Tele consults in the home
    - ID
    - Renal
    - Pulmonology
    - GU
    - Cardiology
    - …

- Additional COVID-19 treatment modalities
  - Remdesivir in the home

..and developing Pallcare at Home, Rehab at Home, SNF at home…

6 questions health systems should ask before implementing:

- Is your health system experiencing problems from a lack of hospital capacity?
- Does your health system have established home healthcare delivery capabilities?
- Do you have physicians with the interest and ability to care for patients in the home environment?
- Does your health system experience a large volume of Medicare admissions for common problems such as community-acquired pneumonia, heart failure or chronic pulmonary disease?
- Does your institution view itself as an innovator in developing and implementing new models or systems of care?
- Can your health system align payment, providers and the hospital for this model?
- Would add: do you have champions at highest levels of leadership?

Bruce Leff, World Hospital at Home Congress, April 2021

Challenges and lessons learned

Ongoing challenges

- Payment
  - Will CMS extend waiver beyond 2021? Will payment structure change?
- Quality and safety
  - >100 programs now in US, no formal shared quality standards
- Dissemination
  - Every "market" is unique – different healthcare microenvironments, different patient populations, different patient and provider expectations, different ancillary vendor ecosystems
  - There is no one size fits all – the program you build will be shaped by patient population, your staff, your system's culture
- Scaling and adoption
  - Still a hurdle to get patients and providers to fully understand what HaH is (and what it isn't)
- HaH care: a new specialty?
  - Not quite home health episode care
  - Not quite home-based primary care
  - Not quite hospital medicine
  - Idea of "the home hospitalist" and "the home hospital nurse"

A few lessons learned

- HaH care is complex, complicated, nuanced and unique: build a dedicated team in which each individual is invested in the success of the program, from leadership to admin support to the front lines (MDs, APPs, RNs, SW, admins)
- Be thoughtful with data collection: e.g. careful with wording of patient surveys
- Nurture a culture of innovation, with ground → up idea generation
- Do not underestimate the admin and logistics support required to run a hospital without walls