Hospital AT Home USERS GROUP

The Hospital at Home Model and the CMS Acute Care at Home Waiver

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AAHCM
AMERICAN ACADEMY OF HOME CARE MEDICINE
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Webinar

Hosted by the American Academy of Home Care Medicine

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We appreciate the support of

The John A. Hartford Foundation

Hospital at Home USERS GROUP

LEARNING OBJECTIVES

- Describe what Hospital at Home is and the rationale and evidence base for Hospital at Home care
- Describe key features of the Hospital at Home care model
- Describe key features of the Center for Medicare and Medicaid Acute Hospital Care at Home initiative

Hospital AT Home
USERS GROUP

HaH - WHY AND WHAT?

WHY WE NEED HOSPITAL AT HOME

WALTER'S GRIPES

- "I can't get breathing treatments on time so I end up on a ventilator"
- "Food stinks"
- "No one talks to me"
- "I got confused and tied down"
- "I always come home with a completely new set of medicines"
- Walter got sick…

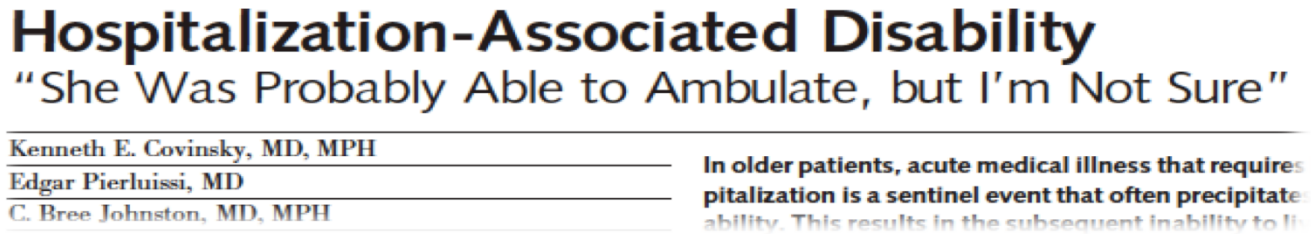
SAFETY RISKS OF HOSPITALIZATION

20% suffer delirium

Functional status never regained

HACs, falls

Unintended Clinical Consequences[1,2]



Hospitalization-Associated Disability

"She Was Probably Able to Ambulate, but I'm Not Sure"

Kenneth E. Covinsky, MD, MPH
Edgar Pierluissi, MD
C. Bree Johnston, MD, MPH

In older patients, acute medical illness that requires
pitalization is a sentinel event that often precipitate
ability. This results in the subsequent inability to li

Often >100% capacity

~12 hour ED wait

Poor Inpatient Access

Most expensive care setting

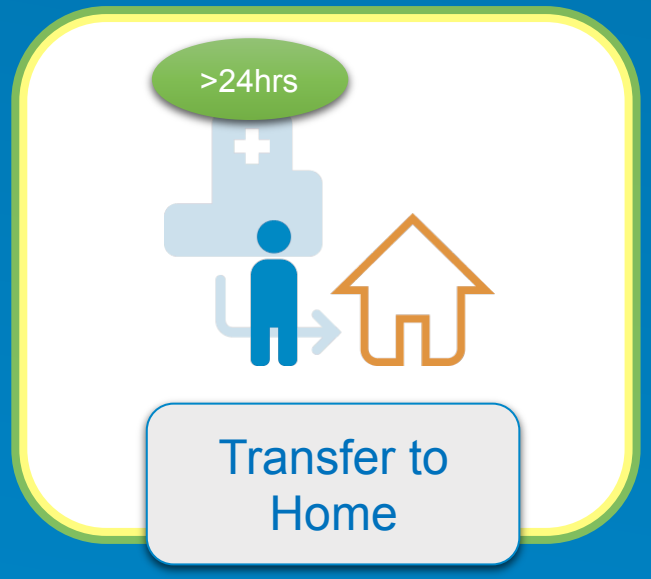
Expensive

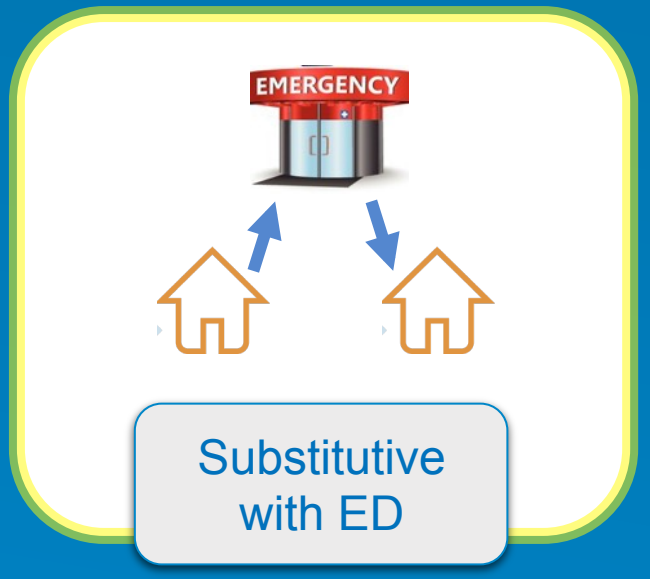
1: Creditor MC. Ann Intern Med. 1993.
2: Hung WH et al. JAMA Intern Med. 2013
3. Covinsky K. JAMA 2011

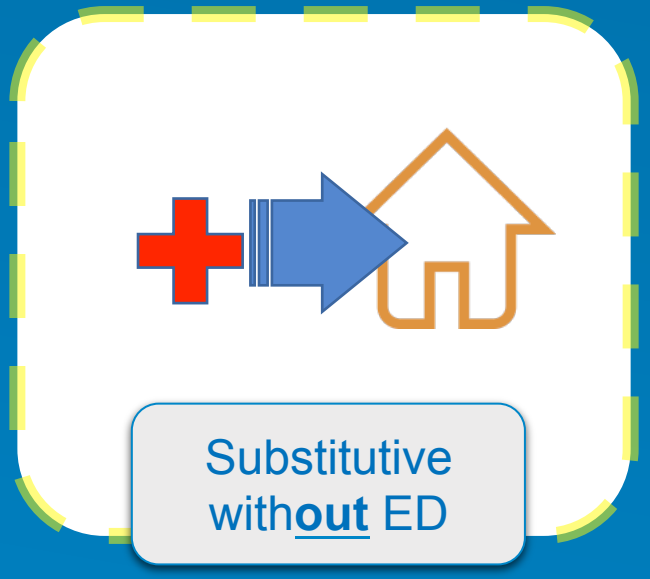
Courtesy of Dr. David Levine

BRINGING THE HOSPITAL HOME

Home-based provision of services usually provided in the acute inpatient setting.







Ticona L and Schulman KA. Extreme Home Makeover — The Role of Intensive Home Health Care. N Engl J Med 2016; 375:1707-1709.
Leff B. Defining and disseminating the hospital-at-home model. CMAJ 2009;180(2):156-7.

Courtesy of Dr. David Levine

SNAPSHOT OF HAH PROCESS 1.0

Assessment

Transport

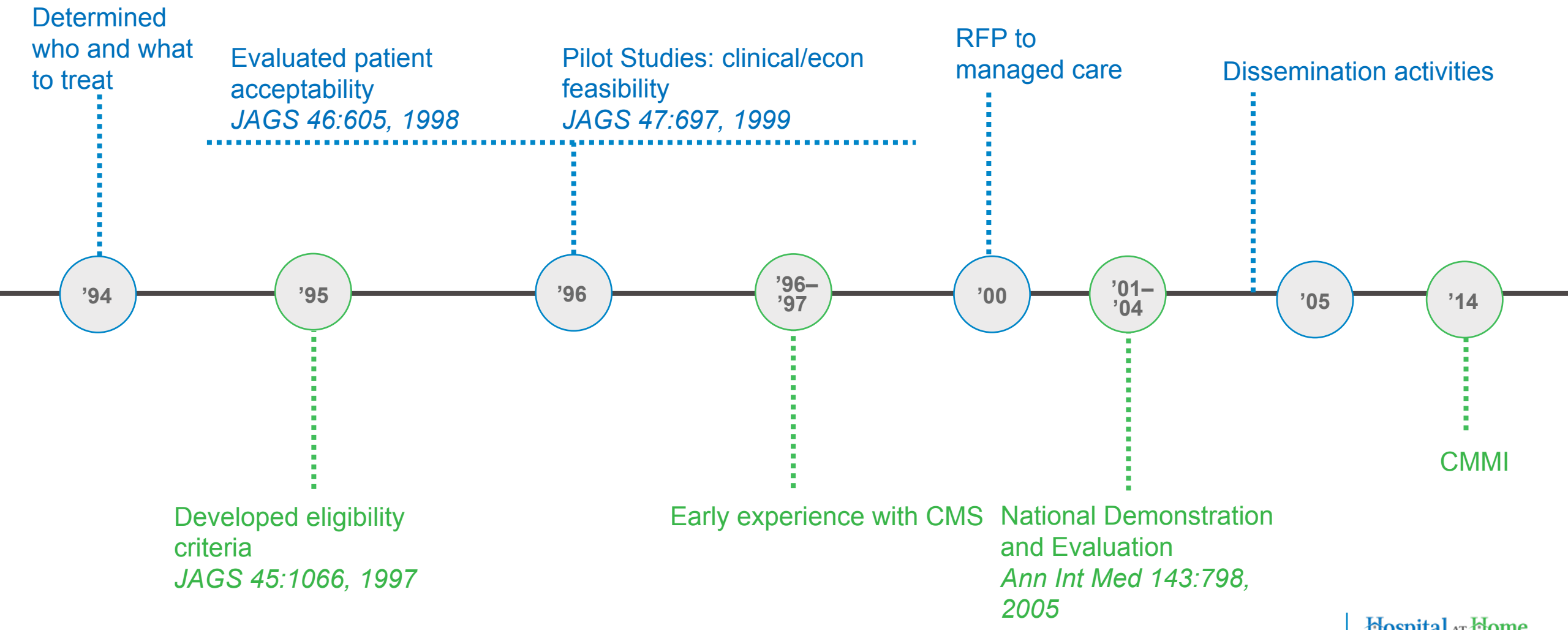
Care

Discharge

- Home-based provision of services usually provided in the acute inpatient setting.
- If HaH not available, patient would be in a hospital bed

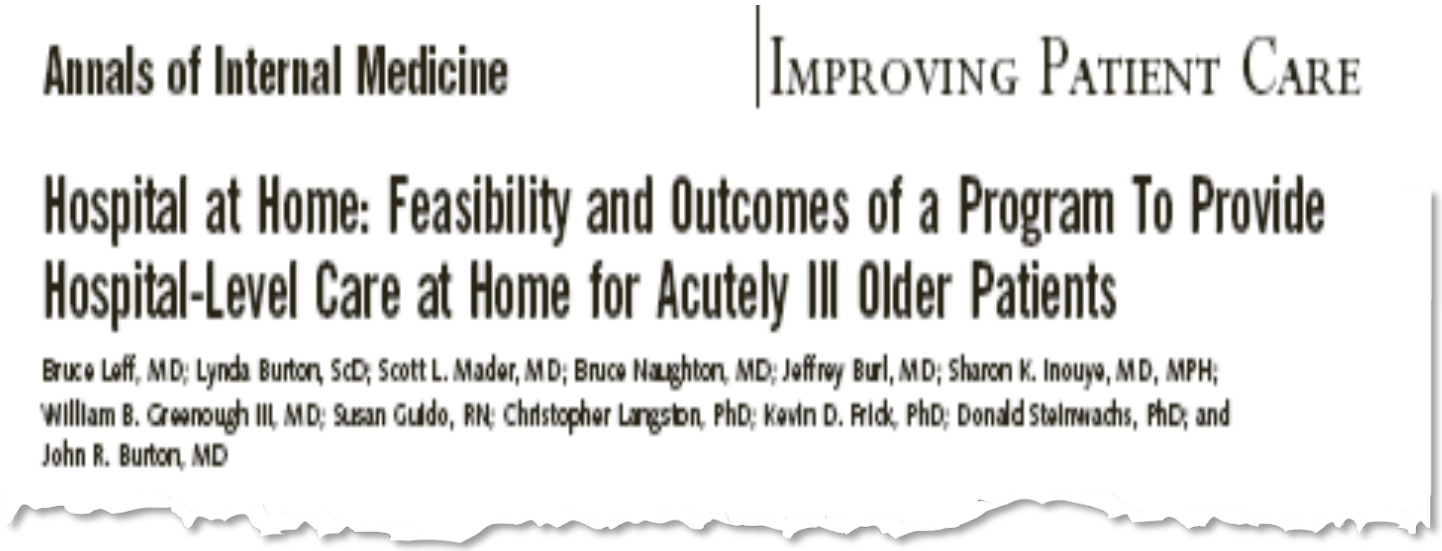
J Am Geriatr Soc. 1999 ;47(6): 697-702..

TIMELINE OF HOSPITAL AT HOME



HaH MAY BE THE MOST EVIDENCE-BASED HEALTH SERVICE DELIVERY INNOVATION

HaH (1.0) IN MEDICARE MANAGED CARE



Annals of Internal Medicine | Improving Patient Care

Hospital at Home: Feasibility and Outcomes of a Program To Provide Hospital-Level Care at Home for Acutely Ill Older Patients

Bruce Leff, MD; Lynda Burton, ScD; Scott L. Mader, MD; Bruce Naughton, MD; Jeffrey Burl, MD; Sharon K. Inouye, MD, MPH; William B. Greenough III, MD; Susan Guido, RN; Christopher Langston, PhD; Kevin D. Frick, PhD; Donald Steinwachs, PhD; and John R. Burton, MD

SPECIFIC SAFETY ITEMS

- Condition-specific quality indicators met at same rate or better
- 74% reduction in incident delirium
- 51% reduction in the use of sedative medications
- Less chemical restraint
- Less death
- 2/169 escalation

- 61% chose HAH care
- High-quality care
- Fewer complications
- Better patient /family experience
- Lower costs of care
- Less CG stress
- Better function
- High provider satisfaction

Ann Intern Med. 2005;143:798. J Am Geriatr Soc. 2006;54:1355. J Am Geriatr Soc. 2008;56:117. Am J Manag Care. 2009;15:49.. J Am Geriatr Soc. 2009;57:273. Medical Care, 2009;47(9):979.

HaH CMMI DEMONSTRATION @ 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, MPH[1]; Tacara Soones, MD, MPH[2]; Linda V. DeCherrie, MD[1,3]; et al

	HaH N=295	Control N=212	Adjusted OR
Acute LOS (days)	3.2	5.5	
Readmission, all cause	8.6%	15.6%	0.43 (0.31,0.52)
ED visits, all cause	5.8%	11.7%	0.39 (0.31,0.49)
Highest overall experience rating	68%	46%	3.12 (2.63, 3.70)
Discharge to SNF	1.7%	10.4%	-8.7%
Overall costs	$11,875	$13,133	-$1259

U.S. HaH RCT

Decreased Utilization / Post Acute Utilization

n=91

- **3 vs 15** *lab orders per admission*
- **14% vs 44%** *receipt of imaging during admission*
- **2% vs 31%** *receipt of consultation during admission*
- **7% vs 23%** *patients readmitted within 30-days*
- **7% vs 13%** *patients seen in the ED within 30-days*

Unchanged Safety & Quality

- Similar rates of HACs, pain scores, high-value care, and low-value care.
- 0 patients transferred back to hospital.

Ann Intern Med. 2020;172:77-85

Improved Physical Activity

32% vs 66% *percent of the day lying down*

Lower cost

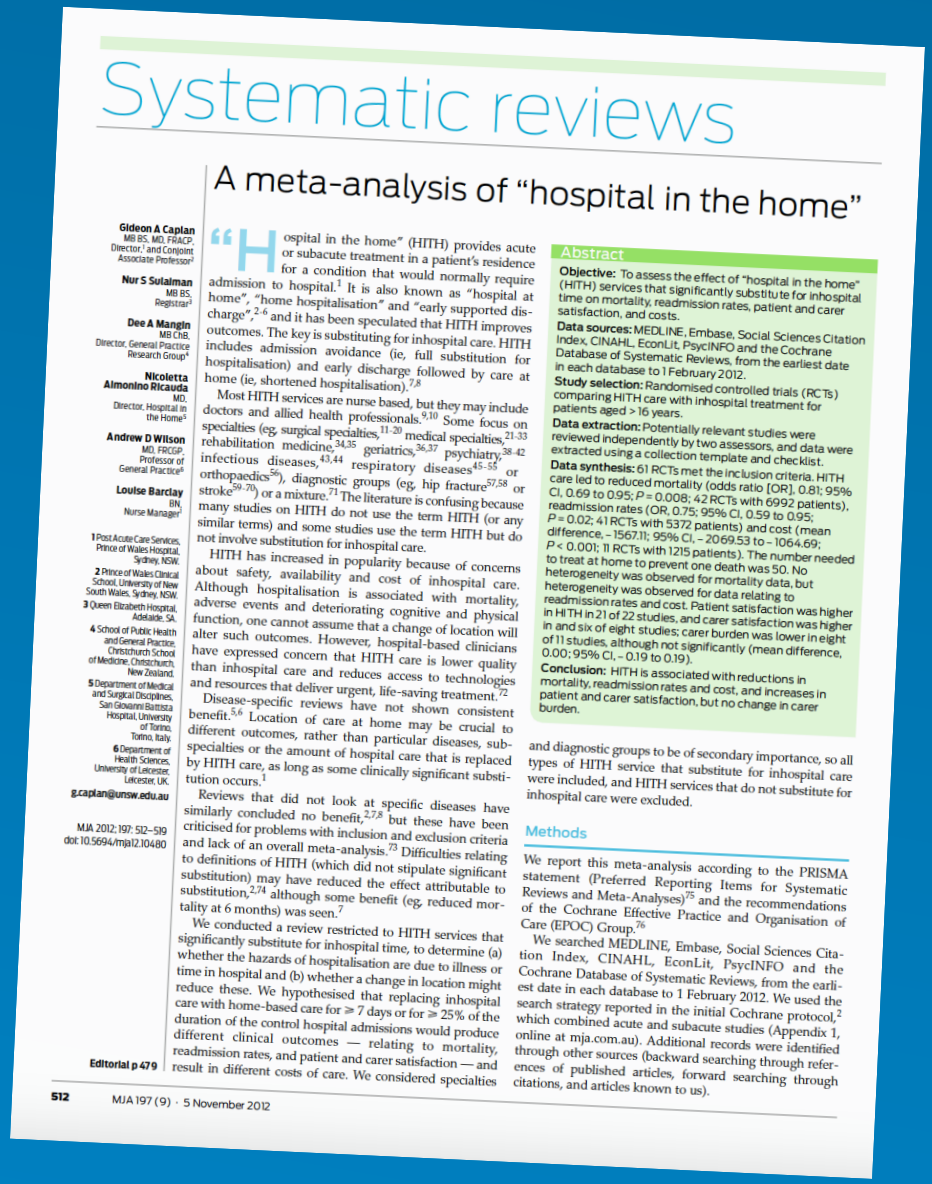
38% *cost reduction, acute episode*

HAH META-ANALYSIS

21% Reduction in Mortality: NNT=50

24% Reduction in Readmissions

Med J Austral 2012;197:512-9



Systematic reviews

A meta-analysis of "hospital in the home"

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MJA 2012; 197: 512–519
doi: 10.5694/mja12.10480

Editorial p 479

Abstract

Objective: To assess the effect of "hospital in the home" (HITH) services that significantly substitute for inhospital time on mortality, readmission rates, patient and carer satisfaction, and costs.

Data sources: MEDLINE, Embase, Social Sciences Citation Index, CINAHL, EconLit, PsycINFO and the Cochrane Database of Systematic Reviews, from the earliest date in each database to 1 February 2012.

Study selection: Randomised controlled trials (RCTs) comparing HITH care with inhospital treatment for patients aged > 16 years.

Data extraction: Potentially relevant studies were reviewed independently by two assessors, and data were extracted using a collection template and checklist.

Data synthesis: 61 RCTs met the inclusion criteria. HITH care led to reduced mortality (odds ratio [OR], 0.81; 95% CI, 0.69 to 0.95; $P = 0.008$; 42 RCTs with 6992 patients), readmission rates (OR, 0.75; 95% CI, 0.59 to 0.95; $P = 0.02$; 41 RCTs with 5372 patients) and cost (mean difference, −1567.11; 95% CI, −2069.53 to −1064.69; $P < 0.001$; 11 RCTs with 1215 patients). The number needed to treat at home to prevent one death was 50. No heterogeneity was observed for mortality data, but heterogeneity was observed for data relating to readmission rates and cost. Patient satisfaction was higher in HITH in 21 of 22 studies, and carer satisfaction was higher in and six of eight studies; carer burden was lower in eight of 11 studies, although not significantly (mean difference, 0.00; 95% CI, −0.19 to 0.19).

Conclusion: HITH is associated with reductions in mortality, readmission rates and cost, and increases in patient and carer satisfaction, but no change in carer burden.

"Hospital in the home" (HITH) provides acute or subacute treatment in a patient's residence for a condition that would normally require admission to hospital.[1] It is also known as "hospital at home", "home hospitalisation" and "early supported discharge",[2-6] and it has been speculated that HITH improves outcomes. The key is substituting for inhospital care. HITH includes admission avoidance (ie, full substitution for hospitalisation) and early discharge followed by care at home (ie, shortened hospitalisation).[7,8]

Most HITH services are nurse based, but they may include doctors and allied health professionals.[9,10] Some focus on specialties (eg, surgical specialties,[11-20] medical specialties,[21-33] rehabilitation medicine,[34,35] geriatrics,[36,37] psychiatry,[38-42] infectious diseases,[43,44] respiratory diseases[45-55] or orthopaedics[56]), diagnostic groups (eg, hip fracture[57,58] or stroke[59-70]) or a mixture.[71] The literature is confusing because many studies on HITH do not use the term HITH (or any similar terms) and some studies use the term HITH but do not involve substitution for inhospital care.

HITH has increased in popularity because of concerns about safety, availability and cost of inhospital care. Although hospitalisation is associated with mortality, adverse events and deteriorating cognitive and physical function, one cannot assume that a change of location will alter such outcomes. However, hospital-based clinicians have expressed concern that HITH care is lower quality than inhospital care and reduces access to technologies and resources that deliver urgent, life-saving treatment.[72]

Disease-specific reviews have not shown consistent benefit.[5,6] Location of care at home may be crucial to different outcomes, rather than particular diseases, subspecialties or the amount of hospital care that is replaced by HITH care, as long as some clinically significant substitution occurs.[1]

Reviews that did not look at specific diseases have similarly concluded no benefit,[2,7,8] but these have been criticised for problems with inclusion and exclusion criteria and lack of an overall meta-analysis.[73] Difficulties relating to definitions of HITH (which did not stipulate significant substitution) may have reduced the effect attributable to substitution,[2,74] although some benefit (eg, reduced mortality at 6 months) was seen.[7]

We conducted a review restricted to HITH services that significantly substitute for inhospital time, to determine (a) whether the hazards of hospitalisation are due to illness or time in hospital and (b) whether a change in location might reduce these. We hypothesised that replacing inhospital care with home-based care for ≥ 7 days or for ≥ 25% of the duration of the control hospital admissions would produce different clinical outcomes — relating to mortality, readmission rates, and patient and carer satisfaction — and result in different costs of care. We considered specialties and diagnostic groups to be of secondary importance, so all types of HITH service that substitute for inhospital care were included, and HITH services that do not substitute for inhospital care were excluded.

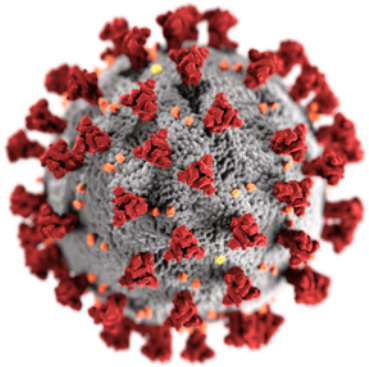
Methods

We report this meta-analysis according to the PRISMA statement (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)[75] and the recommendations of the Cochrane Effective Practice and Organisation of Care (EPOC) Group.[76]

We searched MEDLINE, Embase, Social Sciences Citation Index, CINAHL, EconLit, PsycINFO and the Cochrane Database of Systematic Reviews, from the earliest date in each database to 1 February 2012. We used the search strategy reported in the initial Cochrane protocol,[2] which combined acute and subacute studies (Appendix 1, online at mja.com.au). Additional records were identified through other sources (backward searching through references of published articles, forward searching through citations, and articles known to us).

COVID AND HaH

COVID-19 ADAPTATIONS



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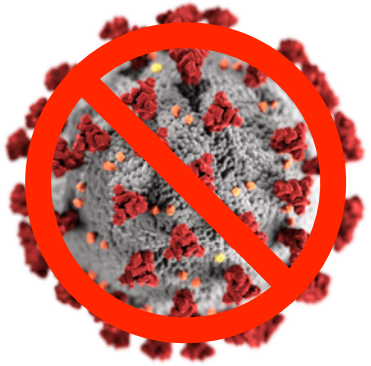
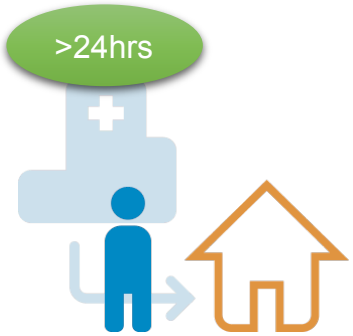
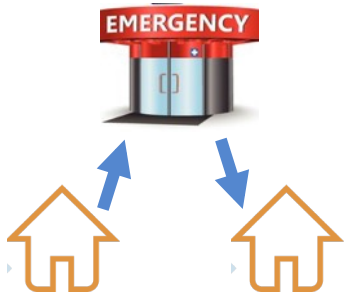
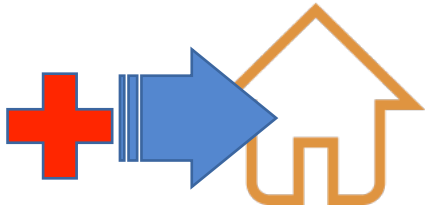




Transfer to Home

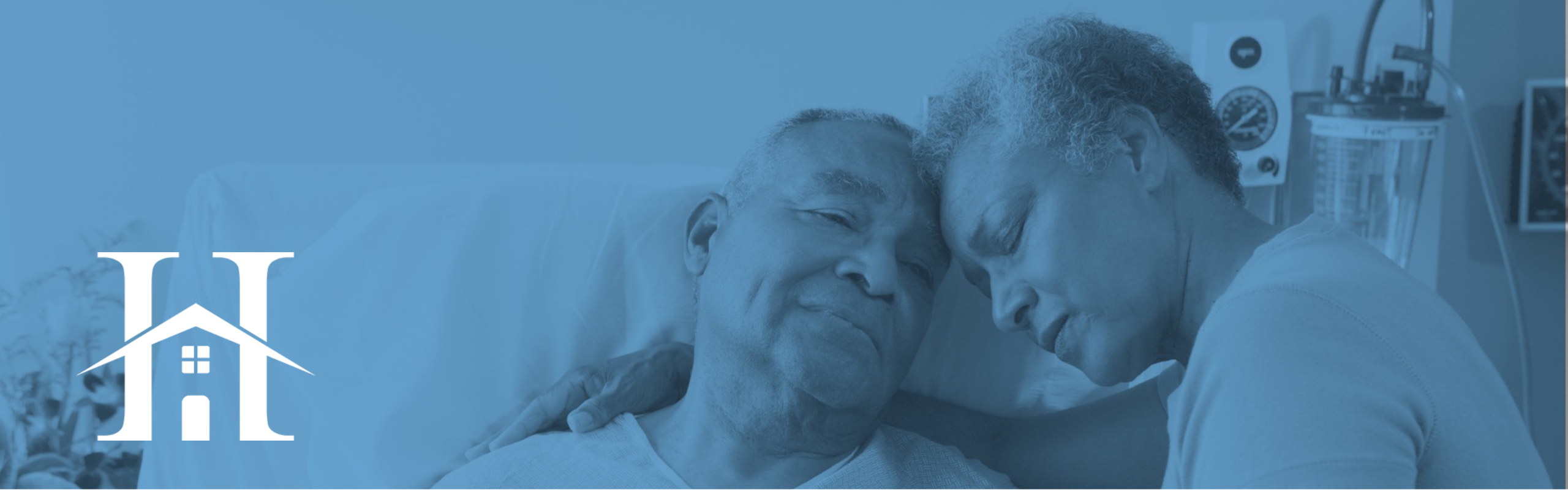


Substitutive with ED



Substitutive with**out** ED

Courtesy of Dr. David Levine



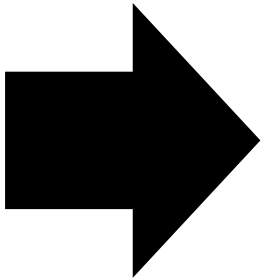
THE HaH MODEL– 50,000 FOOT VIEW

WHAT CAN BE CARED FOR IN HaH

HAH

- COPD
- CHF
- Pneumonia
- UTI
- Cellulitis
- DVT / PE
- Asthma
- Dehydration
- General Medicine Protocol for any patient that could be safely treated at home

Includes 44 episodes & 151 DRGs



Top DRGs Treated in HaH	
Pneumonia	16%
Cellulitis	14%
CHF	13%
COPD	10%
UTI	10%
DVT/PE	5%
Asthma	5%
Gastro	4%
Renal Failure	2%
Other	21%

HaH CAPABILITIES

What treatment modalities can be used in the home?

- Labs
- Imaging
- Arranging visits with consulting specialists
- Supplemental oxygen up to 4 liters per NC*
- Established CPAP/BiPAP patients
- Respiratory treatments
- IV diuretics
- IV antibiotics (continuous and intermittent)
- Continuous IV fluids
- (PD/HD patients with established treatment plan)
- Wound vacs
- Intermittent catheterizations
- Chest tubes to gravity

What treatment modalities can't be used in the home?

- Oxygen requirements greater than 4 liters per NC*
- New orders for CPAP/BiPAP
- Cardiac drips
- Heparin/insulin drips
- Blood transfusions
- Continuous cardiac telemetry monitoring
- Continuous pulse oximetry
- Continuous bladder irrigation
- NGT to suction
- Frequent neuro checks
- IVP/IM narcotics

*Patients with baseline oxygen use above 4L can be considered for HaH admission based on their clinical presentation including past medical history

BASIC HaH CAPABILITIES, SERVICES, CARE TEAM

Access & Response

24/7 access to care team

- First point of contact: immediate
- Emergent response: <10mins
- Urgent response: <1hr

Services

Hospital-level services at home that would have been provided in the hospital

- Pharmacy
- Infusion
- Respiratory
- Diagnostics (labs, imaging)
- Monitoring
- Transportation
- Food
- DME

Care Team

Tailored touches from interdisciplinary care team led by a physician

- Physician-led with daily rounding
- Nurse or MIH paramedic
- Twice daily touches
- Tailored as needed
  - Physical, occupational, speech therapy
  - Social work
  - Aide
  - Courier

STUFF YOU NEED

Mantra: build for what you need and need what you build

- Oxygen concentrator
- Infusion gadget: pump vs elastomeric ball
- Monitoring gadgets: continuous vs intermittent
- Commode
- Scale
- Encrypted video, audio, text

PEOPLE YOU NEED

Mantra: use your hospital wherever you can

- Physician
- Nurse
- Program associate
- +/- PT, OT, SLP, SW
- +/- APP
- +/- mobile integrated health paramedic
- +/- home health aide

CMS ACUTE HOSPITAL CARE AT HOME

Why did CMS act now?

- 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

Waiver Details

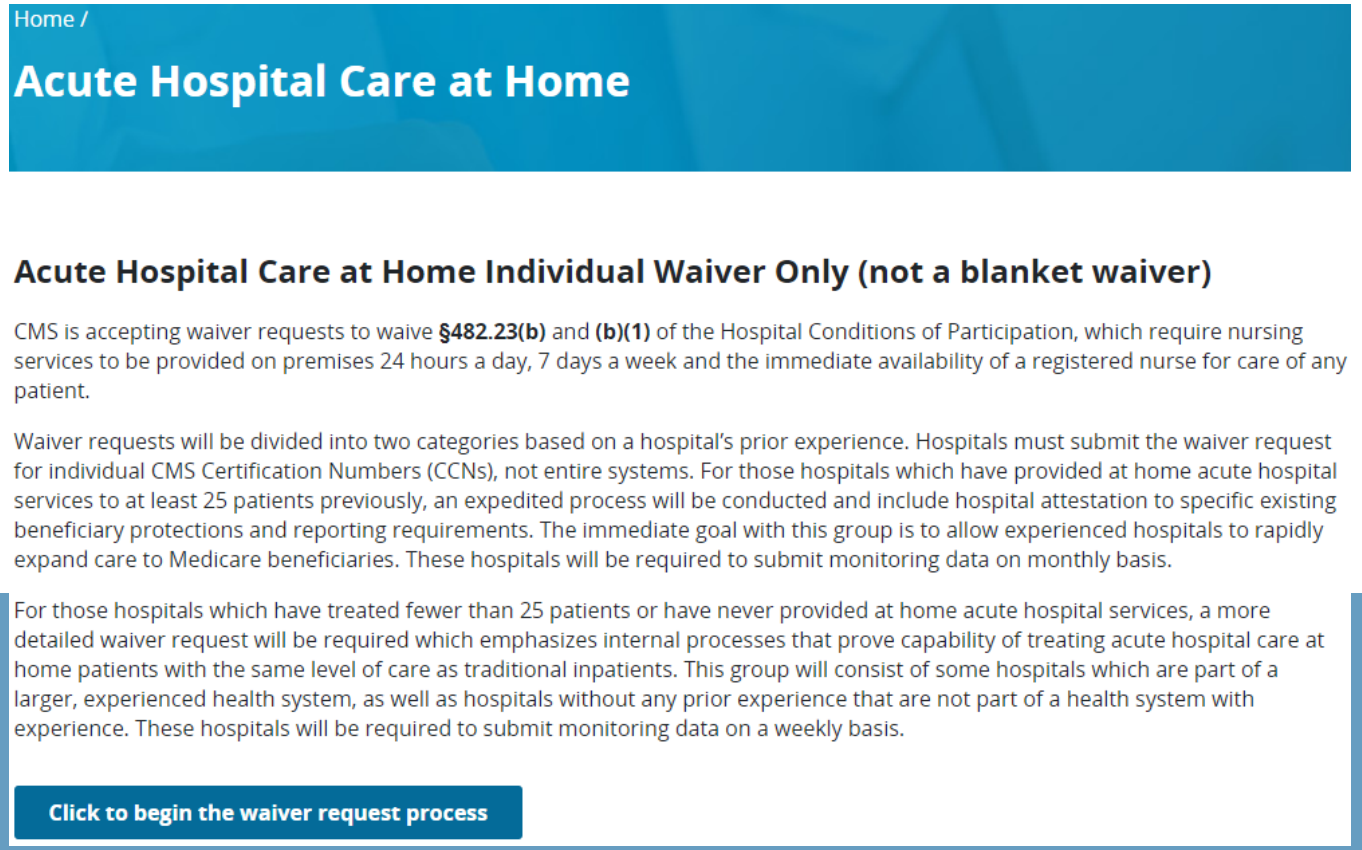
- What is being waived?
  - **§482.23(b)** and **(b)(1)** of the Hospital Conditions of Participation, which require nursing services to be provided on premises 24 hours a day, 7 days a week and the immediate availability of a registered nurse for care of any patient
- Who is affected?
  - Not a blanket waiver
  - Individual waiver requests at the hospital/CMS Certification Number(CCN) level
    - Individual requests from hospitals are evaluated by CMS

Duration of Waiver

- How long?
  - Expected to last the duration of the Public Health Emergency (PHE)

Waiver Request Process

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



CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

Hospital Information and Attestation

Please note: Each hospital certified to provide care to Medicare patients has a unique CMS Certification Number (CCN). Each hospital seeking to provide acute hospital care at home must submit its own waiver request under its unique CCN. For example, if a hospital system has seven hospitals, but only two of the hospitals admit patients who use acute hospital care at home services, two separate waiver requests must be submitted.

If your hospital is seeking Medicaid reimbursement, please contact your state Medicaid agencies as soon as possible since Medicaid waivers may be required.

This waiver is only in effect for the duration of the COVID-19 Public Health Emergency.

All fields marked with an asterisk (*) are required.

Hospital Information

CMS Certification Number (CCN) *

Hospital Name *

Hospital Phone Number

Hospital Address Line 1 *

Hospital Address Line 2

City *

State *

ZIP Code *

Point of Contact

Name *

Email Address *

Phone Number *

Attestation

By submitting information within this form, I attest that have personally reviewed the information above for accuracy. I have also received consent from the represented hospital and any individuals whose information (name, email, and phone number) has been included in this waiver request.

The email address provided will receive a verification email from CMS within 24 hours.

Attesting Name *

Attesting Email Address *

Attesting Phone Number *

(Must be C-suite level of hospital system, including Chief Medical Officer/Chief Nursing Officer)

Hospital Experience

- This key question determines the frequency of monitoring and the details required from a hospital in a waiver request

Path for hospitals with more experience in Acute Hospital Care at Home (AHCaH)

- Expedited process
- Based on hospital attestation to specific existing beneficiary protections
  - Attested by member of C-suite of the hospital
- Reporting monthly
- Goal to allow experienced hospitals to rapidly expand this care to Medicare beneficiaries

Path for hospitals with more experience in AHCaH (required attestations)

Can your hospital provide acute care services at home? You are required to provide or contract for the following services: *

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

Path for hospitals with more experience in AHCaH (required attestations)

Clinician requirements

Does your hospital meet 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

Path for hospitals with more experience in AHCaH (required attestations)

Emergency response time

Can your hospital meet the following minimum emergency response times for each patient: *

- Immediate, on-demand remote audio 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

Path for hospitals with more experience in AHCaH (required attestations)

- Admissions only from an Emergency Room or inpatient hospital
- Hospitals will use a defined patient selection criteria developed internally or externally

Will you agree 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? *

Path for hospitals with more experience in AHCaH (required attestations)

Monthly reporting

Will you agree to track the following 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 the acute episode)
3. Volume of patients treated in this program

Path for hospitals with more experience in AHCaH (required attestations)

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

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

Path for hospitals with more experience in AHCaH (required attestations)

Accepted patient leveling process

Will you agree to use InterQual, Milliman, or another accepted patient leveling process to ensure that only patients requiring an acute level of care are treated by this hospital? *

Detailed Waiver Request Process in AHCaH

- Hospital will attest to each requirement of the expedited waiver request
- Detail processes showing how the following needs will be provided:
  - Pharmacy
  - Infusion
  - Respiratory care including oxygen delivery
  - Diagnostics (labs, radiology)
  - Monitoring/vitals
  - Transportation
  - Food services
  - Durable Medical Equipment
  - Physical, Occupational, and Speech Therapy
  - Social work and care coordination, including safe and seamless patient discharges

Detailed Waiver Request Process in AHCaH

- Detailed clinician staffing models
  - Demonstrate that the initiative's physician oversight and care can be provided to each patient
  - At least two in-person visits by clinicians each day
  - Explain how each patient is able to see an RN either in-person or remotely each day
  - If using Mobile Integrated Health paramedics, their role in the team structure will be explained

Detailed Waiver Request Process in AHCaH

Remote Monitoring

- Requester will describe how each patient is remotely connected to a hospital team member at all times. Explain technology and device use, staffing, and any limitations based on time of day or weekend
- Detailed explanation of how the hospital will meet the requirement of a 30 minute in-person response time with appropriate emergency personnel, including an algorithm that shows the timing of each step in the process and which personnel will travel to the home
    - Partnerships with local paramedic groups or other professionals who will improve this response time will be explained

Detailed Waiver Request Process in AHCaH

Patient selection criteria

- Complete details including all inclusion and exclusion criteria
- Hospital will name the patient leveling process used to ensure that only patients requiring an acute level of care are treated in this program

Reporting Frequency and Goals

- Experienced Waiver Requests
  - Monthly Reporting

- Detailed Waiver Requests
  - Weekly Reporting

More Information and CMS Contacts

- email AcuteHospitalCareAtHome@cms.hhs.gov
- What can CMS do going forward?
- Frequently Asked Questions and other Resources: https://www.cms.gov/files/document/covid-acute-hospital-care-home-faqs.pdf
  - Features links to journal publications, the Hospital at Home Users Group, and several private firms which provide information and resources for hospitals looking to provide this level of care
- Recording of CMS Webinar of December ##, 2020 – Dr. Linda DeCherrie and Dr. David Levine
- https://www.cms.gov/Outreach-and-Education/Outreach/OpenDoorForums/PodcastAndTranscripts

HaH USERS GROUP

- 25+ programs
- Developed
  - Practice standards
  - Quality measures
  - Regulatory framework
- Research
- Advocacy

Hospital AT Home
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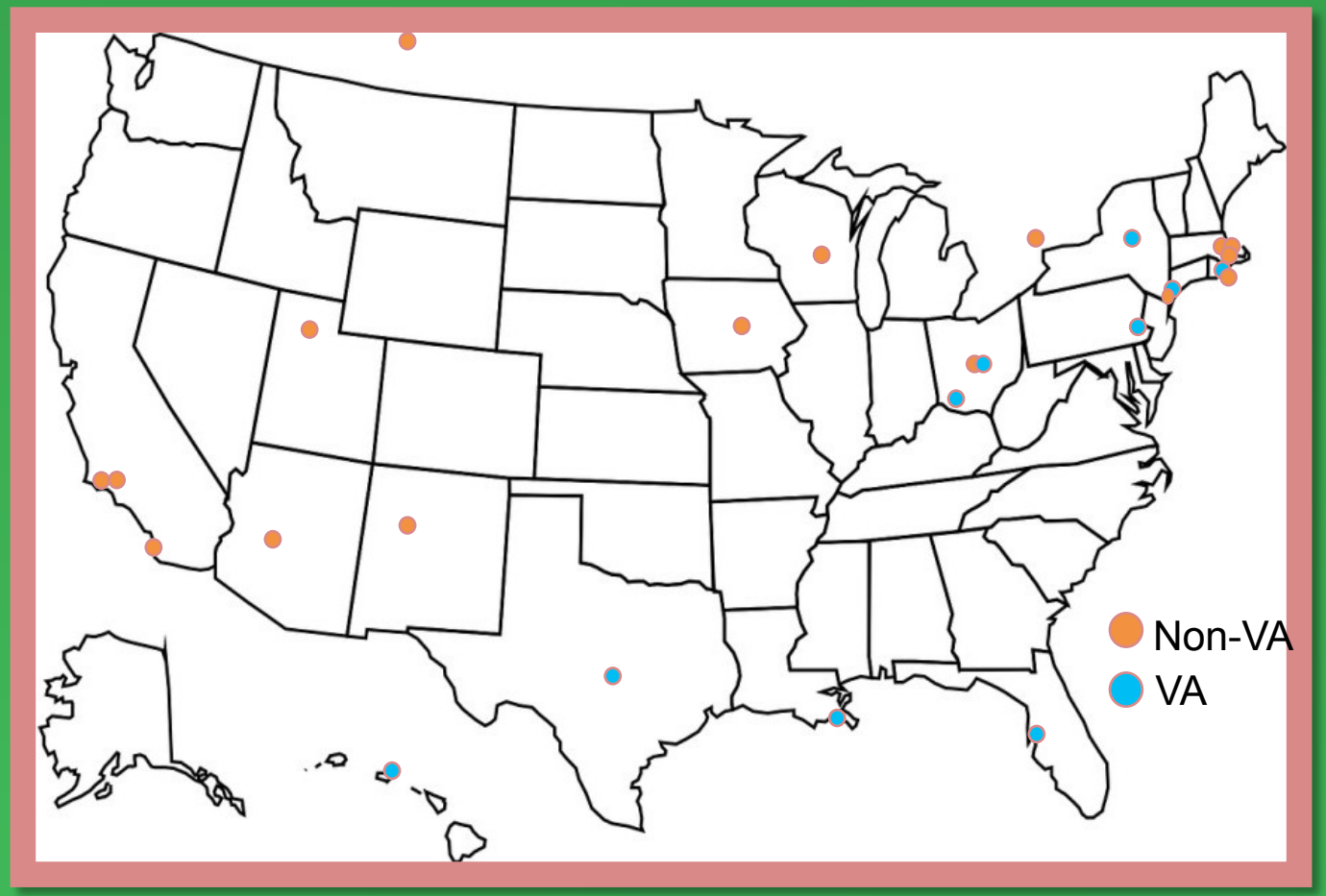

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