IMPROVING MEDICATION ADHERENCE USING BEHAVIORAL AI

a study by Medorion

How Medorion helps health plans to effectively reverse medication non-adherence

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NON-ADHERENCE IN NUMBERS

20-30%
of medication prescriptions
are never filled

~50%
of medications for chronic disease
are not taken as prescribed

Only **50%**
of the prescribed doses
are taken

~125,000
deaths

+10%
hospitalizations

$100-289 Billion
medical industry costs in 2012

A GLOBAL, PERSONAL PROBLEM

Medicine non-adherence is nothing new for patients with chronic conditions, their physicians and health plans. Research shows that many people in the U.S. do not take medication as prescribed, prolonging their symptoms, increasing their discomfort and the chance of developing more serious health complications down the road. According to a research review published in *Annals of Internal Medicine in 2012*, "…20 percent to 30 percent of medication prescriptions are never filled…" and approximately 50 percent of medications for chronic disease "are not taken as prescribed".

What's more, individuals who take prescription drugs generally only take about 50 percent of the prescribed doses, potentially leading to poor health outcomes. This same study also found that medication non-adherence caused nearly 125,000 deaths, prompted 10 percent of hospitalizations, and cost the medical industry between $100 and $289 billion. That was in 2012; still, almost one decade later, nothing has changed.

Patient non-adherence has serious implications as drug costs rise and therapeutic routines become more complex, incurring a negative impact on the cost-effectiveness of medicine and financial burden on society and the economy. The problem is that these macro issues are of no interest to members and have no influence on their adherence.

Why do millions of people opt for non-adherence when medication is so important for their specific condition, and overall health and wellbeing? It might seem odd yet a deeper look into the motivations for non-adherence reveal personal, valid reasons.

Using Medorion's platform, health plans significantly increased PDC medication adherence within just a few months, helping thousands of members adhere to their medication.

Medorion's Behavioral AI-powered technology is tapping into this very challenge, unraveling the many hidden concerns, thought patterns and behaviors behind members' choices - with the ability to reveal the reasons for medicine non-adherence in a way that is reversible using our everyday digital communication platforms. As this case will illustrate, using Medorion's platform, health plans significantly increased PDC medication adherence within just a few months, helping thousands of members adhere to their medication.

BARRIERS FOR NON-ADHERENCE

Having analyzed hundreds of thousands of data, demographics and behavioral trends, there are common barriers to adherence among members, including these four influencing factors:

1. COST

Some members perceive money to be the barrier because of the need to acquire medication, and since drug coverage can change over time, costs tend to fluctuate, resulting in financial worry and non-adherence. Members should be encouraged to communicate with their physician and find a drug that is better suited to their plan coverage.

2. NO DRUG FEEDBACK

"Whether I take the medication or not, I still feel the same, so why should I take it?" Often referred to as 'drug feedback', this barrier is very common among members. It is important to communicate that while results may not feel immediate, the medication is still working and continuing the medication is important in order to prevent complications later on, keeping members healthier for a longer period.

3. SIDE EFFECTS

Some members may struggle with side effects and rather than contact their doctor for advice, they either take a lower dosage or stop the medication - simply because they believe the doctor is 'too busy' and feel embarrassed. Tapping into this concern is paramount. Members should be encouraged to develop a dialog with their physician to better manage side effects and find alternatives.

4. LOGISTICS

It is astounding how many members struggle to refill their medication for logistical reasons. They may have good intentions for their personal health but they forget to take the medication or refill their prescription as needed. One of the best ways to flip the behavioral switch is to encourage them to sign up for home delivery and collect long-term prescriptions, from 30 days to 90 days.

Data driven insights are already helping to increase adherence to medication; the more health plans know, the better the treatment, the better the outcome and the relationship between physician and patient. While the barriers are known, Medorion's Behavioral AI technology is able to identify which individuals have what barrier, why, and what actions can reverse the behavior. This is where AI and Behavioral Science work together to sort the data and find patterns that help profile individual members, identify the barrier, and then create a communication strategy targeted specifically at that barrier.

"NON-ADHERENCE IS A PERSONAL PROBLEM"

In addition to these, since the onset of the COVID-19 pandemic, retrieving medication at pharmacies or specialty clinics has proven inconvenient for patients with chronic conditions. What was once a service reserved to high-tier member plans is now becoming an integral part of cross-tier member plans: home delivery, a service that leaves no excuse and can reverse non-adherence.

APPLYING BEHAVIORAL AI TO OPTIMIZE ADHERENCE

While traditional segmentation can very well highlight the barriers already mentioned, each member journey is different and respective decisions for non-adherence may be voluntary or involuntary, or perhaps a combination of both. Medorion's behavioral AI engine goes beyond to offer acute insight into why specific members are not adhering, uncovering personal motivations derived from vast clinical data.

For instance, one group of members may not be taking their medication because they are afraid of potential side effects, while another segment may not be adhering due to a lack of information about the medication and perceived lack of medication efficacy. Within the latter segment are additional variants that must be studied. Medorion's AI platform can identify and segment these groups effectively and quick enough to make the conversion.

Based on the feeds generated by Medorion's technology, health plans can address the barriers for non-adherence more effectively, and above all, more personally. Medorion generates ongoing data refinements to reveal what messages work, and why, allowing health plan marketers to continuously refine the messages to track each member's level of engagement and adherence cycle.

To demonstrate how behavioral AI can successfully tap into hidden patterns behind non-adherence, Medorion undertook major pilots with several prominent health plans. Understanding that members are in different phases of their treatment journey, medical health, financial status and overall wellbeing is paramount to the process; not all members are the same, and even those that fit a certain profile have hidden concerns and behavior.

Let's look at two members at risk for diabetes who stopped taking medication after a brief period and see how Medorion can offer a helpful solution to a practical problem:

Member A has a low socio-economic profile with a light tier plan with high-deductibles, resulting in 65% medication adherence. In this case, high deductibles make cost is a big factor, and Member A takes medication only on occasion.


Member B has a mid-tier plan with low deductibles and is of middle class, socio-economic means so cost is not the barrier. Instead, the reason for poor medication adherence is that Member B does not feel a difference in their health - no drug feedback.

Hence, we are looking at two members where the message to increase medication adherence is completely different. Being able to tap into the member's personal concerns is an important advantage because health plan marketers can shift from communicating on a macro level to speaking to a member's personal fears and concerns that directly affect them.

Action for Member Group A: Optimize Coverage
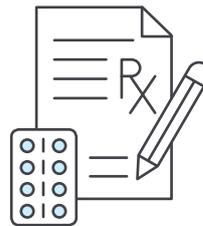
Action for Member Group B: Suggest new prescription

Following your treatment plan is very important to treat your condition and improve your quality of life. Not taking your medication may increase health complications in the future and result in potentially more serious conditions.

Your plan's drug coverage can change from time to time. If you are finding it hard to afford prescription refills, speak to your doctor to find a more suitable medication covered by insurance and lower the cost of care. Together.

Feeling unsure about your medication? Taking your medication is important to keep your health in check. Not taking your medication now will force your body to work harder and may result in potentially serious health issues in the future. Even if you may not feel a particular improvement or see immediate results, rest assured that your body is using the medication to help your system work more easily and efficiently.

Speak with your doctor if you have concerns about medication efficacy.

Data from the study showed that members were more likely to adhere to medication when the potential cost of non-adherence to their personal health were uniquely relevant to them. The key determinants of successful adherence are better communication and stakeholder collaboration. The capacity to listen to members' and understand their behavior will increase confidence in unique treatments.

INCREASING ADHERENCE IS AN INSIDE JOB

Yet again, the evidence and insight from studies suggest that the "pay and pray" approach, as is commonly referred to in the healthcare marketing industry, does not work. Health treatments are not a 'one size fits all' nor 'one size fits most'. Members are not concerned with other people's issues, the impact of non-adherence on society, nor on the economy. They are driven to action only when they are made aware of the potential danger to their health and impact on their lives.

The 'why" factor changes everything, and it changes constantly. Every member's voluntary or involuntary action is a decision, a hint into the personal considerations and hidden patterns. Medorion' behavioral-AI technology knows why those parameters affect medication adherence, and what will most likely convince them to cooperate. This strategy is far more effective than collective campaigns with proven capacity to optimize medication adherence.

> Keeping members healthy is an inside job, and it starts by cultivating a healthy and informed mind.

Using Medorion's AI platform health plans learn to know how to structure effective campaign messages and tailor them to specific individuals in a way that motivates them to medication adherence. Keeping members healthy is an inside job, and it starts by cultivating a healthy and informed mind.

Adherence measures should not be placed to control members, but rather to reveal flaws. For this reason, every stakeholder from the payer to healthcare providers must adopt a more inclusive attitude that encourages positive behavior and better health outcomes.

Understanding the impact that medication has on a member's adherence cycle has the power to transform health care and exponentially increase adherence to achieve each member's personal objectives, as well as across society and the economy.

Are you interested in a pilot?
Medorion can walk you through it.

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