

# Improving Medication Adherence and Clinical Workflows



Discover the ways a large Pennsylvania health system leveraged Memora Health's intelligent care enablement platform to support its oncology program.



# The Challenge

When it comes to oncology, helping patients achieve high medication adherence presents unique challenges, including adverse side effects and limited education or support resources. Past research has consistently shown medication adherence to be essential in successfully addressing chronic conditions — especially when it comes to the effectiveness of oral chemotherapy in treating cancer.<sup>1</sup>

In 2019, leaders at the Penn Center for Cancer Innovation (PC3I) made a commitment to leveraging technology to improve oral therapy adherence. But when much of care shifted to the at-home setting with the emergence of COVID in 2020, they recognized more burden might be placed on patients to navigate their already-difficult care journeys. And they knew they had to innovate more rapidly to help people stick to their medication plans during a time of great change and beyond.

This meant doing more to help patients remain adherent to treatment plans outside of hospital walls, monitoring them to track their symptoms, and actively preventing adverse events that could lead to ER visits or treatment setbacks. Investigators theorized a digital-first approach would be the best way forward, and partnered with Memora Health as part of this initiative.



Improve oral therapy treatment adherence to support positive health outcomes



Empower patients to manage low-grade symptoms at home



Reduce burden of symptom triage on care teams

<sup>1</sup>Thomas, S. A., John, T., Criner, E., & Nguyen, T. M. (2019, June 18). Challenges to Oral Chemotherapy Adherence. US Pharmacist. <https://www.uspharmacist.com/article/challenges-to-oral-chemotherapy-adherence>

# The Solution

As part of a pilot randomized controlled trial, PC3I's Implementation Strategies for Monitoring Adherence in Real Time (iSMART) program decided to use Memora Health's intelligent care enablement platform to test a novel SMS-based virtual assistant, Penny. The research program aimed to gauge the effectiveness of AI-supported automation for increasing medication adherence, improving symptom self-management, and triaging acute symptoms to oncology care teams.

A digital platform was built to incorporate natural language processing (NLP) to send patients clinically informed guidance on symptoms, medication reminders, and short surveys via text messaging. The platform also provided insight into patient status with automated triaging to identify and escalate urgent patient concerns.



Automated  
medication reminders



AI-supported triaging and  
patient concern escalation



Proactive guidance and education  
about cancer treatment



# The Results<sup>\*</sup>

\*Measured from November 2021 to December 2022

The trial first launched in 2021. Though Penn Medicine continues to tabulate data to understand the full scope of Penny's effectiveness, some compelling early results have emerged. Not only did the new program boast a 92% completion rate, but 99.4% of patients enrolled in Penny who self-reported during the live trial remained fully compliant with their medication regimens – a finding that outpaces the total adherence average range of 15-97% some studies have suggested.<sup>2</sup> Additionally, 87% of patients engaged in daily reporting. Penny successfully managed 60% of patients' symptom concerns, leaving clinicians with fewer patient questions to answer.

But addressing low-grade symptoms wasn't the only benefit. The average care team resolution time for Penny's automatically escalated concerns shrank by 40 minutes between November 2021 and December 2022. This result suggests that intelligent care enablement technology could go beyond patient support to actually empower providers to more efficiently address urgent patient requests – streamlining clinical workflows themselves.

<sup>2</sup>Wimbiscus, B. (2020, December 20). Patient Adherence, a Challenge of Oral Chemotherapy. Targeted Oncology. <https://www.targetedonc.com/view/patient-adherence-a-challenge-of-oral-chemotherapy>

**99.4%**

full medication adherence  
among reporting patients

**60%**

of symptoms  
managed by Penny

**40 minute**

improvement in average resolution  
time for escalated concerns

Want to see what Memora's platform  
can do for your organization?

Schedule a Demo

or email [info@memorahealth.com](mailto:info@memorahealth.com)