

**Leverage Healthcare Technology Applications
to Improve Primary Nonadherence.**

Medication adherence starts with assessing a patient's opportunity for having positive outcomes on a specific therapy. Specialty and highly managed medications carry additional complexities due to added financial challenges, information and time needed from the patient and healthcare team to complete essential paperwork prior to initiating therapy, and ongoing monitoring by nurses, pharmacists, and other team members to minimize toxicities and maximize clinical benefit to the patient.

Because barriers to medication adherence are complex, varied, and highly individualized, solutions to improve adherence must be multifactorial, adaptable, and focus on each juncture in the patient's journey. Assessment of individual patients including motivators and barriers, focused education, and creation of tailored strategies are critical to increase adherence over time.

Healthcare teams are being held accountable to demonstrate the value of their services, and their success is dependent on being efficient and resourceful, often through technologic solutions, in their everyday practices. The use of technology is paramount for bridging adherence gaps from utilizing software for early risk evaluation and designing structured care plans to platforms that increase the speed and accuracy of communication by pulling and providing information to each stakeholder vital in the prescription process.

As patients continue therapy, reminders to the team and patient to encourage optimal medication use, proactively prevent adverse events, and create structure to refill medications seamlessly can be achieved through technology solutions that provide more actionable information at the time each member of the patient-centered team needs it most for the specific therapy.

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ADHERENCE.

The link between treatment and outcomes.

“Increasing the effectiveness of adherence interventions may have far greater impact on the health of the population than any improvement in specific medical treatments.”

-World Health Organization¹

An enormous amount of research has resulted in the development of medications with proven efficacy and positive benefit-to-risk profiles, yet the full benefit of these treatments remains unrealized in the real world setting due to nonadherence. It's been estimated that roughly half of the 3.2 billion medications prescribed in the U.S. every year aren't filled or taken as prescribed.²

In a new value-based world that's focused on improving patient outcomes, the missing link between treatment and outcomes is adherence.



This may be one of the reasons the World Health Organization concluded in one of its reports, “Increasing the effectiveness of adherence interventions may have far greater impact on the health of the population than any improvement in specific medical treatments.”¹

Since adherence to therapy, especially specialty and highly-managed medications, is directly linked with clinical outcomes, it is essential that providers and patients have access to the tools they need to start and stay on therapy. This can be accomplished through healthcare technology applications which streamline the enrollment process into patient access programs, as explored in this whitepaper.

The treatment of illness commonly includes the use of pharmacotherapy. Although a medication may be effective in combating disease, its full therapeutic benefit is often not realized because half of all patients do not take their medications as prescribed.^{3,4} On average, 50% of new medication users will fail to take at least 80% of prescribed doses during their first year of therapy.^{1,3,5,6}


“A first step in understanding adherence, or lack thereof, is assessing or measuring adherence.”⁷

Adherence in the treatment of chronic disease is particularly vital, since chronic disease affects nearly one in two Americans and treating chronically ill patients accounts for 86% of all healthcare spending.⁸ Yet strong evidence shows that many patients with chronic illnesses have difficulty adhering to their recommended medication regimen and that adherence is among the lowest for these patients.^{4,9}

There are multiple drivers of nonadherence.

Taking medication is complex and involves the patient, physician, and processing. Because of its multifaceted nature, there are many aspects of nonadherence across the plane of healthcare.^{4,10-12}

1. Fragmentation, which can cause difficulties for physicians to access patient information
2. The complexity of therapies, which can create confusion about the regimen, and how and when patients should take their medication
3. Poor communication between providers and patients about their medications
4. Behavioral factors, such as forgetfulness
5. Patient’s physical or cognitive impairments
6. Socioeconomic factors, including high medication costs, low health literacy, and lack of transportation services to pharmacies



Nonadherence is prevalent across conditions, especially in treating chronic diseases.¹³

Patient nonadherence has a staggering effect on healthcare as a whole. Nonadherence is not only associated with poor therapeutic outcomes, but with progression of disease, and an estimated burden of billions per year in avoidable direct healthcare costs.^{10,14-16}



The high cost of nonadherence is avoidable.

Poor patient outcomes

Medication nonadherence results in approximately 125,000 preventable deaths a year.¹⁷

Disease progression

Nonadherence worsens morbidity. Approximately 33% to 69% of medication-related hospital admissions are due to poor adherence.³

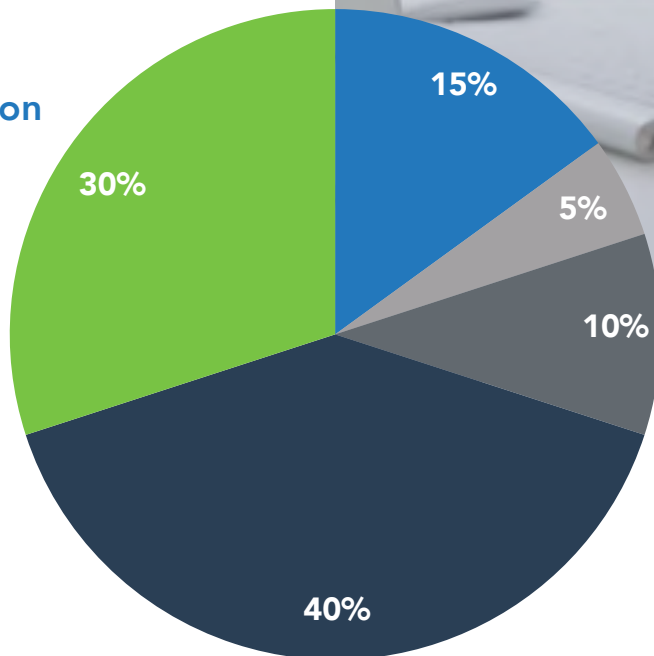
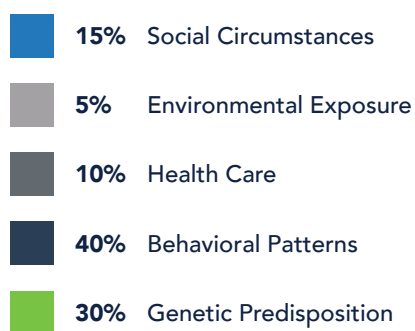
Increased healthcare costs

Healthcare costs ranging from \$100-\$300 billion have been attributed to nonadherence in the U.S. annually. This comprises 3% to 10% of total U.S. health care costs.^{10,15,18}

It's been estimated that 90%¹⁹ of the determinates of health lie outside the clinical setting. In the practice of medicine in the 21st century, the optimization of health extends beyond the patient visit. Patients need access to the tools that will drive the best outcomes for their health in daily life. Patients expectations too are changing — they expect to be an active participant in their health.

Improving adherence starts at the point-of-care.

Proportional Contribution to Premature Death:¹⁹



The best way to empower patients and help them start and stay on therapy is at the point of care through:

1. Accelerating time-to-therapy
2. Addressing drivers of nonadherence
3. Connecting patients to programs that support patients throughout the treatment journey

These ideas aren't new, but the way they can be implemented has vastly evolved. We've arrived at a powerful moment in the history of medicine. Through the implementation of healthcare technology applications and electronic health records (EHRs), we've created a digital system that can not only leverage the once inaccessible data in paper charts to improve outcomes, but can also be used to vastly improve medication adherence.



Incorporating healthcare technology applications into EHRs is the next logical step.

The EHR is where all patient data are centralized, and they can be analyzed to understand what's going on and what can be done to improve patient care. So far we've only scratched the surface of the potential of EHRs — we've created a digital system but still live in an analog world. Still, the capability that exists is leading to exciting breakthroughs in medicine and especially adherence.

For example, data by an EHR can help identify primary nonadherence, commonly known as prescription abandonment, which in turn allows physicians to intervene and direct the course of care. In a retrospective cohort study of 791 patients, only 66% of patients filled their prescriptions within 30 days. The researchers were able to match prescriptions to pharmacy claims in the EHR.²⁰

By 2015, 87% of U.S. office-based physicians had adopted an EHR, more than doubling the rate from 2008, according to data from Health IT Dashboard.²¹

The authors wrote that, "This study demonstrates the ability of aggregated pharmacy claims data available through the native electronic health record to identify patients with primary non-adherence. The availability of multi-payer claims data within the EHR may serve as a foundation for ongoing medication monitoring and improving adherence in a nonintegrated primary care network."²⁰

While this case of EHRs to identify nonadherence is powerful, more powerful still is the way EHRs can be integrated with patient access services that prevent prescription abandonment in the first place.

Leveraging healthcare technology applications can dramatically improve primary nonadherence.

Doctors want better tools to help patients get on and stay on medication, and they want those tools implemented into their EHR. Integrating patient access services in the provider's e-prescribing workflow has been shown to help improve prescription abandonment.

iAssist, a healthcare technology application, works by seamlessly onboarding providers and patients through the start of therapy, and by connecting patients to the services that support them throughout treatment. iAssist has been shown to dramatically reduce time to dispense as well as primary abandonment rates across conditions and patient populations.

Simplifying patient access and accelerating time-to-therapy has always been a focus within the iAssist Workflow. In a study conducted in partnership with a pharmaceutical client, time from prescription submission to patient initiation of therapy was prospectively collected and analyzed between two similar groups of healthcare providers writing drugs for multiple sclerosis.

The findings showed the median number of days from prescribing to therapy initiation for fax-based prescribing was 22 days compared to 10 days for iAssist Workflow-based prescriptions, reducing time to start of therapy by 45%.

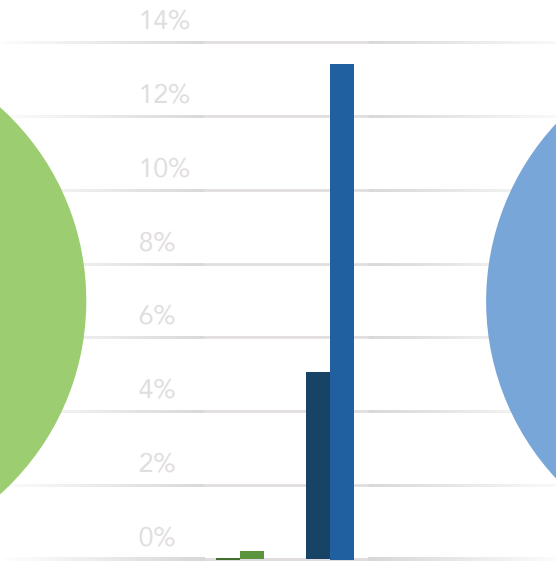
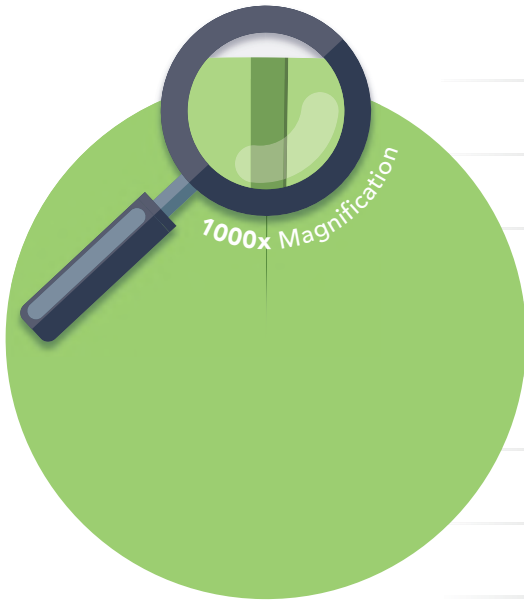


45%

Reduced Time to Start of Therapy

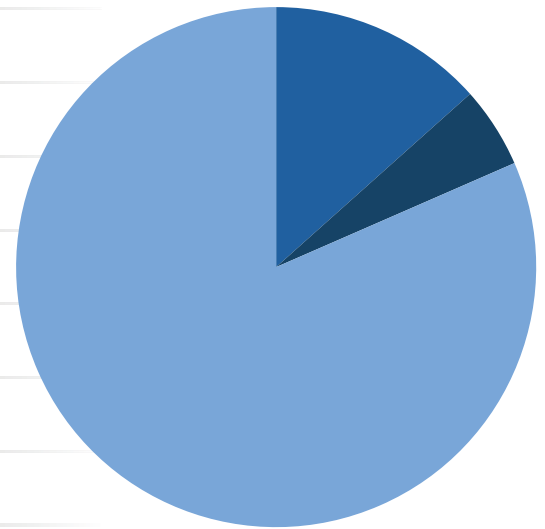
iAssist Referrals*

Initial Rx Abandonment: **0.21%**
Discontinuation Post 1st Fill: **0.02%**
Triaged to Pharmacy: **99.77%**



Fax Referrals*

Initial Rx Abandonment: **13.04%**
Discontinuation Post 1st Fill: **5.05%**
Triaged to Pharmacy: **81.91%**



This case study examined a women's health product with a highly-motivated patient population. The observational study looked at over 52,000 referrals submitted over seven months to the drug's hub. Patients whose drug initiation was submitted through iAssist were **78 times less likely to abandon** their therapy at initial fill or after their first month of treatment. The fax-based process yielded an abandonment rate of over 18.1% compared to less than 0.23% for patients whose drug initiation was completed through iAssist.



Women's Health



Weekly Injection



Highly Motivated Patient



June 2016 through December 2016



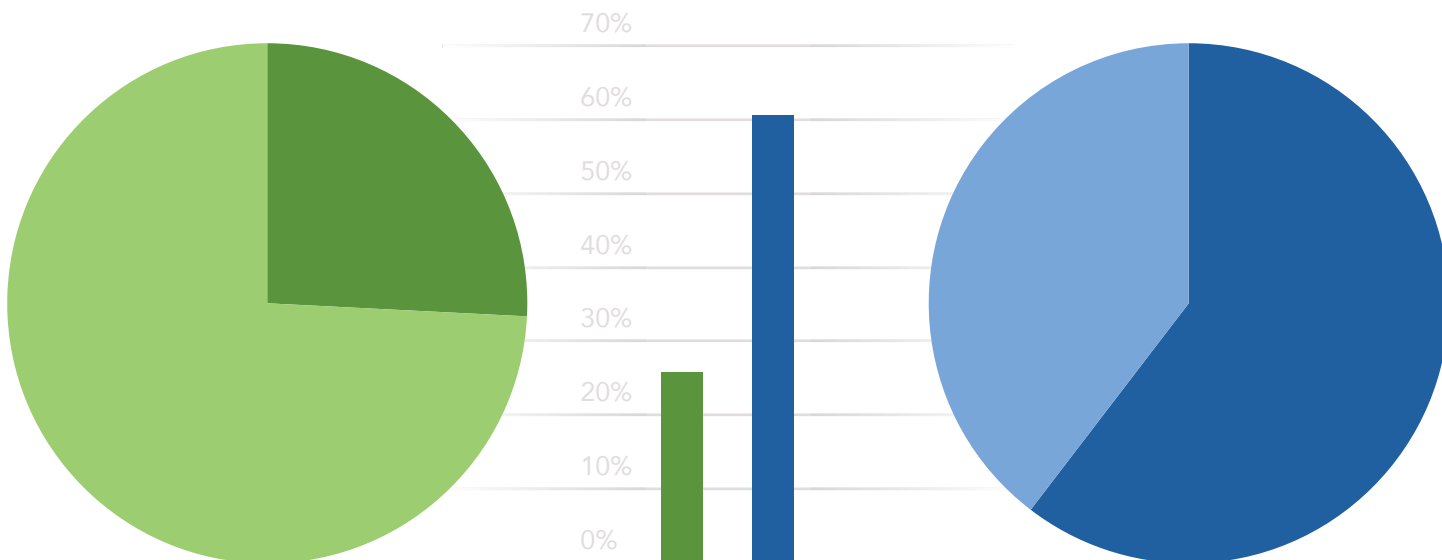
Over 52,000 Referrals

iAssist Referrals*

Initial Rx Abandonment: **25.8%**
 Triaged to Pharmacy: **74.2%**

Fax Referrals*

Initial Rx Abandonment: **60.4%**
 Triaged to Pharmacy: **39.6%**



The second data set, a product in dermatology prescribed for a less motivated patient population, showed more dramatic results. Retrospective analysis looked at over 15,000 referrals submitted in six months to the drug's hub. Patients whose drug request was initiated via a fax-based process had abandoned their medication before being sent for fulfillment 60.4% of the time. Patients whose therapy referral originated through iAssist had abandoned their prescription before it was sent to a pharmacy for fill 25.8% of the time. This demonstrates a **34.6% difference in abandonment rates** with the use of the healthcare technology application.



Dermatology



Patient Administered



Non-Motivated Patient



September 2016 to February 2017



Over 15,000 Referrals



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Learn more about how iAssist can dramatically improve adherence for your patients.

[Learn More](#)

Contact AssistRx at inquiries@assistrx.com or visit us at [AssistRx.com](https://www.assistrx.com)