

The
Business
Case for



Adherence

Helping patients and the
bottom line

By Devin Stone

During NCPA's 111th Annual Convention and Trade Exposition in New Orleans last fall, former NCPA Executive Vice President and CEO Bruce Roberts

asked community pharmacists to take on the issue of nonadherence by making a goal of enrolling two new patients each day into an adherence program. Not only will promoting high rates of adherence help patients, but such a goal can also help a pharmacy's bottom line. To help community pharmacists understand the financial impact of an adherence program, NCPA created a simple calculator to model the possible financial benefits to a pharmacy from raising adherence rates.

The NCPA online calculator can be found online at www.ncpanet.org/adherencecalculator.

It is intuitive to understand why raising adherence rates will make a pharmacy more profitable. Every prescription that a patient fails to refill is a prescription that the pharmacist is unable to dispense. To put a price tag on this missed opportunity, this calculator can help pharmacy owners better understand how big the market is that adherence represents over 12-month, two-year, and five-year windows.

Here's the Breakdown

To put the idea into practice, let's use a hypothetical example that may sound familiar to many readers. Assume that a pharmacy currently dispenses slightly more than 60,000 prescriptions per year and is attempting to play a greater role in helping patients with chronic conditions manage their medications. To evaluate the profit from an adherence program, the first thing a pharmacy owner needs to do is calculate average gross profit per prescription, which for our example will be \$13. This calculation is relatively easy and can be done by taking average reimbursement per prescription drug and subtracting the average acquisition cost. Please note that the gross profit per prescription does not take into account the cost of dispensing, which will vary depending on the total quantity of prescriptions dispensed by the pharmacy.

The next step is to evaluate the number of patients who would benefit from an adherence program. This includes determining the number of chronic medications that these non-adherent patients are prescribed on a monthly basis and the average number of days it takes

for these non-adherent patients to refill their medication. For the purposes of our experiment, we will assume that the patients targeted with chronic conditions on average take five different medications each month.

The number of days that it takes a patient with a chronic condition to refill a medication is slightly more difficult to determine, but it is fair to assume that it will take patients between 37 and 45 days to refill a 30-day prescription. To get an exact answer, claims data can be used to compute the medication possession ratio (MPR), which calculates the supply of medicine that a patient has, divided by the number of days between refills. Typically, nonadherence is defined as having an MPR of fewer than 80 percent, which suggests that it takes the patient more than 37 days on average to refill a 30-day medication. For the purposes of our example, we will assume that nonadherent patients at the pharmacy on average refill their medications every 45 days.

Finally, the pharmacy owner must determine the number of patients the pharmacist can enroll into an

Medication Possession Ratio <i>(Total days supply of drugs)</i> <i>(Days supply of last fill + Day of last refill - Day of first refill)</i>	Average number of days it takes to refill medication
100%	30 days
86%	35 days
81%	37 days
75%	40 days
67%	45 days
60%	50 days

adherence program. It is important to keep in mind that it will take time and resources for a pharmacy to master the implementation of an adherence program, from identifying patients who will benefit to sending refill reminders to tracking patient progress. A suitable goal will depend on a number of factors, including the number of patients with chronic conditions who use the pharmacy and the resources the pharmacy has available to advertise its adherence program to stimulate demand. Attempting to recruit two patients every day into an adherence program is a noble goal, and feasible for many pharmacies.

Armed with this basic information, it is possible to use NCPA's online calculator to evaluate the impact on a pharmacy of an adherence program.

The first thing the online calculator does is establish a baseline of how much money each non-adherent patient currently represents. This is done by taking the average gross profit per prescription, multiplying by the average number of chronic medications taken, and then multiplying by the number of prescriptions the non-adherent patient is expected to fill throughout the year. Using the data input from our practical example, the typical non-adherent patient represents an average gross profit of \$585 throughout the year.

The next step is to compare this baseline scenario with how profitable we would expect these patients to be for the pharmacy if they were fully compliant, and refilled their medications every 30 days. The online calculator computes this as well, and then displays the difference between the gross profit currently experienced by the pharmacy and the amount that the pharmacy could make. From our example, a perfectly adherent patient would represent an annual profit of \$845, which is \$260 greater than the current baseline.

The next step is to determine the profit from enrolling a set number of patients into an adherence program each day. For simplicity, the calculator assumes that the pharmacy is open 365 days a year, so the number of patients enrolled in an adherence program will be 365 multiplied by the number of patients recruited into the program each day. As all patients are not recruited at once, but are recruited uniformly at a constant rate, the total gross profit throughout the year from enrolling patients in an adherence program can be calculated by using a Riemann sum. From our example, the calculator shows that an adherence program that helps two new patients

Medication Adherence and Prescription Drug Revenue Calculator

This calculator is designed to determine the changes in gross profit for a pharmacy after encouraging a higher medication adherence rate. Please input values in the boxes below then scroll down for analysis.

Gross profit per prescription

In 2008 the average gross profit per prescription drug was \$13.13

Number of different drugs prescribed per average patient for chronic conditions.

In 2008 the average patient with a chronic condition consumed 3 different chronic medications.

Number of days it takes the average non-adherent patient to refill a 30-day medication.

This number must be greater than 30. For many non-adherent patients it will take 40 to 45 days to refill a 30-day medication.

Number of existing patients recruited each business day to join an adherence program.

A very good goal is to identify 2 patients each business day that are on maintenance medications. The purpose of an adherence program is to have the pharmacist work with these identified patients to promote perfect adherence beginning on the day the patient is recruited into the program.

Without an Adherence Program

Without an adherence program each patient over the next 12 months consuming **5** different medications each represent under current adherence standards:

a potential gross profit of: **\$585** before tax

After Implementing an Adherence Program

Hypothetically, if the pharmacist was able to work with existing patients to promote perfect adherence so that recruited patients refilled all their medications on a monthly basis, then each patient measured over a 12-month time frame represents:

\$845 in gross profit to the pharmacy before tax

Thus, each patient enrolled into an adherence program over a 12 months represents the potential for:

\$260 in additional gross profit before tax

Business case

A brief business case based on the input values you provided above.

Assume that there are **730** patients each on an average of **5** different chronic medications. Without an adherence program, these patients over the next 12 months will bring in:

\$427,050 in gross profit

If the pharmacy has an adherence program and is able to recruit **2** of these patient(s) each business day and once recruited the patients practice maximum adherence so that each patient refills all their chronic medications every month, then starting today, over the next 12 months these adherent patients will bring in:

\$523,250 in gross profit

The increase in gross profit would be:

\$96,200 greater than what would occur under current adherence practices

The long-term increase in gross profit that would result in promoting maximum adherence for **2** patients each day would be:

\$384,800 over 2 years
\$2,405,000 over 5 years

Enhancing Compliance and Revenues by Mat Silverstein

In November 2009, Robert Bowles, RPh, of Big C Pharmacy in Thomaston, Ga., had the opportunity to provide medication therapy management to a Medicare Part D recipient.

“During the time that I spent with this patient, I quickly realized that this patient was grossly noncompliant with taking their medication,” he says. “I contacted the patient’s physician and determined that the patient was actually supposed to be taking 19 medications. She was noncompliant with 15 of these medications.

Bowles realized that it would probably take multiple approaches to achieve compliance with this patient. A big question was how was the patient going to keep up with 19 bottles of medicine. He determined that the patient had three daily administration times.

“We set up a zip-lock bag for each of these times,”

Bowles says. “One was at 8 a.m., one was at 3:30 p.m., and the last bag was for 4 p.m. Then, we set up My Dose Alert to call her at each of these times. The last part of my approach was to enroll her in our E-Z Med Synchronization Program, so that I could more effectively monitor her compliance.”

Bowles says the results were “literally amazing. After 29 days of this approach, the patient was within three days of being totally compliant [and by the next month was totally compliant]. Certainly, this becomes a win-win-win-win approach for everyone. The patient is healthier, the physician is not frustrated by having to deal with a noncompliant patient, the health care system ultimately saves unnecessary medical costs reflecting the value of a pharmacist, and the pharmacy realized a monthly gross revenue increase from \$450 to \$1,200 in by taking care of this patient.”

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As this basic example demonstrates, an adherence program can be an excellent way for a pharmacy to **dispense more medications and realize a higher gross profit.**

realize perfect adherence will help the pharmacy bring in an additional \$96,200 in gross profit in its first year.

It is important to remember that the calculator computes gross profit, not net profit. Implementing an adherence program will require additional resources

for ultimate success of the program. Pharmacy owners should carefully review the additional costs to the pharmacy of dispensing greater numbers of prescriptions, and the costs associated with implementing an adherence program, to determine the potential overall impact on their pharmacy’s bottom line. The online calculator can help by evaluating the labor costs to the pharmacy of having an employee spend a portion of his or her day sending out refill reminders, as well as by calculating the additional number of prescriptions that need to be dispensed for the pharmacy to break even.

As this basic example demonstrates, an adherence program can be an excellent way for a pharmacy to dispense more medications and realize a higher gross profit. More importantly, such a program can help patients achieve their desired health outcomes. Given that prescription drugs represent a tenth of all health care spending in the United States, promoting adherence is a great way to demonstrate the value that pharmacists can provide to patients, while creating added value for the pharmacy. **ap**

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