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# How to Reduce Preventable Readmissions with Healthcare IT



## 3 Apps to Engage Patients and Improve Reimbursements

- Efficient mobile strategies for reducing hospital readmissions
- Strategic use cases your hospital can launch within weeks
- Six best practices for cost-effective patient- and physician-facing apps

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## Introduction

The creation of the Hospital Readmissions Reduction Program (HRRP), as part of the larger shift toward value-based care under the Affordable Care Act (ACA), has placed strong financial pressure on hospitals to refine their care and transition strategy. While readmission rates nationwide have dropped since HRRP's inception, potentially avoidable readmissions continue to be a \$17 billion problem.<sup>1</sup>

As a result, readmission penalties in 2016 hit a new high with 2,597 hospitals across the US incurring more than half a billion dollars in Medicare reimbursement reductions. The \$528 million in penalties represents an increase of \$108 million over 2015.<sup>2</sup>

The effort to reduce these readmissions must focus on the full continuum of patient care, as many readmissions are due to social and resource issues exacerbated by poorly-executed transitions in care. Patients are often readmitted due to<sup>3</sup>:

- Inadequate information about post-discharge care to patient
- Poor transmission of records and discharge instructions to those managing, authorizing, and providing post-discharge care
- Untimely or uncoordinated post-hospital care in their community

The need to address these issues in an accessible, adaptable, and cost-effective manner has prompted many providers to turn to mobile technology. Mobile continues to be a driving force in the consumerization of healthcare, as smartphone penetration reaches 77% of U.S adults<sup>4</sup>. In addition, the average smartphone user spends 4.7 hours on their phone per day<sup>5</sup>, and relies on it for 221 tasks per day<sup>6</sup>.

The vast majority of that time is spent in apps, as healthcare apps continue to see doubledigit usage increases year-over-year and almost two-thirds of Americans would use a mobile app to manage health-related issues. According to Manhattan Research Taking the Pulse Survey, more than 33 percent of physicians have recommended mobile health application to their patients.<sup>6</sup> Many top hospitals are publishing their own branded mobile apps, with a strong correlation observed between the number of branded apps and the hospital's patient satisfaction ratings.<sup>7</sup>

The wholesale adoption of mobile across all demographics has uniquely positioned mobile apps as a strategy for improving health outcomes, including reducing preventable readmissions.

*The number of users who download mHealth apps is estimated to reach*

**2.6** billion  
*by 2020.*

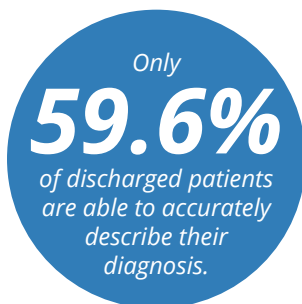
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# Efficient Mobile Strategies for Reducing Readmissions

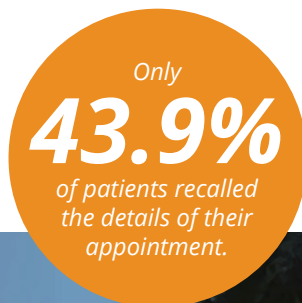
Mobile apps can be successfully leveraged in response to several of the most common causes of patient readmissions, including proper discharge communication, medication adherence, patient and family or caregiver engagement, and chronic care management.

## Proper Discharge Communication

Poor communication with patients at discharge is one of the top reasons for readmissions, as it causes confusion about follow-up care and prescribed medications. In a survey of patients 65+ years of age, only 59.6 percent were able to accurately describe their diagnosis, and of those discharged with a scheduled follow-up, only 43.9 percent recalled the details of their appointment.<sup>8</sup>



In addition, discharge instructions are often provided in a dense, technical format that is sometimes difficult for the patient to process - a study of 204 discharged patients found 65% had functional reading skills below that of their dismissal note, and 65% of the 30-day readmissions were patients with inadequate literacy for their dismissal comprehension.



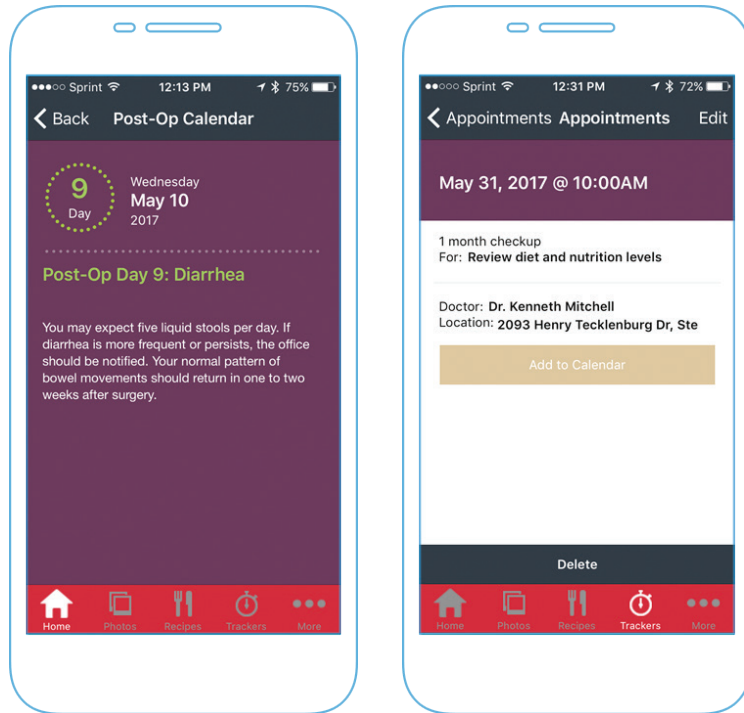
Providing the patient with discharge information in a clear, detailed manner they can easily revisit is important to ensure proper comprehension and post-care. Total hospital readmissions could be reduced by up to 12 percent by improving procedures for admitting and discharging patients, providing better follow-up care, and utilizing health information technology.<sup>3</sup> This could be the difference in whether or not your healthcare system is subject to Medicare reimbursement penalties.



As hospitals seek to revise their discharge processes, many of these solutions are very resource-intensive. Expanding send-home packets and limiting per-page instructions increases printing costs exponentially, and home visits or even telephone calls are inconsistent and personnel-intensive.

## An app for: Post-Discharge

By utilizing available health information technology, providers can reduce resource costs and make the information available to patients in a ubiquitous, accessible format. An intuitive, comprehensive post-discharge mobile application can be instrumental in improving follow-up care and curbing preventable readmissions.



### Key advantages:

- Interactive Checklist – Encourage the patient to ask questions and articulate areas of confusion
- Push notifications – Trigger reminders for various post-discharge care requirements and follow-up appointments
- Visual elements – Include images and videos to accommodate various learning styles and reading levels
- Educational Resources – Provide documentation on medications and conditions
- Customizable Inputs – Make notes or modifications specific to the patient
- Content management – Update and add to instructions or resources for immediate revisions

About  
**44** million  
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## Family/Caregiver Engagement

The benefits of an app extend beyond the individual patient, especially in older populations that are less mobile-dependent. In these cases, the patient will likely be under the care of a family member or care facility that was not immediately involved in the inpatient medical care.

About 44 million Americans have acted as unpaid family caregivers, according to a 2015 estimate from the National Alliance for Caregiving. While critical to the recovery of the patient, these caregivers are often not present during discharge and unaware of key instructions. Even the patients themselves are frequently distracted or still under the effects of anesthesia when given discharge instructions, rendering their assessment inaccurate or incomplete.

An app detailing recovery milestones, outlining what to expect post-op and when to reach out for medical input, can negate unnecessary or avoidable readmissions.



## Improving Prescription Adherence

Medication non-adherence is responsible for a significant number of hospital readmissions, with up to 75 percent of US adults non-adherent in at least one way.<sup>10</sup> According to Mayo Clinic, only 37 percent are able to state the purpose of their medications.<sup>11</sup> Moreover, patients are increasingly discharged with unresolved medical issues requiring post-discharge workups, roughly two-thirds of which are never completed.<sup>12</sup>

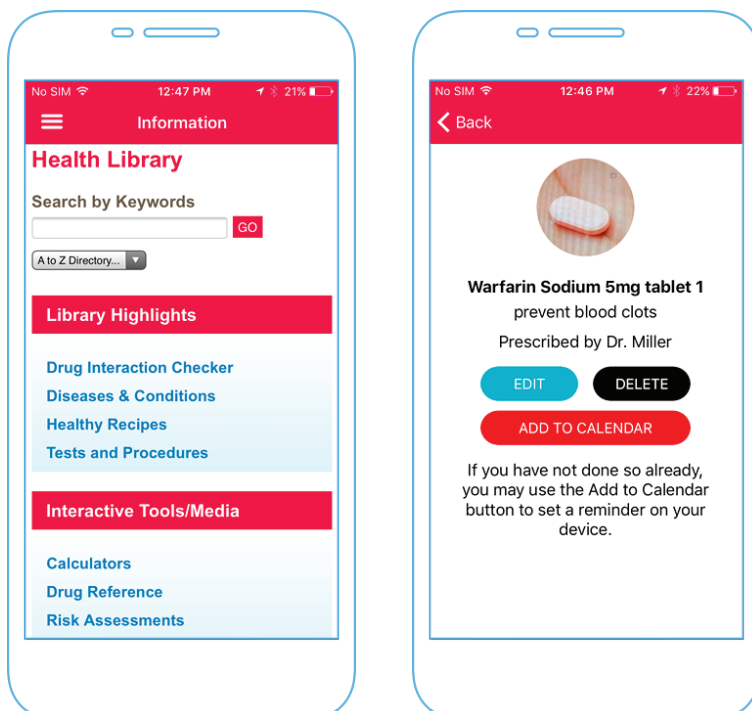
A direct correlation between improved prescription adherence and reduced healthcare usage has been established by multiple studies.<sup>13</sup> An easy-to-use smartphone app enabled with prescription reminders and timed push messages directly from the patient's provider can be an efficient tool for improving patient education and adherence, improving outcomes without requiring manual follow-up.

**75%**  
of US adults are non-adherent in at least one way.

Only  
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## An app for: Medication Adherence

Offering your patient a user-friendly mobile tool for medication tracking doesn't require implementing a complex technology. Prescription tracking can be built as a stand-alone app for a variety of procedures, or incorporated into an episode-specific app as a feature set.



### Key advantages:

- Enter and track medication dosage and intervals
- See all medications at a glance for clear visibility and reconciliation
- Create manageable medication plans
- Get information about medications and interactions
- Set up and receive medication reminders in the app
- Record reactions to medications and track improvement
- GPS-enabled pharmacy locator with turn-by-turn directions
- Get latest news from the hospital community

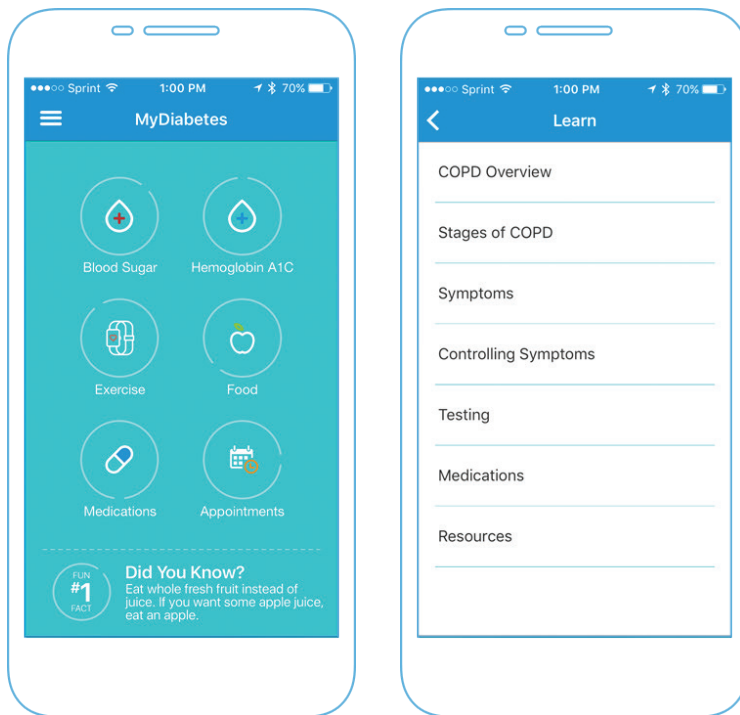
## Chronic Disease Control

The highest rates of preventable readmissions include patients with preexisting chronic conditions like heart failure, COPD, and diabetes.<sup>3,18</sup> These conditions can be poorly managed or coordinated across multiple specialists and hospital visits, often with duplicative or inadequately documented results and incomplete follow-up instructions.

Equipping these patients with resources to understand their treatment plan, self-manage, and detect warning signs can help overcome the knowledge gap that often leads to readmissions. In one survey, 39% of patients with chronic diseases admitted they were only somewhat knowledgeable, at best, about how to effectively manage their condition. At least 70% said they'd like more resources or clarity on how to manage their disease, and 91% said they need help doing so.<sup>19</sup>

### An app for: Chronic Care Management

An app tailored to a specific chronic condition is a way to educate patients and engage with them on an ongoing, proactive basis - between regularly-scheduled or emergency visits.



#### Key advantages:

- Interactive symptom/medication trackers
- Searchable library of articles and videos
- Personalized care team listings, with tap-to-call options
- Connection to patient support community
- Awareness of hospital-sponsored care opportunities
- Resources for healthy living, like recipes and exercise regimens

**91%**

*of patients with chronic diseases said they need help to effectively manage their condition*

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# The Cure: Empowering the Patient

A link has long been established between the sense of personal control and positive health outcomes.<sup>20</sup> This will only be more critical as the focus continues to shift to value-based care, with more holistic approaches and an emphasis on episodes of care.

*To address the readmissions problem, healthcare providers must empower the patient, and mobile applications can be efficiently leveraged to do that.*

As this coincides with the consumerization of healthcare, it is evident that technology will play a key role in reducing preventable readmissions and improving the entire continuum of care. This includes promising early-stage technologies like telemedicine and remote monitoring or wearables.

As providers and healthcare systems continue to explore how to best leverage these technologies, an obvious outlet for the opportunities and analytics they provide is through mobile applications. Current adoption rates are limited due to high costs of acquisition and setup,<sup>18</sup> but as the penalties for non-compliance continue to increase the value will warrant greater implementation and reduced costs of scale.

This positions mobile technology as the bridge, which hospitals can begin leveraging now to empower their patients by providing easy-to-use, branded smartphone apps, and encouraging patients to take a more proactive approach to their health.



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# 6 Best Practices for Cost-Effective Patient and Physician-Facing Apps

As many hospitals have demonstrated, it is not only possible but often more efficient and effective to build their own branded apps than to adopt and modify any of the myriad of apps available in the market. To ensure your app is inexpensive to develop and optimized to meet your users' needs, follow these best practices:

## 1. Research Your Target Patient Group

Whether you are building a patient-facing or internal app, knowing your target audience is the key to success. What kind of functionality would they enthusiastically embrace in a native app? Think of the likely context where they would use it: a smartphone app can enable functions where connectivity is limited, whereas a website or a patient portal could be hard to reach.

## 2. Think Big, Start Small, Act Fast

An app that does everything for everyone is not likely to be user-friendly. Start instead with a small, targeted use-case. MobileSmith allows you to prototype your app quickly and send your test app instantly to iOS or Android devices for testing inside your team or with a patient focus group. To make changes, simply return to the platform and modify your app until you are 100% satisfied with the user experience—no additional development costs involved.

## 3. Polish the User Interface and Experience

Your app needs to catch the user's eye to be downloaded and a superb user experience to keep being used. Users will be unlikely to come back to a poorly designed, disorganized app. Use the testing phase of development to get feedback on design as well as functionality, and don't be afraid to go back to the drawing board and try again.

## 4. Keep your App Fresh

Keeping your app content and functionality up-to-date is essential for successful patient engagement. Use the MobileSmith content management system to update content on-the-fly and to push messages in all of your apps, with role-based access established for your staff. Custom alerts, app version control, and real time content updates will make your app(s) a truly satisfying experience.

## 5. Establish a Secure Data Exchange

To guarantee security and patient privacy, MobileSmith uses reliable user authentication scenarios and industry-standard formats to communicate between your backend systems and each mobile device. You can engage your patients with condition-specific content without having to worry about exposing sensitive patient data. Moreover, native apps can exchange data even in the absence of a reliable Internet connection.

## 6. Embrace Analytics

Once you distribute your final app, use app analytics to track usage and understand the positives and negatives. You can find out what devices are being most frequently used, what pages are most (and least) frequently visited, how much time the users are spending in your app., and what is turning them off. Regularly checking user reviews and issuing updates is another great strategy for keeping your app sharp. Knowledge is power!





*To learn more about the MobileSmith platform and discuss your mobile ideas, contact us at **855.516.2413**, or **sign up** for a platform demo.*

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