CHILMARK RESEARCH

HOSPITAL AT HOME PROGRAMS:

CHALLENGES, SOLUTIONS & PERSPECTIVES

About Chilmark Research

Helping healthcare leaders make the best decisions for the populations they serve.

Founded in 2007, **Chilmark Research** is a preeminent global research and advisory firm focused exclusively on tracking the market evolution of healthcare information technologies (health IT) and use cases.

Our team is united by the belief that new health IT tools are critical for improving the quality and efficiency of care in a modern world. It is therefore our mission to foster the effective adoption, deployment, and use of these new solutions (and enabled services) through objective, high-quality research into those technologies with the greatest potential to impact care delivery.

This laser-sharp focus allows us to provide our community with the most in-depth, future-forward research on the critical technology and adoption trends occurring throughout the healthcare sector.

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Introduction

Report Mission Statement

Chilmark Research designed this report to support further adoption of the Hospital at Home model, bring more clarity to the market, and highlight the most challenging problems providers are facing on their rocky path to H@H expansion.

In addition to this report, a corresponding Buyers' Guide will follow in approximately one month that describes the capabilities of each vendor's solution and their place in this growing market, along with recommendations for implementers on how to work with vendors and navigate the adoption of these models.

Unlike traditional Market Trends Reports that CR is known for, this report on current Hospital at Home trends gathers multiple niche vendors and various digital health technologies under the same umbrella. The need for such a diverse scope and the immaturity of the H@H market led to the elimination of our usual vendor comparison ratings, though we will still provide evaluations of what each solution can offer. We introduce these categories in our Buyers' Guide preview at the end of the report.

Market at a Glance

Hospital at Home (H@H) programs have been studied since the 1970s. With a few pioneering providers establishing their programs in 2015-2019, COVID-19 became the major push to H@H.

H@H is a care delivery program that is expected to provide an acute level of care at patients' homes, adequate to patient condition and ensuring patient safety, including monitoring, infusions, drugs, DME, and other required services.

Not only can H@H be deployed by hospitals, but also by payers (VA is a national leader in H@H programs), ACOs, and employers.

Lack of reimbursement has been a serious barrier for H@H. Prior to CMS waiver, H@H program existed within Medicare Advantage, VA, and 3 commercial payers, since there was no Medicare FFS payment.

With COVID-19 slowly ending its journey, H@H is here to stay.

Key Takeaways

H@H programs will continue to grow in adoption in the coming years. Many providers are still concerned about patients' safety and better H@H market clarity, but it's only a matter of time. Those who haven't implemented H@H yet will have to race to do so.

At the time of healthcare consumerization, H@H becomes a highly valuable service in order to attract, retain, and provide best care for patients. H@H capability stretch far beyond acute care in CMS definition and soon enough can become the best care setting for hospice, post-natal, rehab, end-of-life, and many more.

H@H solutions market is highly immature and does require more seasoning. With more stable reimbursement initiatives, vendors will be able to better adjust their products, incorporate new features, and improve excising functionality to ensure best H@H outcomes for both patients and providers.

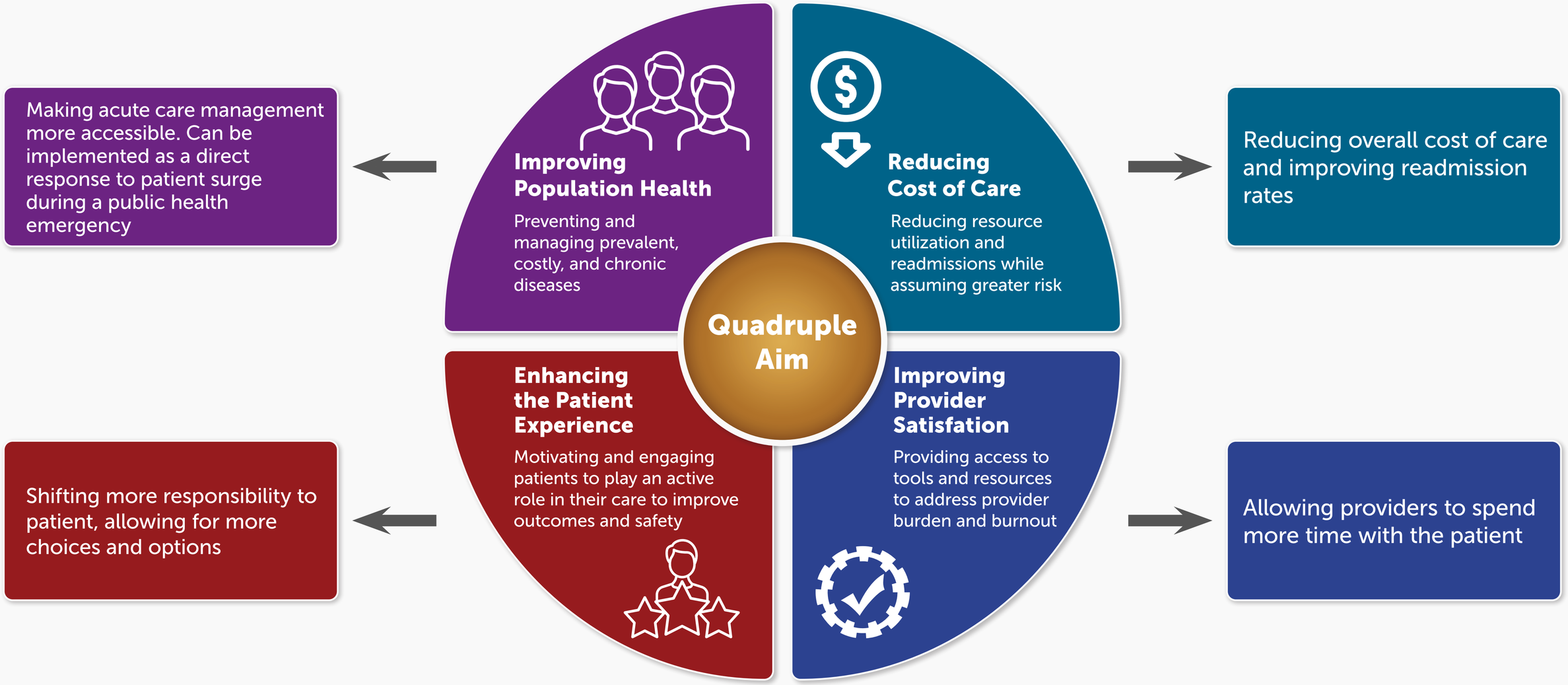
CMS Definition and Requirements

H@H is strictly designed for acute-level patients who came through ED or were admitted from the floor. In order to participate in a H@H program, hospital should have/be able to provide:

- Appropriate screening protocols in place, before care at home begins, to assess both medical and non-medical factors
- An accepted patient leveling process to ensure that only patients requiring an acute level of care are treated
- Physician/PA/NP evaluation of each patient daily either in-person or remotely
- Evaluation of each patient once daily either in-person or remotely
- Two in-person visits daily by either registered nurses or mobile integrated health paramedics, based on the patient's nursing plan and hospital policies
- Capability of 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
- Ability to respond to a decompensating patient within 30 minutes
- Tracking several patient safety metrics with weekly or monthly reporting, establishing a local safety committee to review patient safety data
- 30 min decompensation response 24/7
- MD/PA/NP in-person or telehealth evaluation visit per day
- Immediate audio connection to provider when needed
- Screening protocols, 30-day readmission data collection

Why Hospital at Home Now?

CMS Quadruple Aim



Growing Popularity

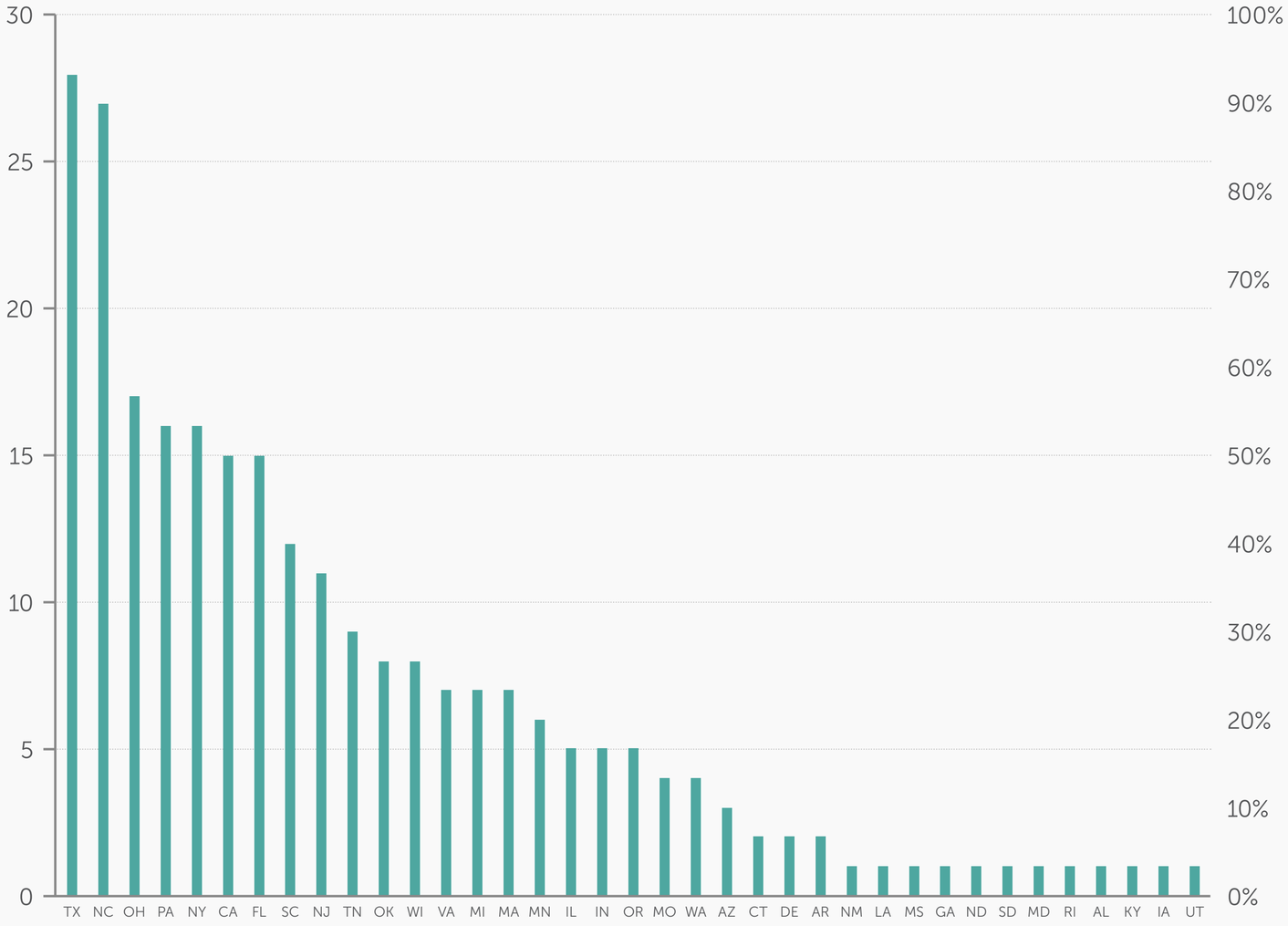
CMS promulgated the H@H program waiver in November 2020 as an urgent response to COVID-19 and to an unprecedented pressure on the healthcare system.

Many hospitals have applied for the waiver. There are currently a total of 281 hospitals enrolled across 37 states (see chart) since the Waiver went live; 71 were approved in 2022 and 22 have been approved in 2023 (as of May 2023).

Growing popularity of H@H can be explained by a number of factors: lack of physical beds and ability to switch more beds to ICU, consumer-oriented approach to patients with added lines of service, better outcomes for certain medical conditions treated with H@H vs brick-and-mortar.

H@H popularity continues to grow. The more hospitals that develop the program, the more vendors will follow. New clinical and non-clinical service availability will allow providing H@H to more patients and treating a wider spectrum of conditions at home.

Number of Hospitals Receiving H@H CMS Waiver per State*



*Publicly reported CMS data as of 12/16/2022

Market Sizing

Beyond CMS

CMS does play a big role in supporting H@H, through collecting data on safety and performance, securing financial sustainability of H@H programs, and supporting providers. Nevertheless, there is H@H beyond CMS:

- VA has been practicing H@H for years and continue to do so, on their own terms and with extensive experience.
- Humana is rapidly expanding its footprint in home care with the acquisition of Kindred at Home last year.
- A relatively large number of payers and providers have their own H@H. Mostly, it's home-to-home programs vs hospital-to-home CMS model.

Benefits

- Solving a lack of hospital capacity
- Ability to quickly respond to an urgent increase of care demand
- Reducing readmission rate by 20%* on average
- Reducing overall cost of utilization
- Recognition as an innovative adopter of new models of care
- Increase in revenue for those organizations under VBC contracts.
- Attracting more patients by offering more convenient line of service
- Reducing total cost of care

Challenges

- Costly and time-consuming program for those who doesn't already have the functionality in place
- To keep H@H sustainable, provider should keep a steady number of patients admitted at any given time
- On average, clinician-to-patient time is higher than in traditional inpatient setting
- Distance between admitted patients can become a serious barrier. In some states travel time between patients can be up to 2 hours
- Internet and cellular connectivity remains challenging in some remote areas
- For providers solely on FFS or with minimal revenue percentage from VBC contracts, keeping H@H sustainable is almost unachievable

Shift to Consumer-Driven Care

- Allows patients to stay in comfort of their home and maintain daily routine with support of family members
- Reduced risk of bacterial and viral infections
- Easier transition to post-discharge stage
- Shared responsibility for the overall condition management outcome/active patient involvement

Product Categories and Descriptions

Buyers' Guide Preview

Caveats and Qualifications

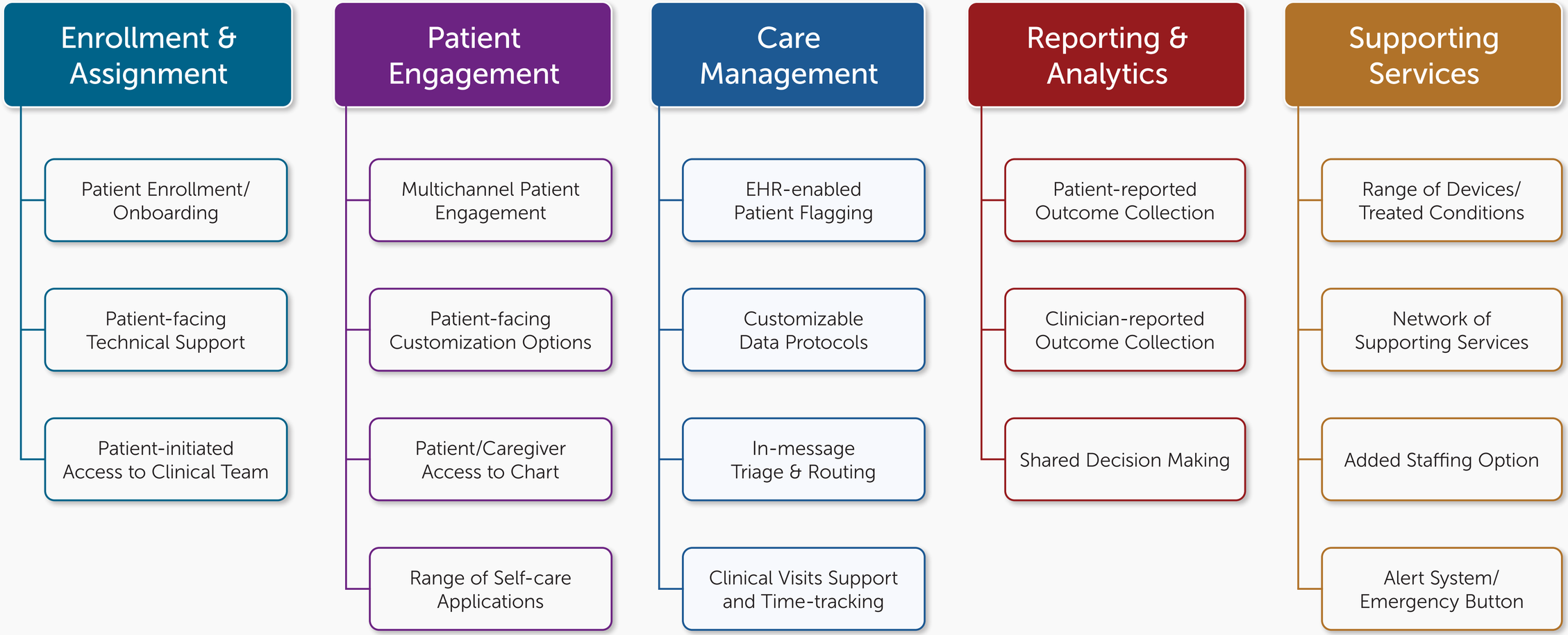
17 Product Capabilities

- Enrollment & Assignment (3 Capabilities)
- Patient Engagement (4 Capabilities)
- Care Management (4 Capabilities)
- Reporting & Analytics (2 Capabilities)
- Supporting Services (4 Capabilities)

Notes

- The product categories we define in this market may not align exactly with existing offerings
- A vendor's offering may combine the functionality defined by us as discrete with other functionalities

Hospital at Home Product Ratings Categories



Enrollment & Assignment

	Innovation	Description
Patient Enrollment/ Onboarding	Omnichannel enrollment through text, voice, video. User-friendly educational materials for successful remote care management.	Tools to screen and educate patients on the hospital at home structure and components of it. Video/audio tutorials on what to expect from H@H, how to properly use RPM devices, other recommendations and protocols based on a specific condition treated.
Patient-facing Technical Support	On-demand 24/7 technical support by chat/voice.	Provide technical support to patients with any questions regarding RPM services, pairing devices, portal access, through the phone/ patient's portals, including chatbots. Includes functions that direct patient activity or assist patients in navigating remote care program. Does not include the aspects of a workflow which routes patient interactions to a provider for review.
Patient-initiated Access to Clinical Team	On-demand immediate access to clinical team through chat/ phone with message triage and escalation.	Tools providing easy patient access to the care team 24/7 for routine and emergency medical questions. Provide remote symptom checking and triage tools using clinical algorithms or AI/ML models.

Patient Engagement

	Innovation	Description
Multichannel Patient Engagement	Real-time and pre-recorded remote encounters to ensure patient engagement and shared responsibility for overall program success.	Includes telephonic, web, and chat encounters as well as pre-recorded tutorials. Notifications and reminders to facilitate care management on patient's side and increase self-discipline.
Patient-facing Customization Options	Personalized application interface.	Creation of a personalized patient approach where patient can select language, frequency and tone for reminders, proffered communication channel.
Patient/Caregiver Patient Portal Access	Real-time patient/caregiver access to patient's information and RPM data.	Data delivery through caregivers' portal, direct share from patient's portal, notifications and updates via cellular. Suggests educational or interactive content based on efficacy. Tools for assisting patient enrollment in clinical trials or experimental treatments or allowing independent patient enrollments.
Range of Self-Care Applications	Tailored self-care applications for treated conditions and a wide range of wellness applications available on demand.	Additional motivational applications for behavioral changes and increased awareness. May include meditative, nutritive, fitness, sleep, and others.

Care Management

	Innovation	Description
EHR-enabled Patient Flagging	Real-time identification of H@H fitting patients based on customized protocol.	Tools flagging prospective H@H patients with SDOH evaluation and available services pairing.
Customizable Data Protocol	Automated update of all condition-specific H@H protocols based on available line of services.	Tools to customize protocols for H@H patient selection, RPM data transmission frequency and personalized criteria for care team alert.
In-message Triage & Routing	Real-time updates and messages to assigned care team with a linked action options.	Communication within the care team. A workflow which routes patient interactions to a provider for review.
Clinical Visits Support and Time-tracking	Navigation clinical visits optimizer for in-home visits.	Coding and billing support for clinical visits and RPM, includes visit time tracking. Enables optimal visit scheduling based on travel time from one patient to another.

	Innovation	Description
Patient-Reported Outcome Collection	Patient responses to changes in status or health.	Allow patients to report symptoms, medication reactions, or changes in status to care teams, and/or prompts patients for feedback at clinically necessary points.
Clinician-Reported Outcome Collection	Clinician feedback on care management and ultimate result of care.	Assists providers or staff with care management overall success evaluation, leverages comments and notes for further improvements.
Shared Decision Making	Provide education, training, or activities to patients as part of an active care program.	Allow patients to review treatment plans, diagnoses, histories and other data. Patient/caregiver access to test and exam results, provider notes. Access to medication list, refills, medication information. Tools for assisting patient enrollment in clinical trials, experimental treatments, or allowing independent patient enrollments.

Supporting Services

	Innovation	Description
Range of RPM Devices	Constant vital signs measurement and transmission.	RPM tools connected to the care platform to manage specific diagnosis/range of specific diagnoses.
Network of Supporting Services	Enables full H@H.	Ability to fully support hospitalization at home, inclusive of labs/tests, meals, therapeutical services and procedures, prescription delivery, transportation, home improvement services, etc.
Added Staffing Options	Full team to service H@H on demand.	Ability to provide extra clinical/non-clinical staffing for H@H when needed.
Alert System/ Emergency Button	30-second reaction time to any emergency request.	Added alerting system and emergency button to the H@H program along with voice, text support.

About the Analyst Team

John Moore Jr. launched Chilmark Research in 2007. From those humble beginnings, John has built Chilmark Research into a respected analyst firm that provides market-leading coverage of the most transformative sectors of healthcare IT. Of great personal interest to John is the role that the consumer will ultimately play in the rapidly evolving healthcare market.

Elena Iakovleva joined the Chilmark Research team in 2022 as a Research Analyst specializing in revenue cycle management and remote patient monitoring initiatives. Her major focus lays in healthcare accessibility and new technologies adoption among payers, providers and patients.

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