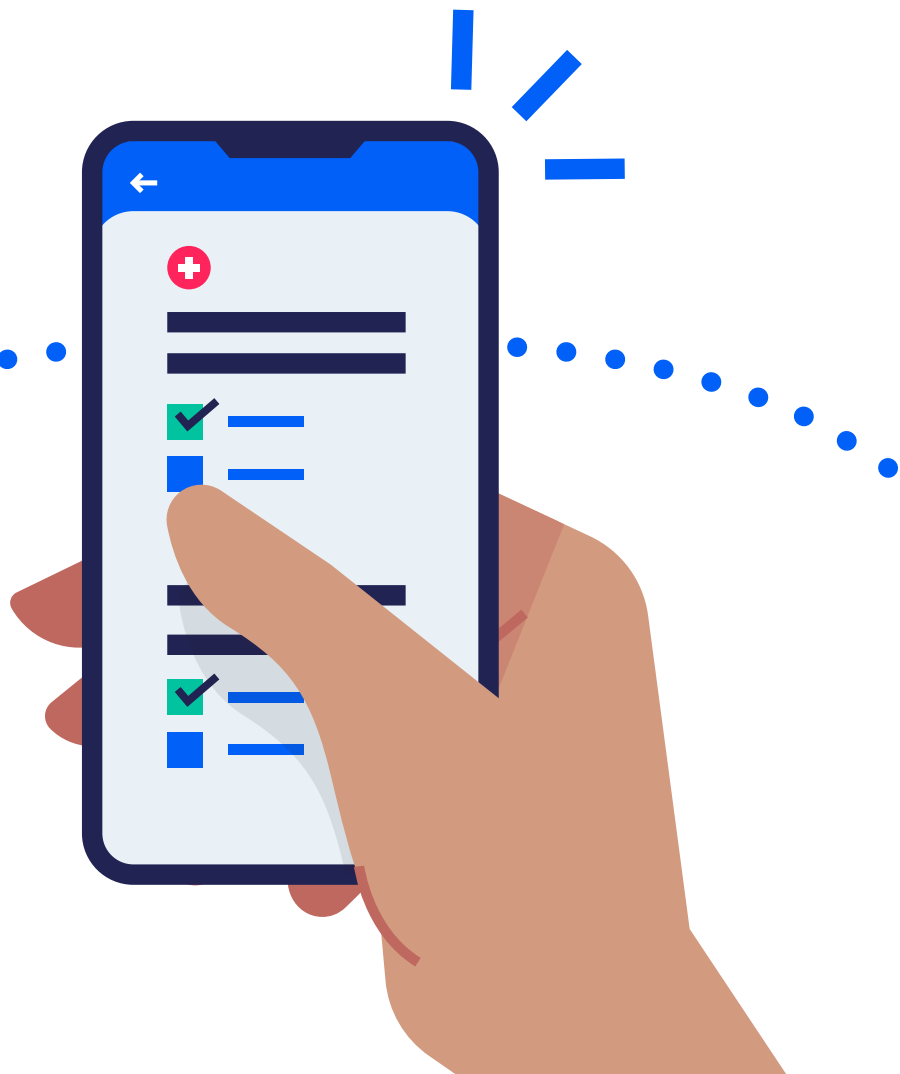




**notable**

# The definitive guide to digital patient intake

6 strategies for designing a digital front door that patients love



[notablehealth.com](https://notablehealth.com)

# Introduction

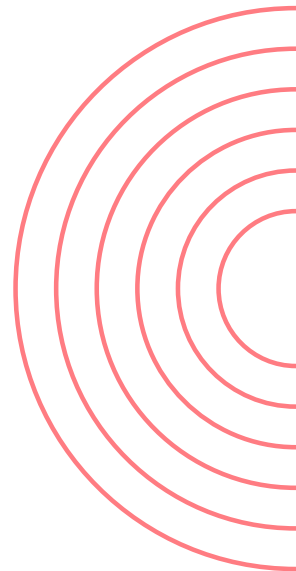
## Healthcare is tired.

COVID-19 has accelerated a number of disruptive forces. Patients expectations have skyrocketed, clinicians are as overstretched as ever, and health systems face a growing number of competitive threats. While addressing these challenges, health systems now must execute on a vaccination program of unprecedented scope.

Digital patient intake rests at the intersection of these trends, promising to improve patient experiences, increase capacity, and support touchless workflows.

While EHRs are incredibly powerful as systems of record, many progressive organizations are looking to supplement these capabilities with digital intake solutions designed to improve patient engagement.

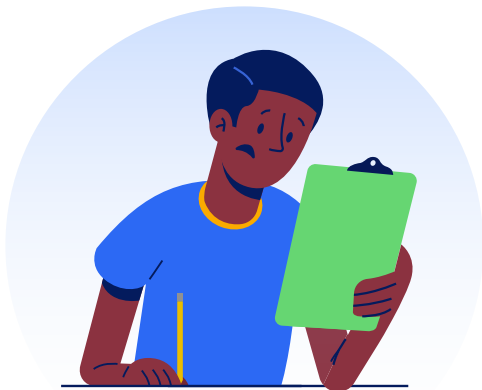
Today, there are a plethora of patient intake solutions that can theoretically be deployed to meet patient demands. However, most health systems lack the appetite or bandwidth for the complex IT implementations or disruption to existing workflows that these solutions require, especially given the new demands that COVID-19 has introduced on health system operations and IT teams.



# The Digital Patient Intake Imperative

Health systems have long resisted the type of consumer-centric digital innovation that has become ubiquitous in industries like financial services and retail. The combination of increasing patient expectations and growing competitive threats, all amidst the backdrop of a global pandemic, has compelled health systems to prioritize the development of modern digital experiences.

Today, legacy intake approaches introduce the following challenges:



## Reduced Patient Satisfaction

Intake is often a disjointed and tiring process for patients. Many providers are still asking patients to fill in details on a clipboard or recite their medical history to front-desk staff. This approach falls short of the seamless digital experiences consumers have come to expect from other industries, significantly compromising patient satisfaction.



## Challenges Supporting Safety Protocols

The global pandemic has amplified the importance of effective clinical registration and intake, introducing the need to screen patients for COVID symptoms and minimize non-essential human interactions. While providers have embraced telehealth in service of these aims, many in-person ambulatory encounters still have room for optimization when it comes to reducing physical contact and enabling physical distancing throughout check-in and registration.

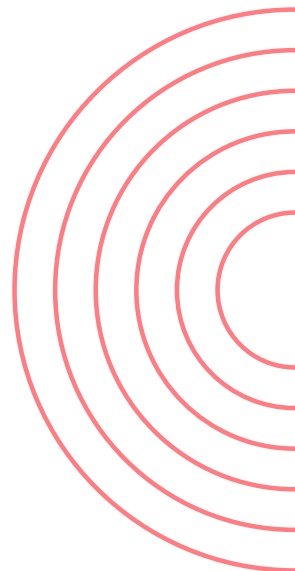
## Increased Administrative Burden



Paper-based information gathering for patient intake is still common, and introduces the administrative burden of manually inputting data in the EHR. For example, while many Cerner users have realized significant value by standardizing inputs via Power Forms, they still require people to manually enter data. A recent study by the NHS in England found that while this approach certainly saved time vs. a more traditional approach, the savings are still relatively minimal (<1 minute per patient).<sup>1</sup> This goes to show that simply digitizing a decades-old paper-based process, without reimagining how digital technology can transform patient intake, does not make a substantial difference in the amount of administrative effort required to check-in patients.

Organizations must find a way to realize the benefits of traditional patient intake offerings, in a way that is complementary to, and not disruptive of existing workflows. Given the urgent need to modernize the patient experience, this must be done in a way that side-steps traditional integration challenges. These dual challenges call for a reimagining of digital patient intake.

Leading organizations like Intermountain Healthcare and CommonSpirit Health provide a blueprint for overcoming these challenges. Based on Notable's experience partnering with these and other health systems, we have identified 6 key lessons that organizations can take to modernize their patient intake and registration experience.



<sup>1</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5855191/>

## Executive summary:

# 6 strategic reframes for modernizing patient intake

Traditional approaches to digital transformation of the patient experience are not suited to today's needs. Projects that have traditionally taken years must be delivered in a matter of months in order to meet the pressing demands imposed by the COVID-19 pandemic.

To be successful in 2021 and beyond, organizations must evolve dated conceptions of how digital health can support the patient experience.

LEGACY SOLUTION	PROBLEM	MODERN SOLUTION
<b>Apps and portals</b> Design digital patient experiences around apps and portals.	<b>Low adoption</b> Many patients experience app fatigue and forget portal log-ins, leading to minimal adoption.	<b>Simplify engagement</b> Compliment apps and portals with SMS messaging, email, and web-based experiences to improve access.
<b>Standalone telehealth offerings</b> Create a standalone telehealth experience without focusing on in-person, ambulatory visits.	<b>Evolving patient expectations</b> Patients expect superior digital experiences across all channels, not just telehealth.	<b>Omnichannel engagement</b> Create omnichannel digital experiences that span across telehealth visits, in-person registration and check-in, and post-visit follow-up.
<b>Peer benchmarking</b> Benchmark your patient experience against peer healthcare organizations.	<b>New competitors</b> Patients compare their experience at your health system with Uber, Amazon, and digital-first providers, not traditional competitors.	<b>Cross-industry learning</b> Look to consumer experiences outside of healthcare to model your digital experience.

## LEGACY SOLUTION

## PROBLEM

## MODERN SOLUTION

### **Design for patients**

Put patients first with the design of your digital front door strategy.

### **Limited staff and MD engagement**

Failing to consider other key stakeholders like staff and providers increases digitally-induced burnout and reduces digital adoption in-clinic.

### **Design for patients, providers and staff**

Treat clinicians, staff, and patients as equal constituents to design digital experiences for.

### **Reactive messaging**

Implement messaging for appointment reminders and two-way communication between active patients and clinicians.

### **Missed patients**

Traditional messaging is reactive, and only serves digitally engaged patients who have already scheduled appointments.

### **Proactive messaging**

Design digital engagement to proactively reach all patients in need of care, not just those with scheduled appointments.

### **API and HL7 integration**

Connect digital health solutions to the EHR using APIs or HL7 interfaces.

### **Lengthy implementations**

Traditional interfaces take months or years to stand-up, and don't often provide access to all EHR functionality.

### **Supplement APIs with RPA**

Leverage robotic process automation to rapidly integrate with the EHR, supplementing with APIs and HL7 interfaces where appropriate.

## Lesson #1:

# Enable digital engagement outside of standalone apps and portals

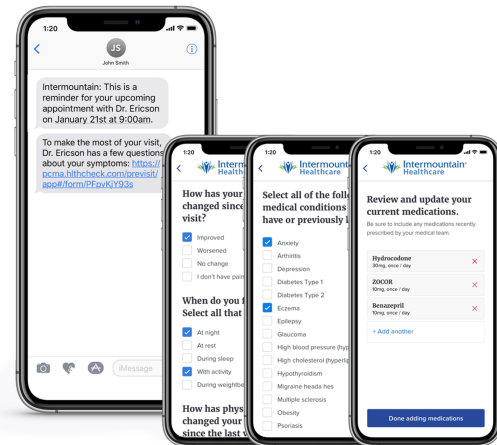
Over 90% of US providers now offer a patient portal. However, most health systems still report low patient engagement rates with portals, with many sharing that 3 out of 4 patients never engage through the portal.<sup>2</sup> One explanation for this is that portals are often designed for patients who are already digitally engaged with the health system, rather than patients who are less digitally literate.

Continuing along this approach runs the risk of operating with a digital front door that is only open for the digitally engaged, instead of for the entire patient population.

Custom apps run into many of the same challenges. Furthermore, those who are most likely to digitally engage are also most likely to be experiencing “app fatigue” - a desire to reduce the number of apps on their phone rather than add yet another icon that they may only use once a year.

Portals and apps can play a strong role as part of a broader digital strategy, but they must be complemented by different engagement channels that are easier to use for less digitally savvy patients. For example, Intermountain Healthcare found that complimenting their My Health+ app with web-based pre-visit digital

intakes that are accessible via automated SMS, powered by Notable, over 70% of patients now complete their entire registration before their visit.<sup>3</sup> Providing patients with an alternative way to digitally engage that does not require an app to be downloaded or a password to be remembered leads to over 4X increases in pre-visit registration completion rates compared to what has been observed across other organizations using a “portal only” approach.



*With Notable, Intermountain delivers automated appointment reminders via text message, linking to personalized digital intakes that don't require a web app or portal to access.*

<sup>2</sup> <https://www.healthit.gov/sites/default/files/page/2019-04/AHApatientengagement.pdf>

<sup>3</sup> For more details on how Intermountain Healthcare partnered with Notable to digitize and automate patient intake workflows, [see our case study](#).

## Lesson #2:

# Digitally transform all touchpoints to create omnichannel experiences

2020 ushered in an explosive proliferation in virtual care. Evidence suggests that during the earlier stages of the COVID-19 pandemic, telehealth utilization increased by over 150%.<sup>4</sup> As restrictions have eased across many parts of the US and we continue the process of rolling out a vaccine, the general consensus is that health systems will see an increase in in-person visits, and by extension, a corresponding decline in telehealth visits.

Yet few expect for telehealth volumes to drop to pre-pandemic levels.

Because of this, some administrators are debating whether they should focus scarce IT resources on enhancing their telehealth experience, or digitally transforming in-person visits.

Leading providers are showing that to meet evolving patient expectations, all patient interactions must be digitally transformed and intuitively designed, regardless of the modality.



<sup>4</sup> <https://www.cdc.gov/mmwr/volumes/69/wr/mm6943a3.htm>



To do this, administrators must not think of telehealth and in-person as distinct channels to support independently, but rather, as individual touch points across a broader, unified patient journey. Accordingly, they should look to establish consistent, standardized experiences across all modalities.

Consider, for example, the process of collecting payments. Many organizations have struggled to collect co-pays from virtual visits, since the only way they had to collect payments was by swiping a credit card or taking a cash payment in the clinic.

Rather than simply building a solution for telehealth co-pay collection, health systems should design and implement a digital payment solution that can be leveraged across all modalities and contexts, whether for a virtual visit, an in-person co-pay, or post-visit balance collection.

This approach, centered around consistent digital design and implementation across channels, will increase both patient engagement and improve the patient experience.

**"During the first quarter of 2020, the number of telehealth visits increased by 50%, compared with the same period in 2019, with a 154% increase in visits noted in surveillance week 13 in 2020, compared with the same period in 2019."**



Centers for Disease Control and Prevention

## Lesson #3:

# Look outside healthcare for inspiration on digital patient experience design

To achieve a meaningful ROI on digital patient intake, organizations should aim to drive a majority of their patients to engage with their digital offering. Unfortunately, many organizations report that less than a quarter of their patients engage with their existing digital intake offerings prior to visiting the clinic. As a result, some health systems have come to settle for 25% - 30% pre-visit digital intake completion as the upper limit for what can be realistically achieved.

Rather than looking at what peer health systems have been able to accomplish, prospective leaders should draw inspiration from the other digital services their patients use. By adopting

the following best practices from companies like Uber, Amazon, and Netflix, we've seen health systems drive patient engagement and satisfaction that far exceeds industry benchmarks.

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## Personalization

When a consumer opens the Amazon Shopping app, they are presented with a curated list of items they might be interested in based on demographic insights and purchase history. In contrast, when a patient engages with a paper intake form, a generic patient portal, or a digitized form template, they receive the same experience as everyone else, making them feel

less 'known' by their doctor and less likely to engage. With intelligent automation, health systems can provide unique experiences for each and every patient, using their medical history to provide a customized digital registration and intake experience designed to capture exactly what's needed to provide the best possible visit with their care provider.



## Remembered experiences

Imagine if every time a consumer wanted to call an Uber, they had to manually key in their home address and credit card information. It stands to reason that people would be much less inclined to use the service. Yet this is the exact same experience that most health systems provide their patients, requiring them to fill in the same information every time they visit their

doctor. With so much information from previous encounters documented in the EHR, providers should model their intake experience after Uber, pre-populating known information into their digital experiences. Instead of requiring patients to fill out everything from scratch, patients would only need to confirm that nothing has changed.



## Intuitive design

Progressive organizations like Intermountain Healthcare and CommonSpirit Health have shown how well-designed experiences from other industries can be translated to healthcare. For example, both of these organizations have implemented OCR (optical character recognition), traditionally used to

capture credit card numbers, for insurance card scanning, enabling patients to scan in their insurance details straight from their smartphone. Likewise, these and other Notable customers have embedded digital co-pay into the registration process through the use of familiar user-friendly platforms like Apple Pay.

# Why patients love Notable

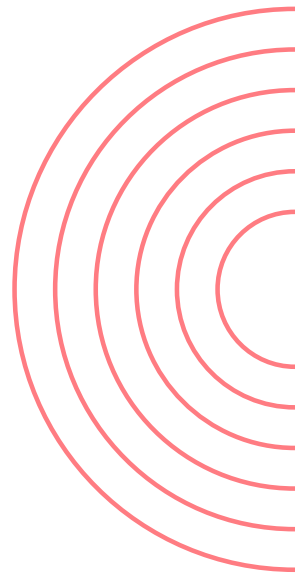
Notable offers patients a mobile registration and intake experience that draws on best practices from leading digital consumer experiences. This contributes to a 97.7% patient satisfaction rating.

According to patients using Notable's pre-visit registration:

**"[I'm] very happy that my medical provider takes extra steps like these to keep us all safe."**

**"The questionnaire was simple and to the point. I liked that I was able to do this prior to my visit rather than having to do it at the time of my visit."**

**"I love not having to write everything on paper and having the opportunity to answer questions before my appointment."**



## Lesson #4:

# Treat clinicians, staff, and patients as equal constituents for your digital experience

Ironically, legacy digital intake solutions can introduce even more administrative overhead than a traditional paper-based workflow. For example, some digital patient intake solutions require staff to navigate to a different application or download a PDF to find information to be transcribed into an EHR, instead of simply copying it off of a paper form.

Modern patient intake should decrease, not increase administrative burden for staff. By using technologies like Robotic Process Automation (RPA), health systems can take the inputs from a digital patient intake and automatically populate them into discrete fields in the EHR. Organizations using Notable, which

employs such an approach, report that doing so can save over 500 hours of front desk staff and MA time per provider per year. This enables them to spend more time face to face with patients, improving the overall patient experience while increasing staff engagement.

Implemented correctly, modern digital intake can also help alleviate administrative burden for clinicians. For example, customers using Notable leverage AI to take information captured through digital intake and use it to create a narrative HPI and ROS, as well as pended orders, directly in the EHR. This has been reported to reduce provider time spent in the EHR by over 50%.



# Projected ROI for commonly automated administrative workflows

Based on experience implementing intelligent automation for both national healthcare providers and regional clinics, Notable has observed the following time savings per physician for automation of common workflows:

**416hrs/yr**

Clinical intake

**83hrs/yr**

Patient registration

**41hrs/yr**

Co-pay collection

**25hrs/yr**

Appointment reminders

This captures time savings by both physicians and their staff, assuming a visit volume of 20 patients per day, 5 days a week, 50 weeks per year.



## Lesson #5:

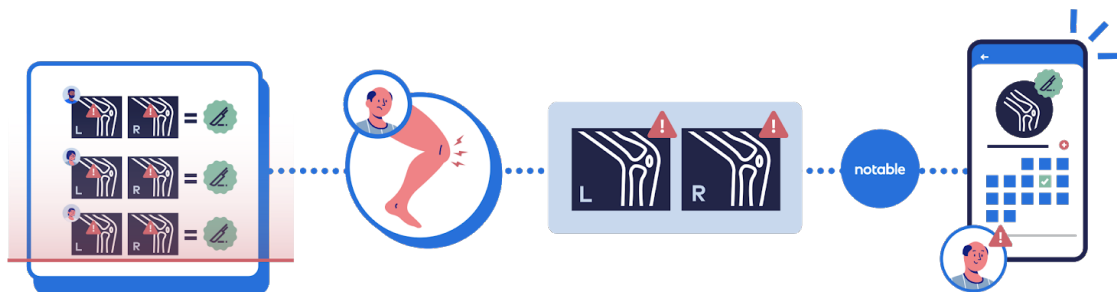
# Supplement reactive patient intake with proactive patient outreach

Traditional digital intake solutions are designed to optimize the experience of patients who already have appointments scheduled. But to maximize the value returned from investments in digital intake, health systems should aim to engage all patients in need of care, not just those who already have appointments scheduled.

With platforms like Notable, health systems can use artificial intelligence to identify patients who are in need of care, either by detecting a care gap, or identifying that a patient has not received care commensurate with those in similar patient cohorts. With this information, health systems can extend the same digital outreach used with patients for pre-scheduled appointments to engage patients without appointments and bring them into the clinic.

This capability has never been more critical for health systems, as it can enable them to identify and engage patients who are eligible for COVID-19 vaccination. Furthermore, in a world where many patients have postponed key procedures as a result of clinic shutdowns or concerns about safety, this can help health systems get ahead of a potential increase in care gaps in their patient population.

With Notable, health systems taking this proactive approach have seen an over 10% increase in visits and elective procedures, recapturing revenues and ensuring that all patients receive the ongoing care they need.



*Notable enables providers to proactively propose follow-ups and procedures based on analysis of similar patient cohorts.*

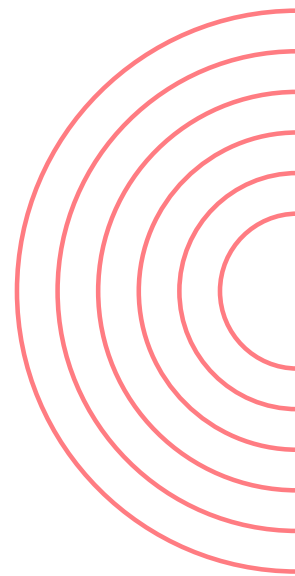
## Lesson #6:

# Leverage robotic process automation to rapidly integrate digital solutions with the EHR

Integration has proved to be a considerable stumbling block for organizations looking to accelerate their digital health initiatives. Standing up a single HL7 interface can take months. And while many EHRs now offer FHIR APIs that digital health applications can hook into, almost no EHR's APIs offer unfettered access to every field and function required to support the end-to-end registration and intake experience.

Advances in RPA technology have revolutionized how organizations can connect digital health applications to their EHR. By enabling health systems to deploy 'digital assistants' that

replicate the clicking and typing that would otherwise be performed by an MA or front desk staff member, health systems can rapidly connect their EHR to external applications. This approach enables fast, multi-system connectivity while reducing reliance on an EHR vendor's APIs and the need for traditional, time-intensive integration. It allows healthcare administrators to leverage the EHR for what it's best at - serving as a central repository of all clinical information - while not allowing it to bottleneck the deployment of innovative digital technologies designed to modernize the patient intake experience.





# Intelligent automation powers modern patient intake

At a point in time when healthcare is stretched to the limit, health systems must take a modern approach to digital patient intake. Intelligent automation enables organizations of all sizes to rapidly transform the pre-visit patient experience through proactive, personalized patient experiences that are designed to reduce administrative burden for staff and providers.

Notable provides the leading platform for intelligent automation, trusted by 3 of the top 15 US health systems to digitize and automate workflows across the care continuum. Providers that use Notable for digital patient intake report 80% pre-visit registration completion rate, 500 hours of administrative tasks saved annually per provider, and most importantly, a 97% patient satisfaction rating.

To see Notable's platform in action and learn how it can help your organization modernize digital patient intake, [schedule a demo with a solution specialist](#).

