

# Improving the Patient Experience with Mobile Apps and APIs

In his job as Chief Application Architect at Rush University Medical Center, Modi Boutrs has the privilege of working in an organization that truly cares. “I’m so grateful to Rush for giving me the opportunity to utilize my experience to put patients first and save patient lives,” said Boutrs.

While Boutrs is committed to saving lives and improving the patient-care experience, his day-to-day life is consumed with meeting the technical challenges that will enable him to help the large, Chicago-based academic medical center get the job done. One of his recent challenges, for example, involved finding a way to get all the information that patients need to stay engaged and connected with the healthcare system to them via mobile devices.

The problem: Relying on HL7 – the widely used patient care and clinical messaging standard – to exchange and share information from multiple sources falls short when trying to develop mobile apps.

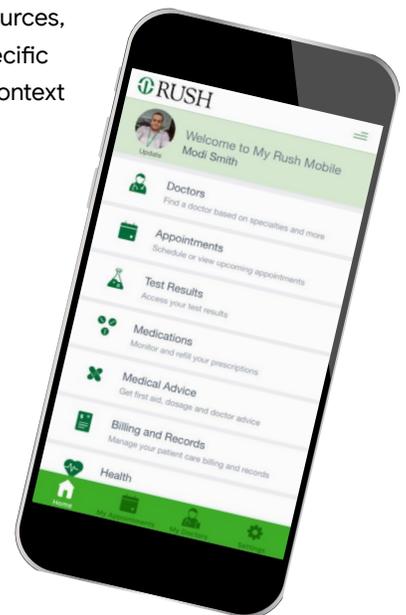
“While HL7 works within the EHR and within the healthcare system, it does not work very well in the mobile application world,” said Modi Boutrs, Chief Application Architect, Rush University Medical Center.

To develop mobile apps that share information, developers like Boutrs need to rely on application programming interfaces (APIs) as well as Fast Healthcare Interoperability Resources (FHIR), a draft standard describing data formats and elements for exchanging electronic health records. With APIs and FHIR, “you get a highly reusable operating system. And out of the box, you get added security for communication and authorization,” he said.



## Solution: My Rush app

Boutrs relied on APIs and FHIR to develop My Rush. This mobile app was designed to keep patients connected to and engaged with the healthcare organization and to easily and collaboratively manage their health and wellness. The app also supports patient journeys specific to various diseases, guiding patients to resources, tools and education specific to their conditions via context aware engagement.





## Relying on APIs and FHIR

My Rush relies on APIs to assess information from a variety of systems. This makes it possible for patients to schedule an appointment with a doctor, get directions, exchange secure messages with providers, access their own electronic health records, estimate wait time and receive test results. The app even uses APIs to interact with external systems, making it possible to schedule an Uber ride, monitor wearables such as Apple Watch, and access data from the Centers for Medicare and Medicaid Services.

The My Rush app relies on “literally – and I’m not exaggerating – over 100-plus APIs,” Boutrs said. To manage this complexity, Rush is relying on Google Apigee, a centralized management platform that allows hundreds of separate systems, devices, mobile apps and third-party apps to communicate and connect via one layer.

“With the platform, “you are able to control and shape the traffic that’s coming to your APIs. You could have granular access to specific services. The management platform also handles your authorization, authentication and access control,” he said. What’s more, it enables developers to use APIs securely and to measure API performance and usage.

“Apigee basically allows us to have a façade so our internal network does not have to be exposed to the outside world. It also enables you to monitor for

malicious intent and, if needed, you can deny service. Basically, you can keep the bad guys out,” Boutrs pointed out.



## Leveraging analytics

Rush is also using Google Analytics to understand patients’ priorities and predict their upcoming needs through intelligent application-usage tracking. “We’re able to track the clicks on the screen, and we’re able to track which functionality is being used more. It tells us which features the patients like; it detects how often the app is used and how many users are using the app. We’re also able to know which devices are being used so we can meet the needs of that specific device as we move forward. So, we’re able to cater to patients’ needs,” Boutrs said.

“Indeed, by using Apigee with the My Rush app, “we have enhanced the patient experience by putting the power in the hands of the patients to become the center of their own care.”

Other healthcare organizations are likely to follow Humana’s lead, as they acknowledge the need to go beyond simply providing patients with on-the-go-access to data. To create more meaningful digital experiences, these organizations are apt to realize just how important it is to take data out of legacy systems and integrate it in the cloud to provide patients with the contextual information that can truly enhance the overall patient care experience.

For more information visit the healthcare website:

<https://cloud.google.com/solutions/healthcare/>