The Role of High Acuity Care in the Home During the COVID-19 Public Health Emergency:
| Overview, Outcomes and Outlook

dispatchhealth®
In 2013 we set out to create the infrastructure to deliver high-acuity healthcare effectively and safely in the home. Little did we know a global pandemic would paralyze our industry in the next six years - magnifying the need for this transformative shift in delivery.

For nearly two decades prior to the inception of DispatchHealth, I witnessed the shortcomings of our healthcare system while working as an emergency room physician, and first-hand with my family members—this line of sight fueled an adaptive strategy already working effectively in other countries. Our plan was to place emergency room level providers, practicing at the top of their license, in patients’ homes with the tools and technology to treat much of what I was encountering day in and day out in the hospital setting. This shift would produce a better experience for the provider and the patients, better outcomes, and lower costs, significantly impacting healthcare in this country.

COVID-19 spawned a tsunami of logistical complications for hospitals and health systems. But, having a firm stake in the ground pre-pandemic, with teams in multiple markets across the country and several payer and health system partnerships, DispatchHealth found itself with a unique opportunity. The distributed healthcare ecosystem we were building would become a lifeline and change the well-being trajectory for more than a million patients nationwide.
Introduction

On January 31, 2020, the Department of Health and Human Services declared a public health emergency. Before long, COVID-19 was wreaking havoc, and by mid-March, the World Health Organization declared a global pandemic. Soon the United States healthcare system would be overwhelmed with an unprecedented number of patients suffering life-threatening complications without the resources to care for them.

Bed rationing became a reality, and news of patients dying of rarely fatal illnesses dominated the airwaves. In addition, with our nation on lockdown, primary care resources became extremely limited, and with hospitals predominantly treating COVID-19 infections, it became challenging for many Americans to meet their healthcare needs.

At a time when others in the industry were dialing back services, DispatchHealth significantly expanded its presence, more than doubling its national footprint in 2020. DispatchHealth entered more than two dozen new geographic markets throughout the pandemic, with 21 additional health system partnerships and more than 100 new payer contracts. The ability to bring hospital-level care to patients at home perfectly positioned DispatchHealth to address many early and ongoing needs. For example, in Washington state, the epicenter of the initial outbreak, Pierce County public health officials partnered with DispatchHealth to set up its first community testing and vaccination locations, with over 1,000 daily tests. Then, in March 2020, Colorado saw its first COVID-19 diagnosis – a man in his 30s who came to Summit County on a ski trip.

COVID-19 Impact at a Glance
(Jan. 2020 - April 2023)

189,139 COVID patients treated

202,018 COVID tests administered

55.7% of patients had at least one comorbidity

47.4% of visits occurred after hours

50% ED diversion for top 10 payer partners

53.4% ED diversion for top 10 partners overall

$16+ million in cost savings for top 10 payer partners
Without processes in place, local hospitals hesitated to admit him. Still, because DispatchHealth could bring the hospital’s power to the patient in his hotel room, DispatchHealth chief medical officer Dr. Phil Mitchell treated Colorado’s first patient. Then in December of 2020, before vaccines were available and international travel was minimal, DispatchHealth answered the call of worldwide carrier Delta Airlines to stand up a COVID-19 testing location within Atlanta’s Hartsfield-Jackson International Airport for passengers on direct flights to Amsterdam and Rome. In a few short weeks, leaders designed and implemented CDC-approved protocols to make it happen and organized the DispatchHealth medical staffing necessary to support the forward-thinking initiative. At the time, Delta’s senior vice president of international travel, Perry Cantarutti, said he hoped the program would be a blueprint for reopening more international travel.

While the end of the emergency phase of the COVID-19 crisis closes a chapter in history, both the World Health Organization and the White House have made it clear that the virus is here to stay, and therefore a more profound understanding of how high acuity healthcare in the home addresses many industry challenges is advantageous. This white paper examines how DispatchHealth’s unique model of care was applied nationwide to address the needs of patients, providers, and payers during the COVID-19 public health emergency.

**New Solutions for New Challenges**

Beyond the nearly 200 thousand COVID-19 patients treated and more than 200 thousand tests administered, DispatchHealth’s most significant impact was the ability to address the unmet needs of hundreds of thousands of Americans with other injuries and illnesses — complex patients facing access challenges or those like 83-year-old Jim Petersen who avoided leaving home out of fear of exposure. As a result, DispatchHealth could administer critical care from his living room recliner when Petersen had pneumonia. In a media interview, Petersen remarked, “In plain English, there’s no place like home.”

Throughout the public health emergency, DispatchHealth delivered home-based high-acuity medical care for nearly 700 thousand patients, almost half a million requiring
emergency room-level services. From pediatrics to geriatrics patients, providers treated conditions like influenza, pneumonia, other respiratory viruses, urinary tract infections, skin infections, lacerations, worsening congestive heart failure, COPD, migraines, and more. Addressing this vulnerable population helped to address capacity constraints and accompanying provider fatigue at healthcare facilities nationwide. But, it also served as a lifeline for patients in desperate need of medical attention during a time of very scarce resources.

In an interview with Forbes magazine, DispatchHealth co-founder and CEO Dr. Mark Prather said, “Without a doubt, these programs address capacity and caregiver fatigue issues. In addition, COVID-19 has raised awareness of the possibilities and value of in-home care broadly, as well as the inequity of care for some of our homebound and access-challenged populations.”

NEW SOLUTIONS FOR NEW CHALLENGES

Access, Delivery and Deferral of Nonemergency & Routine Medical Care

According to data compiled by the Centers for Disease Control and Prevention, by June 30, 2020, 41% of U.S. adults had delayed or avoided medical care because of the public health emergency. For some patients, this created increased morbidity and mortality risks associated with treatable and preventable health conditions.

As providers and consumers sought ways to give and receive care safely, telehealth usage increased dramatically. According to global healthcare consultant McKinsey and Company, overall utilization was 78 times higher in February 2020 than in April of the same year. Still, while an impactful way to connect patients and their providers, the inability to treat more complex and urgent conditions beyond the scope of telemedicine left many vulnerable.

PARTNER:
MultiCare Health System

In Washington, epicenter of the U.S. coronavirus outbreak, the state’s most extensive community-based non-profit health system MultiCare, worked with DispatchHealth to establish a vital program addressing fear-based deferral of nonemergency and routine medical care, as well as access challenges that accompanied limited clinic appointments and closures, for its most at risk, frail patient population.
Dr. Darin Eckert is a family physician practicing in MultiCare’s Rockwood Clinic - Quail Run and says the need was clear, “We’ve been doing virtual visits, but some of these patients have multiple chronic conditions, heart failure, COPD, diabetes, and often they need a physical exam. So we need to see if they’re having complications from these.”

What transpired was a first-of-its-kind program to address these challenges and areas where virtual care had previously fallen short.

**SOLUTIONS: Clinic Without Walls**

MultiCare’s Clinic Without Walls program elevates virtual visits by combining state-of-the-art technology with the art of the human connection, empowering MultiCare primary care physicians in Olympia, Spokane, and Tacoma, Washington, to treat their patients remotely with a window into their home life for better whole-person care. Dr. Eckert says, “My older and more vulnerable patients felt safer knowing they could receive the attention and care needed for acute and chronic issues without the fear of exposure early in the pandemic. They were appreciative.”

During a Clinic Without Walls visit, an appropriately certified DispatchHealth medical technician arrives equipped with advanced technology that sends real-time ear, nose, and throat images back to the treating physician; a patient’s heart, lung, and abdomen sounds are also accessible. The in-person technician can perform point-of-care lab work to assess conditions such as diabetes, renal failure, or anemia. In addition, the technician can obtain electrolyte results,

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*Dr. Darin Eckert*

*Family physician practicing in MultiCare’s Rockwood Clinic - Quail Run*
complete flu and COVID-19 testing, urinalysis, and run advanced tests like an EKG or order imaging via mobile radiology if necessary. Christi McCarren, former SVP of Retail Health and Community-Based Care at MultiCare, suggests, “From where a primary care doctor sits, knowing that there’s someone who can physically lay eyes on a patient they’re worried about makes them rest easy.”

A snapshot of 2022 data revealed important results - 254 high-complexity patients, among three primary care physicians, received care at home in Spokane and Olympia. The average age of patients was 78, with a near-equal split of men and women with an average of 15 comorbidities each. Common conditions seen during the sample period include Pneumonia, COPD, heart failure exacerbation, and complications of diabetes. In addition, patient satisfaction reached unprecedented levels, with an average Press Ganey score above the 90th percentile. For Dr. Eckert, remaining engaged with his sickest patients was vital, “I’m so appreciative of this opportunity to bring comprehensive care to my patients during the pandemic – it has been a privilege.”

The partnership enabled MultiCare, a health system with more than a centuries-long legacy of excellence, longitudinal primary care to create better patient access while focusing on a superior patient experience. As a result, Clinic Without Walls has made a life-changing difference for MultiCare’s most vulnerable patients, who have chronic conditions and require complex care. Dr. Eckert adds, “Coming into the office for care remains a hardship for a select subset of my patients with disabilities. The ability to offer a full spectrum of care via the enhanced virtual visit allows me to take better care of them by seeing them more often. Given their physical or cognitive challenges, many of these patients cannot easily follow up with in-person visits. Using this unique, virtual option to care for these patients allows me to bring my care to them, creating an opportunity for better, more timely care, which gives me a much greater opportunity to minimize disease progression and prevent the unnecessary complications which are likely to occur with a delay in care and follow up.”

NEW SOLUTIONS FOR NEW CHALLENGES

Capacity Constrained Hospital Emergency Rooms

Overcrowded emergency departments had been a topic of concern pre-pandemic. Leading up to the public health emergency, the measured volume of patients visiting their local emergency room had increased by more than 60% over the late 90s1. While wait times and patient volume dipped at the start of the pandemic,
COVID-19 has only intensified factors associated with crowding, increased wait times, and lengths of stay, which significantly impact patient morbidity and mortality, medical errors, staff burnout, and cost.

PARTNER:

Inova Health System

Inova is Northern Virginia’s leading nonprofit healthcare provider - known for its world-class care. Inova serves more than 2 million individuals annually through an integrated network of hospitals, primary and specialty care practices, emergency and urgent care centers, outpatient services and destination institutes. Inova’s five hospitals are consistently recognized by the Centers for Medicare and Medicaid Services (CMS), U.S. News & World Report Best Hospitals and Leapfrog Hospital Safety Grades for excellence in healthcare. And Inova is home to Northern Virginia’s only Level 1 Trauma Center and Level 4 Neonatal Intensive Care Unit.

Finding an innovative solution to the influx of patients prompted the health system to partner with DispatchHealth on a solution. In late 2021, DispatchHealth’s in-home high acuity healthcare services became available to qualified patients. And on the heels of its success, two timely capacity management initiatives were created, COVID-to-Home and ED-to-Home, both of which were instrumental in helping decant emergency room volume and save valuable bed space for the sickest Northern Virginia patients.

SOLUTIONS: ED-to-Home

“During the COVID-19 Omicron peak, we were full in the emergency department - we needed to begin thinking about alternative ways to expand our capacity long term,” explains Tanveer Gaibi, MD, MBA, Inova System Division Chief of Emergency Medicine.

The ED-to-Home collaboration was set up to serve stabilized patients dealing with conditions that qualify for treatment and recovery at home, with the understanding that an in-home follow-up evaluation and care from a DispatchHealth provider would occur soon after discharge.
Dr. Gaibi says, “Our physician and operational leaders within Inova felt that ED-to-Home was the right thing to do. We had to find alternate ways to create capacity.”

In addition to reducing emergency department capacity, the program aimed(s) to reduce post-discharge bounce-backs and emergency department recidivism. Primary conditions treated as part of the ED-to-Home transitional care program include congestive heart failure, urinary tract infections, dehydration, asthma and COPD, cellulitis, COVID-19 and pneumonia.

ED-to-Home visits include a full medical history, physical exam, symptom management, and medication reconciliation. DispatchHealth providers can perform point-of-care labs, medication administration, IV fluids, wound care, catheter management, EKGs and much more. Clinicians also conduct health literacy and social determinants of health assessments and ensure that the patient has a follow-up primary care physician or specialist visit scheduled.

Dr. Gaibi adds, “Patients are getting really good care. We have a net promoter score of 96 from ED-to-Home patients. DispatchHealth provides another tool in the toolkit as we are forced to reimagine healthcare.”

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Tanveer Gaibi, MD, MBA
Inova System Division Chief of Emergency Medicine

SOLUTIONS: COVID-to-Home

On the heels of early success with ED-to-Home, the wave of patients needing care with the introduction of the Omicron variant prompted Inova and DispatchHealth to partner on COVID-to-Home. Earlier in the pandemic, hospitalization occurred for patients requiring oxygen therapy and monitoring; this program allowed patients to recover at home - this was a win for the patient in terms of comfort and overall capacity in the emergency department and inpatient units.
Patients were sent home with an oxygen concentrator, portable oxygen tank, and pulse ox monitor. They received a phone call from DispatchHealth’s virtual nurse team within four hours of arriving home to ensure they could remain at home overnight. The following day, DispatchHealth providers visited patients at home to evaluate their overall status, provide symptom management, and ensure they understood how to manage their condition at home. A registered nurse with DispatchHealth continued to support the patient virtually for the next two weeks with daily call or text check-ins to review symptoms and offer reassurance and education. Patients also had access to DispatchHealth’s 24/7 virtual nurse team for any changes in condition, questions, concerns, or support in returning to the emergency department when symptoms warranted. In addition, DispatchHealth’s virtual nurse team implemented an oxygen-weaning protocol on all patients to ensure their recovery was progressing appropriately, as well as coordinated directly with the patient’s primary care physician for ease of transitioning the patient back to community-based care.

The most significant outcome of the rapidly implemented COVID-to-Home solution was the patient and family experience with a net promotor score of 100 (80% response rate). By March 2021, there was a better understanding of the COVID-19 disease process and treatments; still, the fear of being diagnosed and sent home on oxygen was high. One patient commented, “The people were great to talk to about what was happening with my mom. Mom wanted to be home but got sick and had to go back in, having the nurses call and ask questions helped a lot.”

**NEW SOLUTIONS FOR NEW CHALLENGES**

**At-Home Hospitalization Alternative**

In the years leading up to the pandemic, healthcare insiders were becoming increasingly aware that a hospital stay could result in substantial deconditioning and debilitating nosocomial infections for vulnerable populations – elderly patients, for example, are at higher risk of hospital-acquired infections and cognitive impairments. Furthermore, with our nation’s medical spending reaching unsustainable levels ($4 trillion), opportunities to treat patients at a lower cost with the potential for better outcomes and higher patient satisfaction became extremely attractive for the treatment of patients suffering illnesses such as pneumonia, urinary tract infections, or exacerbations of conditions like heart failure or chronic obstructive pulmonary disease (COPD).

Enter the public health emergency, hospital capacity at crisis levels created dangerous levels of stagnation in the waiting rooms of hospital emergency departments. Yale researchers examined capacity data between January 2020
and December 2021 and found the median time patients waited in the emergency department for an in-patient bed was 6.58 hours, well above the four-hour benchmark set by the Joint Commission. As a result, in November 2020, the Centers for Medicare and Medicaid Services (CMS) implemented the Acute Hospital Care at Home waiver, paving the way for Americans with government-backed healthcare programs to receive hospital-level care at home for specific, approved conditions. Shortly thereafter, private payers would follow suit.

PARTNER:
Humana Inc.

SOLUTION: Advanced Care

In February 2021, Humana Inc. partnered with DispatchHealth on a first-of-its-kind agreement with a national payer to provide advanced levels of in-home care, as an alternative to hospitalization, for Medicare Advantage members living in Denver, Phoenix, Houston, Dallas, Fort Worth, Las Vegas, Atlanta, Richmond, and Tacoma. Early indications from a review of DispatchHealth internal data are positive.

In an interview with Home Healthcare News, Susan Diamond, Humana’s CFO and past president of Humana’s home business stated, “From a dollar-and-cents perspective, we will see lower readmissions and less need for post-acute care. This program takes more of a 30-day episode of care approach.” DispatchHealth

The agreement enhances Humana’s holistic approach to patient care and empowers clinicians to go beyond traditional clinical treatment. Humana and DispatchHealth are focused on improving the overall home care experience and health outcomes by allowing individuals to remain at home while also empowering the medical team to identify and address patient needs, including social determinants of health.

Susan Diamond
CFO and past president of Humana’s home business
Humana members with conditions such as cellulitis and urinary tract infections, chronic obstructive pulmonary disease, heart failure, and many others can be treated safely at home and avoid hospital visits. Members who meet the clinical admission criteria have access to an on-call dedicated DispatchHealth medical team, which includes an internal medicine-trained physician with emergency room experience and a physician assistant or nurse practitioner. Patients receive 24/7 physician coverage with remote monitoring, an emergency call button, and daily visits from DispatchHealth’s medical team, including bedside nursing.

Diamond adds, “The agreement enhances Humana’s holistic approach to patient care and empowers clinicians to go beyond traditional clinical treatment. Together we will improve the overall home care experience and health outcomes by allowing individuals to remain at home while empowering the medical team to identify and address patient needs, including social determinants of health.”

PARTNER:
Ohio State University Wexner Medical Center

SOLUTION: CMS Waiver Support

Among the many health systems across the county that have applied for the CMS waiver to offer an alternative to facility-based hospitalization, Ohio State University Wexner Medical Center partnered with DispatchHealth to care for its qualified Medicare patients at home. In a podcast interview, one of the program’s initial patients, 76-year-old Mary, said, “I had gone to an Ohio State walk-in clinic, and my oxygen level was in the 70s, so they sent me to the hospital. And then they came to me and said we’re enrolling you in this hospital-at-home program. Do you want to do that? I said of course!” Mary shared her delight in enjoying everyday activities while hospitalized in her environment, “I remember asking them if I could feed my birds, and they said, of course, you can feed the birds out on the patio.” And Chief Administrative Officer of OSU’s hospital-at-home program, Rachit Thariani, adds this program also addresses capacity issues “by caring for patients in the home and freeing up a hospital bed for somebody who needs to be in a hospital bed.”
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Rachit Thariani,  
*Chief Administrative Officer of OSU’s hospital-at-home program*

**Good Work Gets Noticed**

DispatchHealth has been recognized by the local and national media for bringing the power of the hospital to the comfort of home. News coverage included stories from [Forbes](https://www.forbes.com), [NPR](https://www.npr.org), [CBS Colorado](https://www.cbscolorado.com) and [Local 9 News KUSA](https://www.kusa.com).

**Looking Ahead**

The COVID-19 crisis spotlighted the fragility of the U.S. healthcare industry and the challenge of achieving equitable access to care. It also served as a stark reminder that treatment delays accompanying overcrowded emergency rooms can lead to higher morbidity and mortality rates, increased violence toward staff, elevated levels of clinician burnout, and higher turnover among hospital staff. Throughout the public health emergency, healthcare practitioners often had to make dramatic adjustments. As a result, the industry has an open window of opportunity to look, listen, and see where adjustments have resulted in improvements – high acuity healthcare delivered to patients at home being among the most significant.

As we learned, creating infrastructure that recognizes the home as a viable location for the delivery of high-acuity care empowers payers and providers with the resources to flexibly respond to the medical and social needs of patients, whereby the needs of those facing care management challenges, who are at the highest risk of poor outcomes, are addressed. First, however, we must advance on the adaptive strategies and momentum gained during the COVID-19 pandemic to support the progress.
On the heels of the public health emergency, Included Health and DispatchHealth partnered on a unique, virtual-to-home care offering to supplement the care that begins online with on-demand, in-home support. This augmented offering will activate the home as a setting to treat everything from common to complex injuries, illnesses, and diseases. In addition, it offers excellent promise for reducing unnecessary emergency department visits and better-managing interventions for patients with chronic conditions. “Connecting virtual-first care to a network of experts who can bring urgent medical services into the home is about serving people’s preferences and needs first while also better managing the journey and cost of healthcare overall,” said Dr. Ami Parekh, chief health officer for Included Health. “Working with DispatchHealth is an incredible extension to our service, one that will remove the friction, travel, and stress associated with visiting a resource-strained emergency room or urgent care center and allow our members to be treated and recover in an often-preferred setting – the home.”

Today DispatchHealth delivers advanced medical care to patients, in their home environment, in 34 states and is the largest provider to offer alternatives to hospitalization.

[sources]


2. Reuters — Omicron subvariant XBB jumps to 18% of U.S. COVID cases – CDC — National Inpatient Hospital Costs: The Most Expensive Conditions by Payer, 2017 #261 (ahrq.gov)