

THE IMPORTANCE OF STICKING TO IT: NON-ADHERENCE TO PRESCRIPTION MEDICATION

By: Green Shield Canada and MEMOTEXT

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Drugs don't work if you don't take them. Seems obvious, doesn't it? Yet Green Shield Canada (GSC) recognized several years ago that medication non-adherence was a significant factor both in the inefficient use of health benefit plan dollars and for the poor health of individuals covered by those plans.

The Growth of Chronic Conditions

GSC's annual Drug Study provides an analysis of its claims data to identify the drivers of cost and utilization and trends for the future. Although we are often solely focused on individual high cost drugs, the most costly trend is actually the growing cost of drugs to treat chronic conditions – diabetes, depression, high blood pressure, and high cholesterol. The data also reveals that the group of plan members prescribed medication for these conditions tend to be non-adherent at high rates.

According to the 2014 study results, plan members with:

- Diabetes were 55% adherent (oral diabetes drugs only)
- Depression were 43% adherent
- High blood pressure were 63% adherent
- High cholesterol were 57% adherent

To come up with our adherence scores, we use a methodology called "Medication Possession Ratio" which is a way of analyzing our plan members' claims data and establishing the volume of drugs prescribed, the length of time they are taken, and the timeliness of the refill date.

Types of non-adherent behavior

Those who are non-adherent to hypertension and/or high cholesterol medication tend to fall into certain "types":

- The Forgetters: Forget to take their medication.
- The Reactors: Stop taking their medication because they dislike the medication's side effects.
- The Fearful: Don't take their medications because of perceived risk of long term effects or addiction.
- The Skeptics: Don't take the medication because they don't believe it will have any effect on their health.
- The Unsure: Don't take the medication properly because they don't fully understand it; what it's for, the benefits of taking it, and so on.



GSC Steps In To Help

The factors that influence whether or not people take their medicines correctly are complicated and they have a lot to do with human nature. Some doubt the effectiveness of a drug they are prescribed, some don't bother filling prescriptions, others take their doses irregularly, and still others are afraid of side effects. But GSC found in its recent data, far and away, the most common reason plan members don't take their medication is that they simply forgot.

Plan members who are not adherent to their prescribed medication (or don't "sticktoit" in GCS-speak) risk getting sicker, developing complications or additional health problems, and experiencing reduced productivity or time away from work.

GSC's mission is to create innovative solutions that provide access to better health for all Canadians. With all the evidence in hand, GSC saw an opportunity to improve plan member medication adherence – influencing both plan member health and wasted spend impacting their clients' plans. Since adherence was so poor for high blood pressure and high cholesterol medication, GSC started there.



Sometimes A Nudge Is All That's Needed: The Stick2It™ Program

In late 2013, GSC partnered with MEMOTEXT® to develop the Stick2It program for eligible GSC plan members. The goal of the program was to offer supportive messaging and personalized reminders to improve adherence to cholesterol and hypertension medication and thereby achieve better health outcomes.



The logo for the Stick2It program features the word "stick" in a green, lowercase, rounded font, a large grey number "2" in the center, and the word "it" in a green, lowercase, rounded font to the right.

Who Was Eligible?

Any GSC plan member between the ages of 25 and 64 who was recently diagnosed with high cholesterol or hypertension and was just starting a new drug therapy was eligible to register for the Stick2It program. To identify those possible participants, a report was created from GSC's claims data every three weeks that showed the new starts for those specific drug categories.

What We Did...

- Eligible plan members were invited, via a direct mail campaign, to sign up for the program free of charge. All they had to do was input their GSC ID number on the Stick2It website or phone in their GSC ID number.
- Participants completed an intake survey where they were asked how well they were sticking to their medication, what kinds of supportive educational messaging they would like to receive, and what factors might prevent them from adhering to their treatment.
- Based on their responses, participants received a proportional number of messages from each of these categories:
 - o General information about the illness
 - o Diet and exercise advice
 - o Maintaining a healthy lifestyle
- Participants also chose when and how they would like to receive Stick2It's medication reminders and messaging – by phone, text, or email.
- This data was integrated into the MEMOTEXT Personologic Algorithm to create a customized messaging and reminder program for the individual.
- Six months after enrolment, participants completed another survey asking them again about their preferences for messaging and how well they were sticking to their medication regimen. These responses were then used to fine-tune the proportion of messages they received from each category.



The Results...

Participants:

- A total of 434 plan members signed up for the program
- A total of 43 cancelled, resulting in a retention rate of 91.1%

Participants were highly motivated to adhere: more than 90% planned to strictly adhere to their medication regimen at the beginning of the program.

Persistence:

- Medication persistence, i.e., the proportion of individuals who continued to take their medication during the study, was markedly different between participants using the Stick2It Program and those who were not.
- Over a 10 month period, the Stick2It program increased persistence by 37.3% compared to a control group of individuals from the same plan member population who were taking similar medications.
- This increased persistence was also observed in the medication dropout rate. 22.5% of control participants stopped taking their medications after their first refill, compared to only 13.5% of Stick2It participants.



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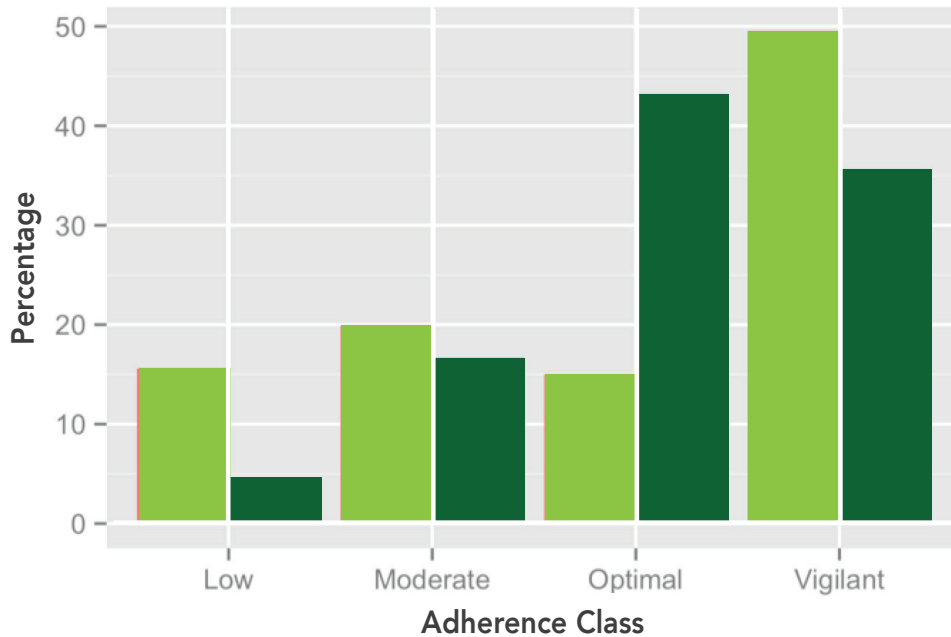
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COMPLIANCE:

- Stick2It participants also showed great improvement in medication compliance rate, i.e., the proportion of days a participant was taking their medication during a refill interval. 49.5% of Stick2It participants were classified as “vigilant,” compared to only 35.6% of the control group.
- Compliance Rate classifications for Stick2It participants versus the control group is shown below. The distribution of each category suggests two important things: 1) the Stick2It program helped individuals who were in the optimal range of adherence move towards the vigilant range, and 2) the Stick2It program helped individuals who would have normally stopped taking their medications completely move into the low and moderate ranges of adherence.

Compliance Rate Stick2It Vs. Control




Group
Stick2It
Control

Adherence Class Breakdown:
Low: <50%
Moderate: 50-79%
Optimal: 80-99%
Vigilant: >100%



What We Learned...

- Overall, the MEMOTEXT-administered Stick2It intervention provided substantial gains in medication persistence, compliance rate, and medication dropout rate.
- The program was well received, with a low cancellation rate (~10%).
- The most common reason for non-adherence to medication was forgetfulness.
- More women than men enrolled in Stick2It.
- Most participants (99%) chose to sign up online rather than via phone.
- The preferred method for the reminder messages was text, not phone or email.



The results of this pilot suggest that a mobile-based intervention can improve adherence in patients with hypertension and high cholesterol and provide value to the participant, the health benefits provider, and the plan sponsor. A re-assessment of participant need and preferences at five months may further improve patient adherence and outcomes.



About Green Shield Canada

Green Shield Canada is a benefits specialist. It's what they do. But as Canada's only national not-for-profit health and dental specialist, their reason for being is the enhancement of the common good. Green Shield Canada seeks out innovative ways to improve access to better health for Canadians.

From coast-to-coast, their service delivery includes drug, dental, extended health care, vision, hospital and travel benefits for groups and individuals, as well as administration services. Supported by cost containment strategies, advanced technology and exceptional customer service, they create customized programs for over one and a half million plan participants nation-wide.



About MEMOTEXT

MEMOTEXT provides personalized digital and mobile health based medication adherence solutions to patients. Our programs integrate an evidence-based design methodology, self-learning engine, and communications platform to personalize digital health interventions for various health care stakeholders.

Our evidence-based and disease-specific interventions use validated assessment and personalization methodologies to deliver significant and sustained increases in patient adherence to treatment regimens.



MEMOTEXT®