



MyPath for Hospital in Home

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MyPath for Hospital in Home Introduction

The COVID-19 pandemic has accelerated the shift to the Future of Health—a future defined by digital transformation and the use of artificial intelligence and machine learning applied to radically interoperable data sets—driving us from health care to well care and enabling the rise of the empowered consumer. Throughout 2020, regulatory barriers, technological blockades, and long-held orthodoxies focused on the patient-provider relationship, site of care, and consumer expectations have been toppled. Though the shift happened almost instantaneously, it has set new expectations for the use of virtual and digital health technologies in patient care. A virtual hospital model can help respond to these ever-changing orthodoxies, offering three main advantages in this new world:

01. Next-gen patient care in the patient's preferred location – at home,
02. Efficient resource allocation, and
03. New revenue opportunities for providers.

Virtual hospital models provide patients with in-patient and nursing home level care at home. These models leverage digital and medical technologies to manage complex clinical models and patient conditions, as well as on-demand responsive logistics to address changing patient circumstances in near real time. Virtual hospital models also provide connectivity for patients and their caregiver(s) to the care team and care plan information. These characteristics make virtual hospital systems a viable care option for a myriad of patients: acutely ill or elderly patients who are at risk for other hospital-borne infections, low-acuity patients who require limited physician intervention and prefer the comforts

of their own homes, and higher-acuity patients who can move to their homes for post-case monitoring.

We can imagine a scenario in the near future which functions as follows. Patients are first identified as potential candidates for a virtual hospital model based on their condition, acuity level, geography, and home compatibility. Once their virtual hospital experience is activated, the virtual care team uses patient-specific wearables and devices installed in the patient's home to track the patient's vital signs and health indicators in real time. In the event of an emerging medical need, providers can take advantage of a deployable health team escalating from traditional home health care to physicians on call to rapidly dispatch EMS teams. Additionally, the team can provide and install additional clinical and non-clinical equipment required by the patient, which is managed through a multi-layered network supply chain. Experience with home health points to this being a model which is accepted by patients and achieves strong outcomes. For example, only 16% of patients in a Medicare home health system experienced readmission to the hospital within 60 days, and patients were overwhelmingly satisfied with their overall care (Forum on Aging, Disability, and Independence et. al).¹

Virtual hospital systems are the future to managing patients in an appropriate setting, creating a better patient experience, improving health outcomes, and managing costs appropriately. In order to fully step into the Future of Health, payers and providers need to work together to enable the development of effective, affordable virtual hospital systems.

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Overview of MyPath for Hospital in Home Solution by ConvergeHEALTH

Deloitte has developed a solution to help health systems bring about this new model of care, accelerating them into the Future of Health. The MyPath for Hospital in Home (MPHiH) solution is a virtual hospital ecosystem of capabilities that allows provider organizations to care for certain level acuity patients in the patient's own home.

Each organization will need to consider how the MyPath for Hospital in Home solution integrates with current systems and workflows in addition to defining the scope of the conditions that they will cover as a part of the solution.

The MyPath for Hospital in Home solution includes much more than physical technology and analytics. The solution requires seven capabilities, including the integration of the solution into an organization's existing technology systems, workflows, and supply chain in order to create an integrated patient and provider experience.

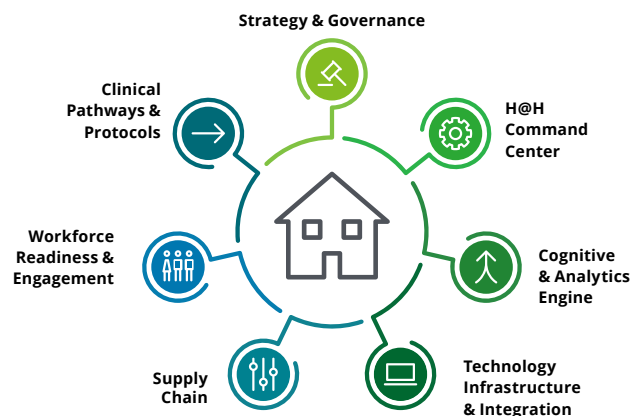
- **MyPath for Hospital in Home Strategy & Governance:** Organization leadership aligns on development of long-term business model, program vision, and governance structure for an integrated solution.
- **MyPath for Hospital in Home Command Center:** The command center is an integral part of a Hospital in Home solution. Provider organizations define the criteria by which patients will be triaged into the program—such as patient geography, home type, and care needs—and a pilot is recommended with low acuity conditions such as pneumonia, cellulitis, or respiratory infections.

The command center systems are integrated to allow for remote monitoring, coordination of supplies and services, and analytics, and create a flexible staffing model to keep clinical and IT resources working 24/7. Command center staff is responsible for onboarding patients into the program, monitoring patient health status, rounding, and getting supplies to the patient as required.

- **MyPath for Hospital in Home Cognitive & Analytics Engine:** The command center and supply chain are supported by a cognitive and analytics engine. The engine drives insights on identification, stratification, intelligent routing, geospatial mapping, population health, and outcomes. It allows for alert monitoring and risk scoring of the patient population to provide decision support to the command center.
- **MyPath for Hospital in Home Technology Infrastructure & Integration:** The technology infrastructure encompasses digital and virtual modules that integrate with electronic health records (EHR) and offer enhanced data management and analytics capabilities for a differentiated experience. The infrastructure has been defined to provide scalability across the organization and the required logistics to enable other capabilities.

- **MyPath for Hospital in Home Supply Chain:** The supply chain leverages data science to enhance resourcing and provisions plans to deploy resources and supplies across the network. A contracting plan needs to be outlined to effectively procure, supply, and install tools and resources. This is an integral part of the solution so that the organization can get resources, supplies, and infrastructure to the desired place on time.
- **MyPath for Hospital in Home Workforce Readiness & Engagement:** The alignment of clinicians and staff, and the development and/or extension of workflows is critical. Organizations identify staffing availability and requirements to develop a staffing model which enables the MyPath for Hospital in Home solution 24/7. Additionally, a change management plan to align staff across the organization to this new model of care is required.
- **MyPath for Hospital in Home Clinical Protocols & Pathways:** Finally, organizations may need to create or update clinical pathways, training protocols, and processes to guide care delivery in this new model. This will require alignment with clinical leadership to prioritize future disease states, the creation of flexible pathways to provide care, and collaboration with IT to integrate these updates into the EHR.

MyPath for Hospital in Home



In addition to these capabilities, organizations need to consider how they will respond to emerging medical circumstances beyond the scope of the command center. An on-the-ground health team should coordinate resources in the command center to enable quick response when needed. The makeup of may vary by organization, but could include home health workers, clinicians on call, or emergency resources.

MyPath for Hospital in Home Ecosystem and Experience

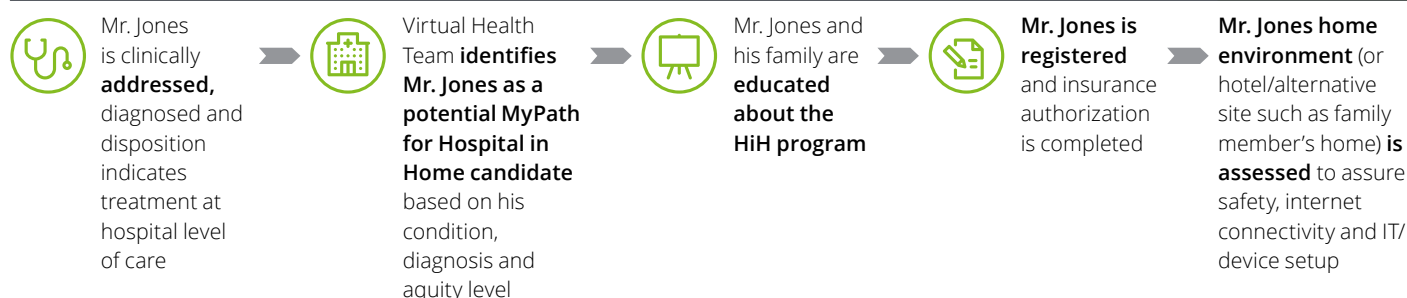
Deloitte has the technology, services, and experience to help organizations understand the virtual health ecosystem and design and implement the MyPath for Hospital in Home solution based on organizational requirements. Many of the seven required capabilities are similar to those needed to enable a virtual health ecosystem, however the MyPath for Hospital in Home solution's command center and supply chain capabilities are added to provide a decision support and logistics layer to care for and treat patients in their own home.

The MyPath for Hospital in Home solution integrates scalable technology built upon Deloitte's ConvergeHEALTH patient engagement and analytics platforms and integrates with devices that are already in market and FDA-approved. The solution has

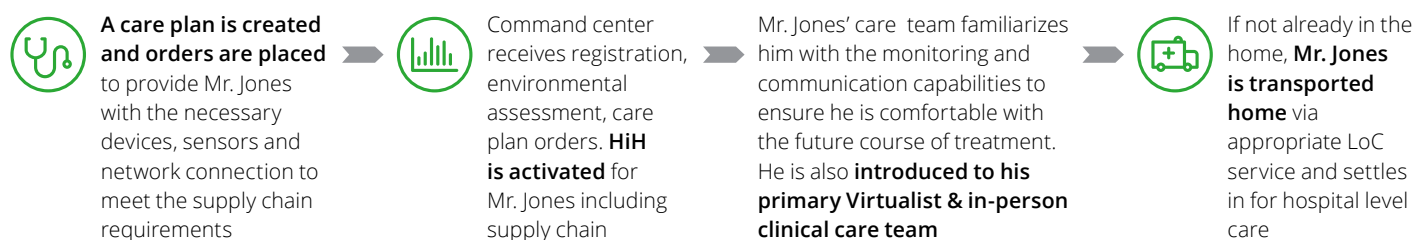
a modular, cloud-based architecture allowing integration with existing EHR, medical health record (MHR), and enterprise resource planning (ERP) systems. It also makes use of Deloitte's relationships with a large ecosystem of technology, analytics, and logistics focused companies. By bringing together these capabilities and relationships, our clients can become ecosystem conveners, as opposed to owning multiple disparate assets. This helps to create a frictionless transition between care settings for both the patient and provider.

MyPath for Hospital in Home integrates into the daily life of patients, from enrollment to discharge. Let's explore how MPHHiH powers – and empowers – Mr. Jones's patient journey:

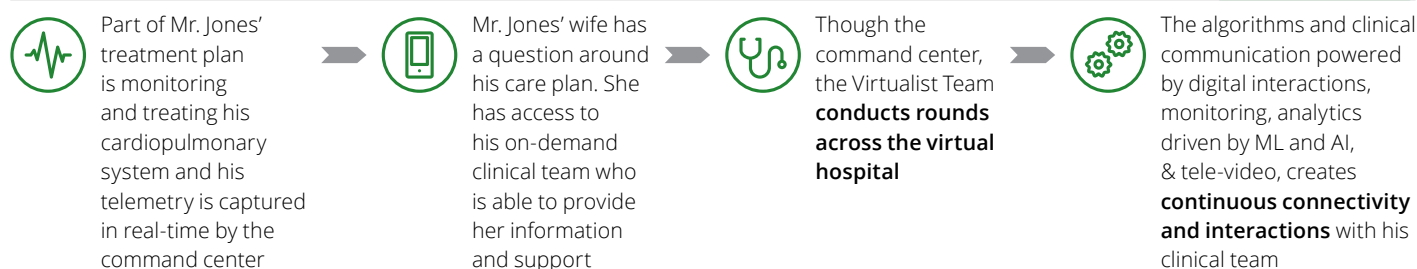
Assessment & Enrollment



Admission

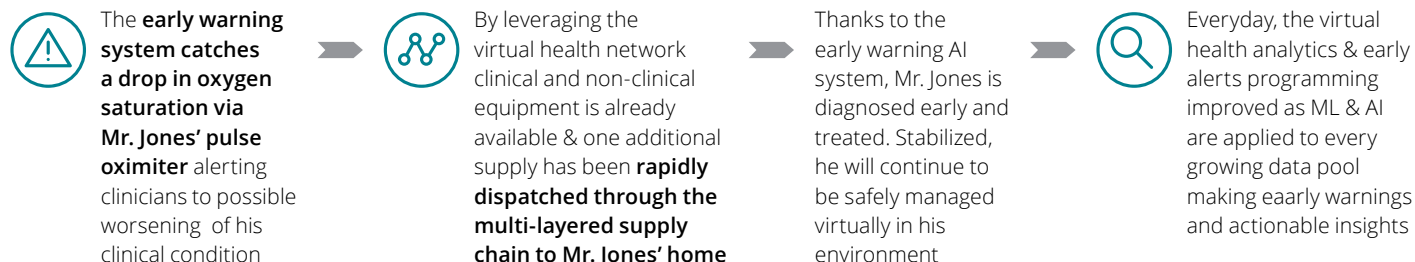


Experience



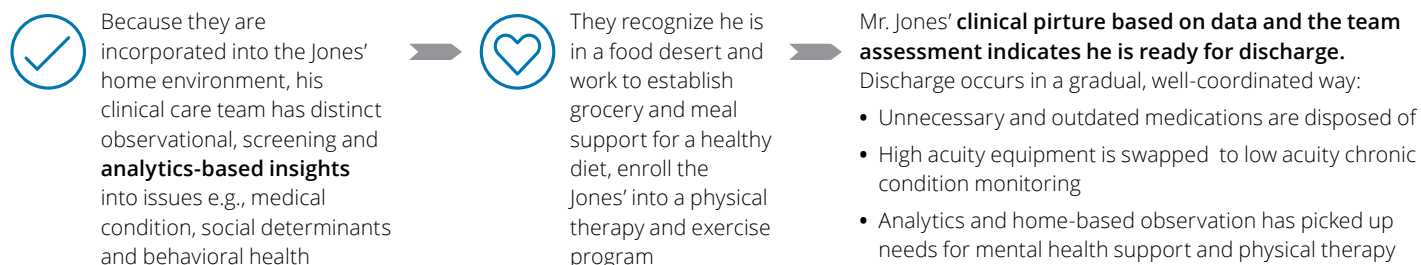
Managing an Emergency

Step 4



Gradual Discharge

Step 5



Thanks to the MyPath for Hospital in Home solution and ecosystem of capabilities, Mr. Jones is able to be cared for and recover in the comfort of his own home. He was glad to have direct access to his care team, thankful for the quick response to his care emergency, and happy that certain drivers of health were considered.

The consideration around drivers of health—the social, economic, and environmental factors that influence health outcomes, an area also known as the social determinants of health (Bacá)²—is very important as organizations build virtual health capabilities. It is imperative that digital offerings, such as MyPath for Hospital in Home, do not further exacerbate disparities prevalent in both urban and rural settings across vulnerable populations. For example, 33% of rural Americans lack access to high-speed broadband Internet to enable video-based telehealth visits (Hirko et al.)³ Additionally, 27% of Americans aged 65+ report not using the internet (Anderson et al.)⁴

Finally, 25% of Hispanic or Black children do not have a computer at home, as compared to 10% of white children (US Census Bureau)⁵ and inpatient portals were less used among African American and older patients relative to white / younger patients, demonstrating both a racial and age divide (Lagasse).⁶ These disparities can make it very difficult to reach disadvantaged populations with digital offerings and if not properly addressed and strategized against, technology can lead to increased health care disparities. Organizations play a major role in their community and should consider how a digital solution like MyPath for Hospital in Home can reach a larger portion of their population. Deloitte is well positioned to provide guidance on how to address disparities through our Activating Equity practice as it is imperative that the Future of Health does not exacerbate disparities but rather extends health care to communities and provides equitable access to care.



Financial Implications of MyPath for Hospital in Home

Deloitte estimates the potential addressable market for Hospital in Home as a length of stay / post-acute disruptor ranges from \$60-70 Billion

From a financial perspective, the COVID-19 pandemic led to an initial nosedive in patient volumes and a shift in payer mix that have driven a decrease in revenues for health care providers. In response, providers have been forced to implement short staffing and furloughs in attempts to maintain margin. To illustrate, non-urgent procedure volumes in April 2020 were only 16% of the previous year (Betts)⁷ and provider organizations saw EBITDA margins of -19% in April of 2020, a 174% decrease (Lagasse)⁸ from the same time last year.

A virtual hospital model shows a strong opportunity to counteract these effects. Specifically, Deloitte estimates the potential addressable market for Hospital in Home

as a length of stay / post-acute disruptor ranges from \$60-70 Billion, with the main financial opportunities deriving from:

- Disruption of the post-acute / SNF care market
- Reduction in length of stay

In 2018, post-acute 2018 Medicare FFS spend totaled \$58B. The MyPath for Hospital in Home model has the opportunity to disrupt the post-acute care market and allow health care providers to gain market share within this addressable market. Notably, our model predicts that MyPath to Hospital in Home can operate at a cost level that is at least 10% lower than traditional SNF / LTAC / IRF settings, which could give providers an edge in this

competitive setting. Additionally, though not included in our model, there may be a cost-saving opportunity in preventing hospitalization for many patients, which helps to better manage total medical expenses and allows patients to be cared for in a more preferable environment.

The MyPath for Hospital in Home solution provides health care organizations with a financially viable care model that can help to counteract some effects of the COVID-19 pandemic by acting as a disruptor of traditional post-acute care, reducing total hospital length of stay, and attaining a significant revenue boost for organizations based on the ability to backfill beds with a higher acuity patients.

Conclusion

Virtual hospital models are an opportunity for health care organizations to transform the delivery of patient care and step into the Future of Health. The MyPath for Hospital in Home solution provides a breadth of capabilities that allow organizations to create a safe, patient-centric care experience in the home to better cater to the patient while creating new financial opportunities for the provider. The solution leverages ConvergeHEALTH's patient engagement and analytics platforms and a third-party technology ecosystem to provide remote monitoring, virtual appointments, and in-person care visits. These capabilities integrate into the patient's daily life, helping to improve outcomes, enhance patient and clinician experience, and provide a new revenue source for the provider organization.

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