UCHealth taps mobile technology to engage with patients and revolutionize the way care is delivered









# The Challenge

- Create a deeper and more connected patient experience with UCHealth
- Develop a mobile platform that reflects UCHealth's commitment to excellence in patient service and relationships
- Develop a branded offering, delivering patient-specific information as well as a healthy lifestyle resource for users
- Capitalize on 18-month research project determining patient needs and defining a mobile strategy
- Maximize UCHealth development team's deep .NET expertise and skills instead of staffing platform-specific Android and iOS teams



## The Solution

- Fast mobile development partnering with UCHealth development team and Neudesic's enterprise mobility team
- Visual Studio Tools for Xamarin enabled a flexible platform to accelerate and streamline development.
- Delivered fully native Android and iOS apps simultaneous, sharing 75% of the code across platforms.
- Seamless integration of Epic electronic medical record as the engine for UCHealth patient data
- Extended platform value with data from varied sources such as the Apple Health app, health care news, patient stories, and healthy recipes



# The Benefit

- Streamlines secure access to patient records within the UCHealth system
- Empowers patients with a smart, relevant tool to proactively manage their health and lifestyle
- Simplifies ongoing maintenance and future improvements due to Visual Studio Tools for Xamarin code-sharing capabilities
- Provides a technology foundation to advance mobile services and digital innovation across UCHealth

UCHealth embarked on an 18-month research project to better understand patients' needs and wants, and uncover ways to support their goals. Our mobile app reflects our mission to help people live extraordinary lives by providing the very best, personalized experience.

- Manny Rodriguez, Chief Marketing and Experience Officer, UCHealth

## The Client

Based in Aurora, Colorado, UCHealth is a nationally recognized, nonprofit network of seven acute care hospitals and more than 100 clinics throughout Colorado, southern Wyoming and western Nebraska. With University of Colorado Hospital as its academic anchor, UCHealth is uniquely able to provide advanced treatments and innovative clinical trials, ensuring excellent care and outcomes for more than 1.3 million unique patients each year. UCHealth's mission is to improve the lives of people in Colorado and beyond, and in fiscal year 2016, UCHealth spent \$584 million on financial assistance, subsidized care and other areas to directly benefit patients and the communities it serves.

Working to improve and optimize health rather than just health care, UCHealth's specialty practices have been recognized for excellence nationwide. "Patients expect convenience, rapid access, and personalized service in their encounters with UCHealth providers and staff," said Manny Rodriguez, UCHealth's chief marketing and experience officer. In 2016, the organization cared for more than 113,000 inpatient admissions and observation visits, and almost 2.6 million outpatient visits across their network.

## The Challenge

UCHealth wanted to redefine the patient experience and improve the personalized service they provide. In keeping with its mission, vision, and values, the company stepped forward to establish an environment of holistic wellness and personalization, in contrast to a more traditional injury and pain treatment approach. Supported by company leadership focused on patient engagement and experience, the executive team began developing a strategic initiative to ramp up technology as a touch-point for care interactions. "UCHealth's leadership is vocal and proactive about its desire to deliver the best customer experience," added Rodriguez. "We made it our mission to more deeply understand patient needs and wants, undertaking a comprehensive, 18-month research project to uncover more insight." A key takeaway was the growing demand for mobile services as part of the UCHealth care experience.

As part of its larger strategy to improve experience, the charge for the organization's IT and marketing departments was to develop an improved mobile app where patients could access UCHealth's patient portal, known as My Health Connection. This knowledge hub would enable patients to access to their complete medical history, as well as the ability to schedule visits based on location and availability, message doctors, renew and fill prescriptions, view test results, schedule and receive appointment reminders, and find doctors, practitioners, and specialists. "Part of offering excellent care and service is meeting our patients where they are – bringing a full library of medical information to their mobile devices," said Rodriguez. "At the same time, the UCHealth app goes well beyond records and calendars; our fundamental goal is to empower our patients to live a healthy lifestyle and take control of their future."



Our move to enable a mobile experience for patients underscores the UCHealth commitment to technology and innovation. 99

- Manny Rodriguez, Chief Marketing and Experience Officer, UCHealth

#### The Solution

With this goal in mind, UCHealth partnered with the Neudesic enterprise mobility team, who set to work building the UCHealth app utilizing Microsoft's Visual Studio Tools for Xamarin. Neudesic brought operational efficiency to the process, capitalizing on Xamarin as a means of coding both iOS and Android operating systems at the same time. The platforms were able to share 75 percent of the code, enabling both iOS and Android applications to be available with the initial launch of the app.

To populate the app with health information, UCHealth needed to integrate the functionality of its Epic electronic medical record software. "Epic provides the information backbone for our systems, and it was critical that our patients could access this data seamlessly and securely while on the go," said Rodriguez. With Xamarin providing 100% access to devicespecific APIs and UI patterns, UCHealth's mobile infrastructure was quickly able to provide secure, real-time access to more than 190 million patient electronic health records. The project's joint teams then crafted further mobile functionalities tailored specifically to the UCHealth brand, integrating with various other data sources to improve the patient experience while maintaining security and privacy across data points and records. "We were able to capture the immense capabilities of the Epic software, creating a branded UCHealth environment as a single, robust mobile platform for users," said Rodriguez. The site adds value to users as a lifestyle tool, including access to the Apple Health app, as well as health care news, patient stories, health and fitness tips, and healthy recipes.

### The Benefit

"Mobile capabilities are essential in re-imagining health care for patients and providers. Creating a convenient 'health ecosystem' for patients is just one more way UCHealth is providing a personalized and unique experience for patients, helping us grow as the region's preferred health provider," said Rodriguez.

UCHealth today is able to securely share patient-specific information as well as health-focused content – reaching users when, how, and where they choose to access the information. "This is truly an opportunity to communicate with patients and connect with them in a personalized and convenient way," said Rodriguez.

Working with Neudesic, UCHealth also gained insight into best practices for further developing its mobile strategy. Executives are already planning what's next—expanding their telemedicine offerings, and exploring artificial intelligence for augmented and virtual reality health care scenarios. "For UCHealth, our culture is defined by innovation and its capacity to transform health care and provide the best experiences for our patients," said Rodriguez.



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