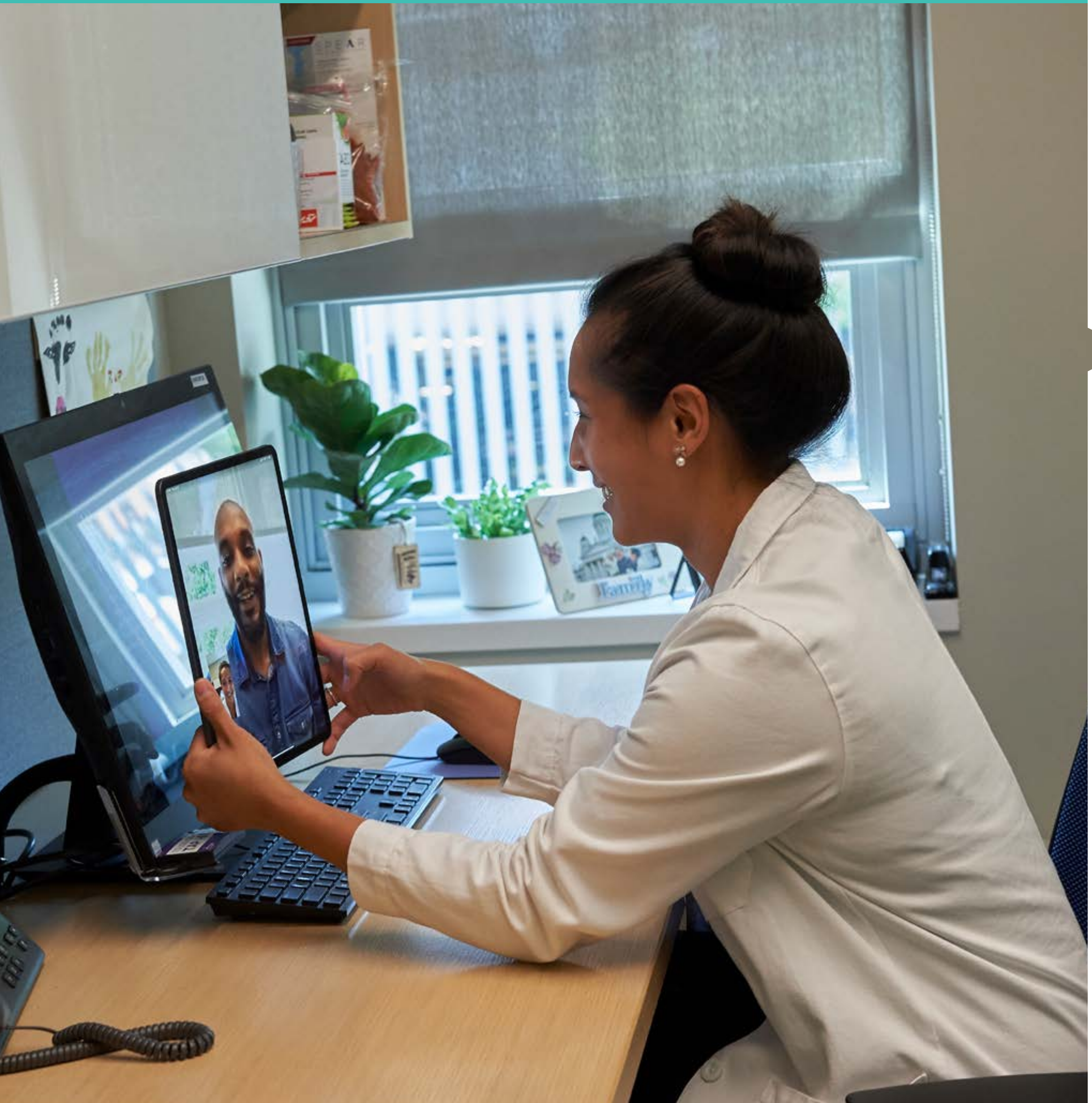


HEALING AT HOME: THE FUTURE OF VIRTUAL CARE AT NYU LANGONE

A REPORT FOR THE
NANDANSONS CHARITABLE FOUNDATION





NYU Langone Health launched its first virtual urgent care program in 2017—a pilot project initially offered to employees and their families. The inherent value of the platform was clear: Data showed that for certain common ailments, seeing one’s provider in the office was often less consequential than obtaining a speedy and reliable appointment or diagnosis.

The Nandansons Charitable Foundation first partnered with NYU Langone a year later to build out that platform and expand virtual care to include children in addition to their families. We now know concretely that virtual care not only makes it easier to find and obtain medical care, but also offers many broad and tangible benefits as a population health management strategy.

In March of this year, NYU Langone found itself at the epicenter of the COVID-19 pandemic, one of the greatest public health challenges of our time. At a moment when the best course of action for most patients was to remain at home, NYU Langone heavily leveraged the virtual care systems the Foundation helped create and expanded them to meet the outsize needs of the New York region’s large and diverse patient population. The ongoing COVID crisis has laid bare the critical value of telehealth services and opened the door for new opportunities to expand and improve upon current home-based care. Today, we are once again in the pilot phase of a new, remote-monitoring program that, if successful, will make it even easier for our patients and their doctors to assess and track their health without a trip to the hospital. Already, you’ve laid the groundwork for our overarching vision for the future of virtual medicine. We are delighted to share highlights on progress you’ve enabled, and we hope you will once again partner with us to make that vision a reality.

VIRTUAL URGENT CARE AND THE COVID-19 CRISIS

In the last six months, the coronavirus pandemic has deeply impacted nearly every aspect of our lives and, in particular, the medical institutions entrusted to care for them.

Beginning in December, NYU Langone began preparations for the need we knew would come and moved rapidly to adapt, innovate, and reprioritize to best care for all of our patients and the communities in which we operate. As New York quickly became the epicenter of the pandemic, and the number of patients began to swell at our facilities, we sought better avenues to diagnose and treat more patients and do so in a way consistent with our best disease-prevention strategy: social distancing.

Rapid Expansion of Virtual Services

Almost overnight, virtual care became a linchpin of our COVID-19 response. In the span of just one week in March, we launched a full-service, 24-hour virtual visit platform that was built, critically, on the technology we designed for our virtual urgent care service. During the same period, we also acted swiftly to dramatically expand the number of virtual care providers from 20 to 1,300 clinicians to help evaluate, diagnose and treat patients with COVID-19. At the height of the crisis, the extraordinary growth in staffing, hours, and virtual technology led to a ten-fold increase in virtual urgent care visits overall and an average of approximately 5,500 virtual visits per day. Between April 16 and 29 alone, we conducted 52,683 of these visits and an average of 5,000 non-emergent telehealth visits daily. And although our primary responsibility was the expansion of

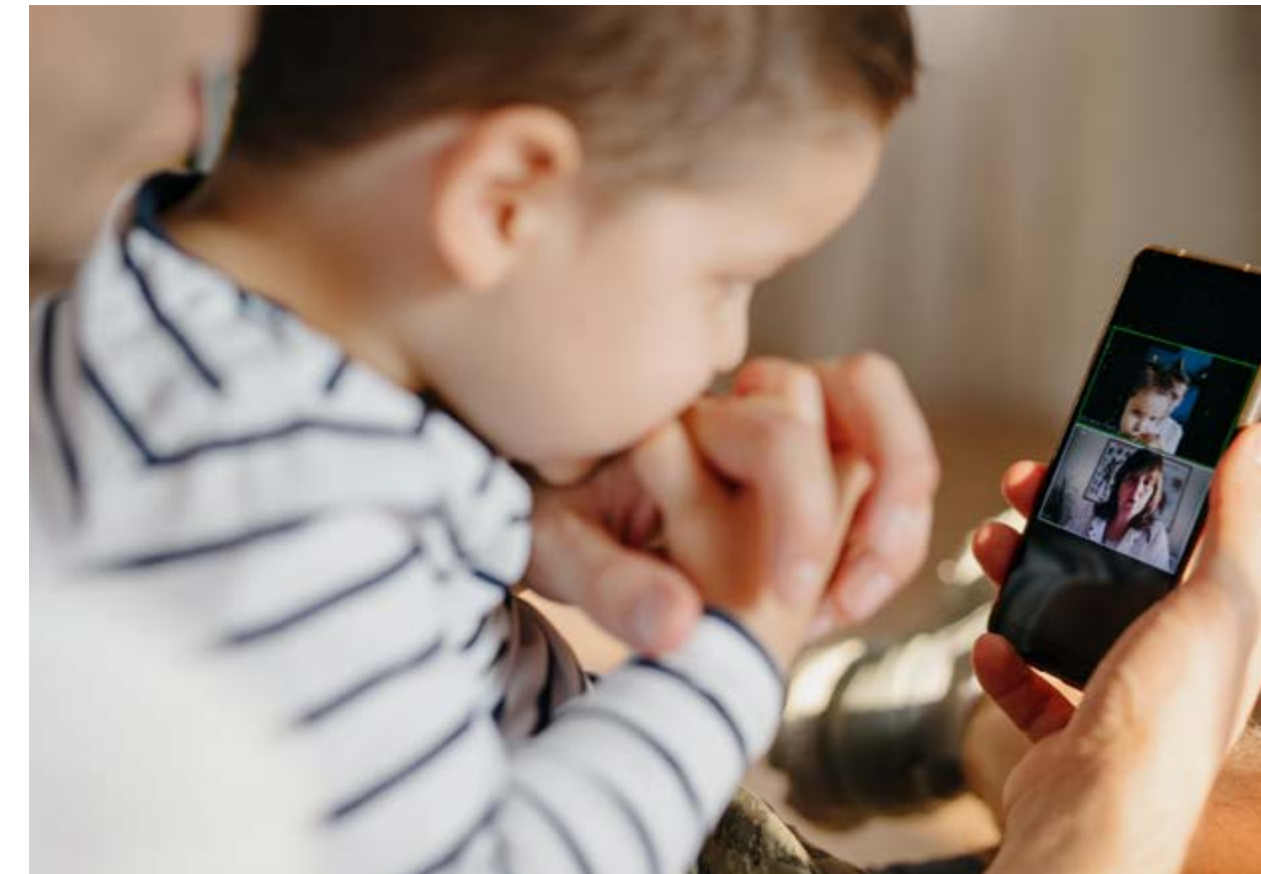
telemedicine services for COVID patients, we also added virtual mental health care, ensuring that all patients, whether sheltering at home or hospitalized in isolation, had access to the critical support they needed during this trying time.

Lifesaving Impact of Virtual Urgent Care

The COVID-19 crisis demonstrated the significant and, at times, lifesaving value of virtual care. In particular, having a virtual care platform enabled us to see more patients and reduce stress on our emergency departments; triage and prioritize patients in a way that preserved essential resources and personal protective equipment for our most vulnerable patients; and protect patients and medical personnel from greater, unnecessary exposure to COVID-19 and other diseases. The crisis also placed a spotlight on the very real limitations of in-person care for people whose life circumstances are incompatible with traditional doctor appointments, such as those with certain professional obligations, transport difficulties, or child-care responsibilities.



We would have needed to wait until the next day to visit our son's pediatrician since they were closed for the day. Was great to get reassurance from a medical doctor immediately.



CURRENT STATE OF PEDIATRIC VIRTUAL URGENT CARE

Today, NYU Langone completes an average of 110 visits with children and families per month, representing a 700 percent increase from October to December of last year.



Since October 2019, we have conducted more than 800 pediatric appointments, ranging from the diagnosis of common symptoms, such as rash or fever, to prescription refills, doctor referrals, and coronavirus screenings. From March to July 2020, we also conducted at least

33 pediatric visits for suspected coronavirus infection. A new initiative across the NYU Langone Health system aims to increase total virtual volume to an average of 8,000 video visits per month, 20 percent of which would be for children 18 years of age and younger.

Broader Reach and Enhanced Functionality

Newly relaxed regulations around telehealth, including provisions that now permit the practice of healthcare across state lines, have also provided new opportunities to extend our reach via virtual care. NYU Langone's virtual urgent care is now available to residents of New York, New Jersey, Connecticut, Pennsylvania, Florida, and South Carolina. In the last year, we as an institution have also made it possible for all of our providers to conduct non-emergent virtual visits, with some departments conducting as many as 200 video visits per day.



Although there was a short wait, it was better to wait at home than in an ER. This visit saved us a trip to the hospital.

REMOTE PATIENT MONITORING: OUR VISION FOR THE FUTURE OF VIRTUAL CARE

During the pandemic, NYU Langone’s emergency department witnessed a marked decrease in patients presenting with common but serious conditions such as stroke, heart attack, and appendicitis. On the surface, this might have been good news—a sign of better health in our patient population.

But people weren’t actually having fewer strokes or heart attacks during the pandemic. Rather, many individuals who needed critical care were unwilling or unable to come to the hospital for evaluation and treatment. And this, of course, was far from a local issue; hospitals across the country were witnessing the same patterns.

As is always the case when care is delayed, the results were disastrous: people got sicker, diseases progressed into more severe conditions, and people died even though their condition was treatable. COVID-19 merely underscored the problem: For a host of reasons—from fear to stigma to socioeconomic stressors and challenges—a large number of individuals who desperately need advanced healthcare simply do not or cannot access it, even in normal times.

We believe that virtual care with remote monitoring has the ability to remove some of the barriers to treatment by taking that treatment out of traditional medical settings, and by empowering patients to actively participate in their own health.

Indeed, the COVID-19 pandemic has put in sharp relief both the value and the opportunity of virtual care in medicine. And as a leading medical institution at the heart of the crisis, NYU Langone has a strong interest in finding new, innovative, and pragmatic healthcare solutions that enable more patients to access quality care whenever and wherever they need it. This was and continues to be the primary goal of our virtual health program. As we continue to expand and improve on that program, we also recognize that our doctors need access to key, real-time health information to make the most accurate diagnostic and treatment decisions possible.

To that end, we believe that video-based care augmented with remote patient monitoring (RPM) is the future of virtual care, both in terms of urgent medical needs and longer-term disease management. Fully realized, a robust RPM system will enrich these telemedicine encounters, facilitate more home-based care, and bring essential health vital signs data directly to patients and their providers.

RPM Pilot Program

Building on the success and rapid adoption of our virtual care services—particularly during the COVID-19 crisis—NYU Langone is now designing and implementing a pilot RPM program with two central components:



- **First, we are working in conjunction with our electronic health records database, Epic,** as well as other third-party vendors to develop an integrated Epic-MyChart (patient portal) RPM platform that will seamlessly record and upload real-time data sent from any number of wirelessly connected medical devices.
- **Second, we are working with our supply chain department** to source Bluetooth or wireless-enabled health measurement tools, such as scales, blood pressure cuffs, and pulse oximeters for in-home patient use. Taken together, we aim to bundle these tools into a single, NYU Langone-branded “Violet Box”—a comprehensive kit that puts health management into the patient’s hands and enables providers to serve that patient remotely.

Our Plan

NYU Langone already has some form of active RPM in eight areas, including obstetrics, transplant, and bariatric medicine. For example, over the last 18 months our maternal fetal health program has sent high-risk mothers home with glucometers to track their health and identify early warning signs from home. Similarly, our lung transplant recipients are already being equipped with up to seven devices that connect to our system to help monitor and more aggressively treat these patients without a visit to the clinic. For these existing programs, we are testing a total of nine integrated data types, such as blood pressure, heart rate, glucose, and O2 saturation.

NYU Langone is also laying the groundwork for a robust RPM program with significant investments in IT support for our virtual users. This includes the launch of a 24-hour telehealth helpdesk to troubleshoot problems related to our system or the devices meant to connect to it.



PHASE 1: VITALS

- Blood Pressure
- Heart Rate
- Temperature
- O2 Saturation
- Weight
- Steps



PHASE 1.5: VIOLET BOX

A comprehensive kit that puts health management into the patient’s hands and enables providers to serve that patient remotely.



PHASE 2: FACILITATED PHYSICAL EXAM

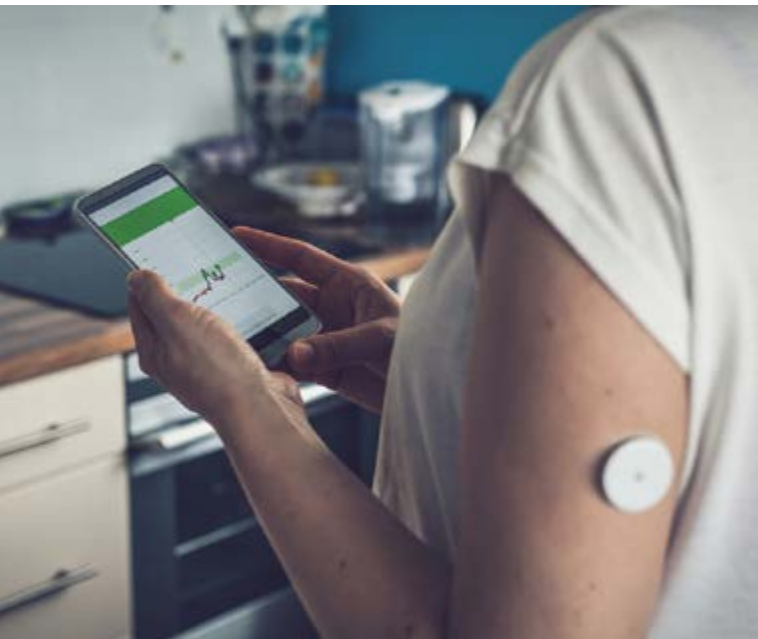
- Enabled Synchronous Physical Exam
- Cardiac, Pulmonary, ENT, Derm, GI, etc.
- Integration of Advanced Exam Devices and Vendor



PHASE 3: SPECIALTY SPECIFIC

- Integration with Glucometers, Spirometers, Tonometry, etc.



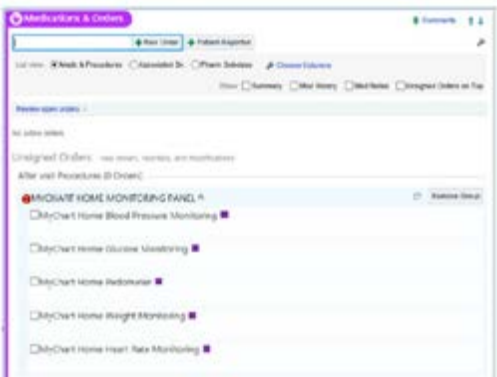


How It Will Work

Using our integrated Epic-MyChart RPM platform, a doctor will place an order to initiate a patient into the RPM program. Similar to existing Video Visits, the app or website will direct patients to RPM program information and facilitate the purchase of a basket of devices. Patients will then either connect an Apple or Android device to automatically upload their real-time health data to our system or input their vital signs data manually. Patients will receive prompts via MyChart, text, etc. to ensure that data is uploaded prior to a doctor visit. The patient’s provider, or a pool of providers, will receive, and have the ability to visualize, the results using the Epic “Health Trends” function, among others.

1. PROVIDER

- Ordered in Epic
- Results sent to provider or provider pool in-baskets
- Visualized with Epic Health Trends



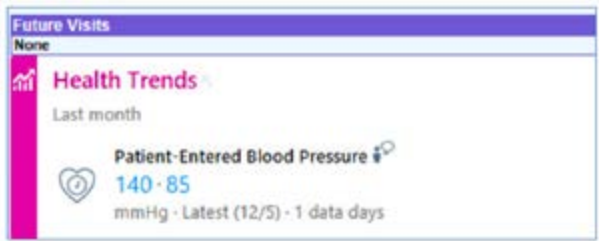
2. PATIENT

- Track My Health available in MyChart
- Permission their Apple/Android + device to automatically upload
- Patients may also enter their data manually



3. PROVIDER

- Data available for review in multiple locations in Epic
- Data managed by provider or pool



Ashley's recent Patient-Entered Blood Pressure readings (past 60 days)				
Date	Time	Diastolic BP (Patient-Entered)	Systolic BP (Patient-Entered)	Diastolic BP (Patient-Entered)
10/10/2017	12:01 PM	76	106	76
10/10/2017	12:38 PM	85	105	85
10/10/2017	1:23 PM	80	114	80
10/10/2017	10:25 AM	85	129	85
10/10/2017	1:42 PM	85	137	85
10/10/2017	10:48 AM	84	134	84

A CONTINUING PARTNERSHIP

There is no doubt that the support of our philanthropic community has made NYU Langone a stronger, more resilient institution—particularly in the face of this unprecedented crisis. But as we take stock of recent events and prepare for what is to come, we are particularly grateful to philanthropic partners like you, whose visionary support for the pediatric virtual urgent care program prior to the crisis played such a pivotal role in our ability to respond to it.

Further, even in the best of times, philanthropy is integral to making innovative new projects a reality, and this is infinitely more true today. To give the best to our patients and broader community, we must not only survive a crisis—we must grow, adapt, and aspire to even greater excellence. You have given us that opportunity.

We thank you again for your support, and look forward to your partnership in the future as we continue to find new and better ways to care for those we serve.



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