

## PHARMACIST & TECHNICIAN CE:

# Use Existing Resources: Opportunities for Improving Medication Adherence

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## Abstract

Medication adherence is vital to the health of patients as nonadherence to chronic disease regimens increases the risk for patient morbidity and mortality. Additionally, nonadherence places a high burden on healthcare systems. There are a variety of reasons patients may not be taking medications, many of which were classified by the World Health Organization in 2003. There are also a variety of tools and surveys that can be used to identify causes for nonadherence and barriers to taking medications as directed.

Fortunately, there are many opportunities for pharmacists to help patients improve their medication taking behaviors including state-wide and national programs. The Wisconsin Pharmacy Quality Collaborative and Medicare Advantage Part D programs are just two examples of existing structures available to pharmacists to improve adherence. Additionally, leveraging existing resources, such as pharmacy technicians and other members of the healthcare team, can expand opportunities for pharmacists to dedicate more time to patient education and adherence. With the use of these tools, pharmacists are well poised to help improve patient adherence to positively influence the overall health of a patient while improving the state of the healthcare system.

## CE FOR PHARMACISTS & TECHNICIANS

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### Learning Objectives

- Explain the five primary causes for nonadherence as classified by the World Health Organization
- Identify the five core elements of Medication Therapy Management
- Review the adherence metrics for the Medicare Advantage Part D plans
- Describe the roles of health care team members on improving medication adherence

It is well established that adherence to medication regimens is crucial to the overall health of a patient. Unfortunately, it is believed that approximately 50% of patients in developed countries with chronic illnesses do not take their medications as directed,<sup>1-6</sup> and the rate of nonadherence is higher in developing countries.<sup>1</sup> It has been shown through anecdotal stories and various studies that patients who are not adherent to their medication regimens have poorer health outcomes, which leads to increases in patient and healthcare costs and ultimately increases the burden of patient management on the healthcare system.<sup>1-3</sup> In fact, it has been reported that over 100,000 deaths annually and over a third of hospitalizations resulting from medications can be attributed to nonadherence in the United States.<sup>7,8</sup> This results in \$100 billion per year in healthcare expenditures.<sup>8</sup> Improving patient adherence to medications is essential to improving patient quality of life and reducing healthcare costs.

### WHO Adherence Classifications

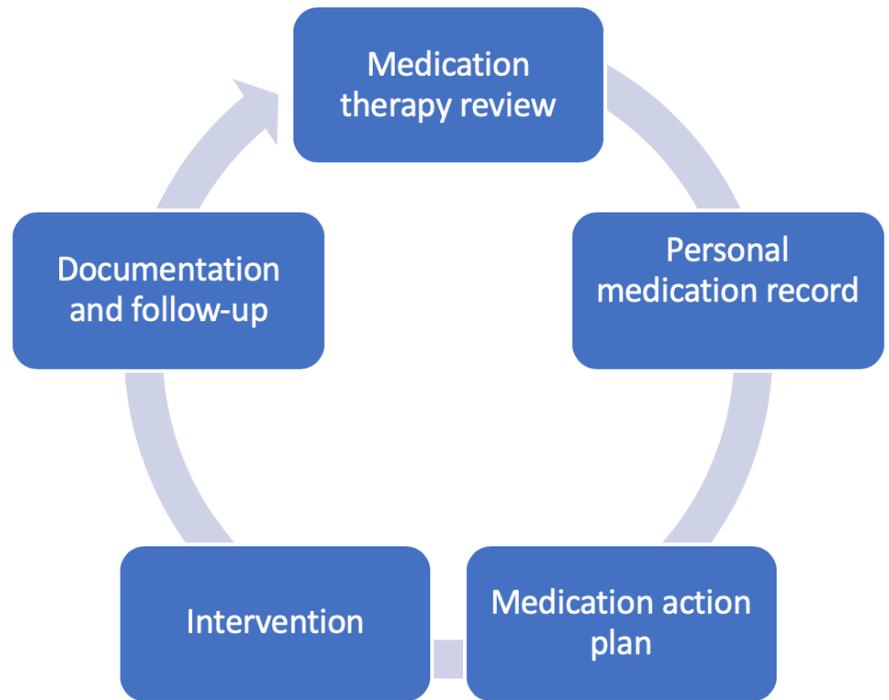
There are many reasons for patients to not take their medications or to take

them differently than prescribed. In 2003, the World Health Organization classified adherence tendencies into five primary classes or factors: social and economic, healthcare team and system-related, condition-related, therapy-related, and patient-related.<sup>1</sup> These classifications identified primary reasons that a patient may not be successful with taking their medications as directed by a prescriber. Brief descriptions about these identified reasons for nonadherence are provided below.<sup>1,5</sup>

1. Social and economic factors: These factors impact a patient's ability to obtain medications and understand the directions to take them appropriately. Factors such as patient education level and native language impact how well a patient may understand the prescribed directions. Limited or lack of transportation resources, long distance from offered healthcare services, and costs associated with transportation and medications themselves influence whether a patient will start or continue taking the medication. For these patients, access to resources may be a struggle and providing social support through community organizations, translator services, and medication savings programs may be helpful.

2. Healthcare teams and system-related factors: This brings the healthcare system into focus by identifying gaps in care, restricted access to providers, provider knowledge, and provider engagement in patient care. Being aware of potential knowledge or care gaps and encouraging open communication between providers, support staff, and patients is a first step to address this issue. Providing training to fill knowledge gaps and implementing processes to limit care gaps allows the provider increased opportunities for improved patient outcomes. Along these lines, it is important to train providers how to assess for nonadherence among patients. A variety of tools exist to help providers identify nonadherence behaviors, which will be discussed below. Patients may be concerned about a prolonged wait time for urgent visits or between routine care visits. This increases the risk for patients to move between and among healthcare systems, which in turn can increase the chance for errors in medications as reconciliations are completed with each system change. Adjusting or redistributing workload among providers and support staff may reduce wait times and ultimately improve relationships among employees and patients.
3. Condition-related factors: A patient's symptom severity, progression of disease, and availability of effective treatments are all considered condition-related factors. Patients who have a severe and quickly progressing disease may have worse adherence to medications than those with a slower moving, less severe presentation.
4. Therapy-related factors: These factors are similar to condition-related factors but focus instead on duration and complexity of available treatment regimens, associated side effects, and frequency of past failed treatments. Identifying the illness and communicating appropriate treatment regimen directions in a way that patients can understand and follow is important for ensuring patient adherence. Medications with a high

**FIGURE 1. MTM Core Elements**



rate of undesirable side effects are more likely to have high nonadherence rates. Accordingly, patients may become discouraged if they have already tried multiple therapies but have been so far unsuccessful.

5. Patient-related factors: Finally, some patients may not accept or believe their diagnosis or may simply be anxious about their treatment options, all of which contribute to patient-related nonadherence classification factors. Patients may not understand the disease, or they may have negative feelings or perceptions about it. These patients should be provided accurate information about their diagnosis and encouraged to try and self-manage symptoms whenever possible. While education alone may not be the strongest adherence tool, it is important for maintaining patient motivation for continuing treatment and should include follow up encounters. There are a variety of adherence applications for smart devices that can be shared with patients to help alleviate some fears, answer questions about their disease, and provide motivation to adhere to their medication regimen.<sup>4</sup> Giving the patient a choice in which therapy to

start can empower a patient, giving them more ownership of the disease and its management.

Patients may not be taking medications for a variety of reasons and it is possible that multiple reasons exist at once. The specific motivations for nonadherence may be known only to the patient and it is up to healthcare providers to listen and identify these reasons. Creating a one-size-fits-all adherence program would be challenging and likely be ineffective for many patients. It is important to treat each patient individually and address each situation independently.

### Assessing Nonadherence

There are also many ways to assess a patient's current state of nonadherence. Compliance scores and questionnaires such as the Eight-Item Morisky Medication Adherence Scale (MMAS-8), Medication Adherence Questionnaire (MAQ), Hill-Bone Compliance Scale (Hill-Bone), and the Self-Efficacy or Appropriate Medication Use Scale (SEAMS) are examples of commonly used, validated tools.<sup>2</sup> The choice of the tool depends on patient specific factors such as personal barriers and beliefs to their medication taking behaviors. For example, each of these tools can be used to identify adherence barriers,

**TABLE 1. Adherence Assessment Tools**

<i>Adherence Assessment</i>	<i>Advantages</i>	<i>Disadvantages</i>
Medication Adherence Questionnaire (MAQ)	Quick to use with only four yes/no questions Identifies barriers such as forgetfulness and adverse medication reactions	Less reliable and less validity than MMAS-8 for chronic diseases Requires permission for use
Eight-Item Morisky Medication Adherence Scale (MMAS-8)	More reliable and greater validity than MAQ for chronic diseases	Contains seven yes/no questions and one Likert-scale question Requires permission for use
Hill-Bone compliance scale	Identifies barriers such as forgetfulness and adverse medication reactions	Contains 14 Likert-scale questions More specific for management of hypertension
Self-Efficacy for Appropriate Medication Use Scale (SEAMS)	Works well for high and low health literacy	Contains 13 Likert-scale questions

but the MMAS-8 and Hill-Bone also assess medication taking behaviors. SEAMS may be a great option for patients with low health literacy who may struggle with other adherence assessment tools. Tool choice is also impacted by how care is provided in the healthcare clinic, such as face-to-face appointments or telephonic services. The MAQ is the quickest of these listed while the SEAMS is more time consuming. Thus, MAQ could be given via telephone encounters whereas SEAMS would be a better option if there is face-to-face time allotted to address and review responses with the patient. See Table 1 for advantages and disadvantages of these tools. While this list is not all-inclusive, using an adherence tool may be a good option for many institutions and practices but choosing the best one for the site requires some research to make sure the desired goals of the tool are attained.

Whether or not an adherence questionnaire or survey has been implemented, it has been demonstrated that adherence programs orchestrated by pharmacists improve adherence and reduce healthcare related costs, including costs to the patient, provider, insurer, and healthcare institution.<sup>1,3,9</sup> While pharmacists are generally well poised to provide front-line adherence services, they often struggle to provide these services due to other job-related responsibilities.<sup>5</sup> Fortunately, there are a variety of ways to utilize existing resources to provide pharmacists a greater opportunity to provide adherence services and improve the health of patients and reduce costs. Leveraging state-supported tools such as the

Wisconsin Pharmacy Quality Collaborative (WPQC) and national programs such as the Medicare Advantage Part D (MAPD) insurance Star Measures are two ways to help support pharmacist-led adherence programs in institutions around Wisconsin. Expanding the role of pharmacy technicians to allow for more time to provide patient education is another way for pharmacists nationwide to grow adherence services. Lastly, encouraging pharmacy students to participate in national adherence-focused campaigns can help facilitate adherence as a focus in their future practices.

### Medication Therapy Management/Wisconsin Pharmacy Quality Collaborative

A cornerstone of pharmaceutical care is providing medication therapy management (MTM) services to patients. In such services, a pharmacist will review a patient's medication regimen, assess the regimen for therapeutic appropriateness and efficacy, and make recommendations to optimize health outcomes. Often these services occur within a retail or clinical setting, but they are not limited to such locations. The practicing pharmacist then works with a provider to adjust the patient's regimen as appropriate for optimal care. Some institutions have collaborative practice agreements whereby the pharmacist or pharmacy have a formal agreement with a provider(s) to start, stop, or adjust therapies as outlined in the document.

This agreement may include the ability to order labs for medication monitoring. A systemic review by Conn and Ruppap found that pharmacist interventions made directly with a patient were more effective for improving patient adherence than interventions that alerted a provider to a patient's nonadherence ( $p < 0.05$ ).<sup>4</sup>

Several national pharmacy organizations recognize MTM and have developed five core elements as part of a standardized definition: Medication Therapy Review, Personal Medication Record, Medication Action Plan, Intervention, and Documentation and Follow Up<sup>10</sup> (Figure 1). MTM allows pharmacists to step into a clinical role, while embracing a position on the health care team, to provide optimal health outcomes.

One meta-analysis from 2015 by Viswanathan et. al. set out to determine the impact of MTM on patients with chronic diseases compared to standard care.<sup>10</sup> They reviewed 44 studies that included MTM from ambulatory settings. While evidence was lacking to form conclusions regarding MTM efficacy for many outcomes such as blood pressure and cholesterol, the authors found adherence to select medications was improved by about 4.6% with the implementation of MTM services. MTM also increased the number of patients who had achieved the predetermined adherence threshold level, with an odds ratio of 0.99-5.98. The inability for firmer conclusions due to insufficient evidence was thought to be due in part to significantly different patient populations and types of MTM interventions among the groups. Arguably, this illustrates how well MTM can be

molded and implemented to obtain specific healthcare goals at individual organizations. Furthermore, despite these differences in how MTM can be applied, an impact on adherence was still shown.

While MTM is generally considered a comprehensive dive into a patient's medication list, pharmacists can also perform Targeted Medication Reviews (TMR). As the name suggests, TMRs focus on a limited number or specific type of medication problems. Examples include nonadherence and drug-drug interactions. TMRs are included in MAPD plans to provide complete patient care.<sup>11</sup> However, TMRs certainly do not need to be limited to this patient population. Healthcare organizations can adopt TMRs to assess and improve adherence for antibiotics, anticoagulants, antivirals, and medications to treat chronic obstructive pulmonary disease and congestive heart failure, to name a few. These programs have increased the rate of patients being on appropriate medication therapy and have decreased healthcare associated costs, as shown through a review of clinical pharmacy services between 2006 and 2010 completed by Touchette and colleagues.<sup>9</sup> However, the authors found that not every medication service results in cost savings to the patient and/or institution, despite improvements in medication adherence. Nevertheless, it is still crucial that pharmacists continue to implement adherence programs to improve patient health outcomes.

A 2019 retrospective, propensity score-matched cohort study assessed the effectiveness of TMRs on medication adherence in both 2014 and 2015 Humana MAPD patient populations.<sup>11</sup> They compared these groups to a control group, which was comprised of patients who did not receive MTM services despite being eligible for such services. Adherence to specific disease state medications was examined before and after a TMR intervention. Researchers used the proportion of days covered (PDC) to assess adherence. The PDC can be calculated by dividing the number of days that a medication covers during a specified time period by the total number of days in that period. For the 2014 population, nonadherence contributed to over 50% of the medication-related problems. For

**TABLE 2. Medicare Program Coverage**

<i>Medicare Program</i>	<i>What is Covered</i>
Part A	<ul style="list-style-type: none"> <li>• Inpatient and hospital healthcare</li> <li>• Skilled nursing facility</li> <li>• Hospice</li> <li>• Laboratory tests</li> <li>• Surgery</li> <li>• Home healthcare</li> </ul>
Part B	<ul style="list-style-type: none"> <li>• Outpatient healthcare</li> <li>• Durable medical equipment</li> <li>• Home health</li> <li>• Some preventive services, including cancer screenings, infection screenings, and yearly wellness visits</li> <li>• Limited immunizations, including influenza, hepatitis B, pneumococcal</li> <li>• Limited medications, including those related to End-Stage Renal Disease or transplantations</li> <li>• Nebulizers</li> </ul>
Part C (also known as Medicare Advantage Plans)	Bundled plan containing some or all of the following: <ul style="list-style-type: none"> <li>• Part A</li> <li>• Part B</li> <li>• Part D*</li> <li>• Hearing*</li> <li>• Dental*</li> <li>• Vision*</li> </ul>
Part D	Medications

*\*Not all Medicare Advantage Plans include coverage for these programs.*

the 2015 group, this had increased to 87%. The authors found that TMRs were effective in improving adherence in both 2014 and 2015. For 2014, change in adherence following a TMR was as follows: oral diabetes medications (6.6%,  $p = 0.15$ ), antihypertensives (12.9%,  $p < 0.01$ ), and statins (11.2%,  $p < 0.01$ ). This is compared to 2015 results of oral diabetes medications (6.2%,  $p < 0.01$ ), antihypertensives (5.2%,  $p < 0.01$ ), and statins (8.2%,  $p < 0.01$ ). This study confirms that TMRs can improve patient adherence, and therefore reduce medication-related problems in a Medicare Advantage Part D beneficiary population.

In Wisconsin, accredited pharmacies are able to provide similar services to optimize patient outcomes and safety through the Wisconsin Pharmacy Quality Collaborative (WPQC). Currently, there are over 200 pharmacies participating in the WPQC program across Wisconsin.<sup>12</sup> Primary targets for this program are to improve patient health outcomes and reduce healthcare costs to patients, payers, and institutions. As discussed, each of

these items can be directly impacted by improving patient medication adherence. Part of the WPQC program involves the completion of a medication history for all new patients and for patients who use multiple pharmacies.<sup>13</sup> It is here that pharmacy personnel can help identify nonadherence patterns and barriers and take action to improve outcomes. Currently, WPQC offers services to select commercial health insurance plans and to Wisconsin ForwardHealth. Of the 69 pharmacies surveyed, 89.9% valued the WPQC program.<sup>14</sup>

WPQC has two levels of service. Level I (LI) are targeted interventions while level II (LII) are comprehensive medication reviews (CMR). Examples of LI services include medication addition or deletion, formulary change, and tablet splitting. While these changes may seem simple, for some patients changing to a different formulation or splitting a tablet is the key to them taking their medication as directed. Another LI service includes a patient encounter that focuses on adherence and opportunities to improve medication taking abilities.

**TABLE 3. Star Measure Adherence Levels**

<i>Adherence Metric</i>	<i>1 Star</i>	<i>2 Star</i>	<i>3 Star</i>	<i>4 Star</i>	<i>5 Star</i>
Diabetes	< 72%	≥ 72% to < 78%	≥ 78% to < 81%	≥ 81% to < 85%	≥ 85%
Hypertension	< 79%	≥ 79% to < 83%	≥ 83% to < 86%	≥ 86% to < 88%	≥ 88%
Cholesterol	< 73%	≥ 73% to < 77%	≥ 77% to < 83%	≥ 83% to < 87%	≥ 87%

LII encounters include a complete review of the patient’s entire regimen and may combine multiple LI interventions. Both LI and LII interventions have been found to augment the care community pharmacies are able to provide their patients (84.06% and 73.91%, respectively).<sup>14</sup> It is possible that since LI interventions are typically quicker to complete, they may be more feasible to implement and, subsequently, pharmacies may be able to complete them at a greater frequency.

Outside of the retail setting, pharmacists can complete such encounters during clinic visits or discussions with primary care providers. Often pharmacists work with patients for comprehensive medication reviews, polypharmacy reviews, targeted teaching visits, disease-state management visits, and adherence-focused encounters. A review of clinical pharmacy services between 2006 and 2010 found that very few programs reviewed identified themselves as offering MTM services.<sup>9</sup> Additional programs met the criteria for MTM services, however, did not label themselves as such, possibly due to the location of services provided. Regardless of the encounter type or location of the patient visit, adherence checks can be quickly incorporated and are crucial to overall patient health.

### Medicare Part D Star Rating

Nationally, providers have the option to improve patient health outcomes and reduce healthcare associated costs through the MAPD insurance plans. This unique type of Medicare insurance provides patients with both medical and prescription coverage. See Table 2 for a review of Medicare insurance coverages.<sup>15</sup> Similar to other insurance plans, the MAPD plan is critiqued for quality through numerous metrics referred to as Star Measures. Star

Measures were influenced by already well-known healthcare quality organizations such as the Pharmacy Quality Alliance (PQA) and the National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS).<sup>16</sup> Insurance plans are given a 1 through 5 rating for each Star Measure based on predetermined criteria. The individual Star Measures are then weighted and combined to assign a health plan with an overall Star Rating. Achieving a 5-star rating for the MAPD product line has large implications for financial viability, membership growth, and ultimately provides high value services for the patient base seeking care. Specifically, plans with higher ratings are eligible for increased quality bonus payments in addition to providing additional choices for beneficiaries enrolling in the insurance plans.<sup>16</sup>

Given the importance of medication adherence for improving disease states, many of the Star Measures are adherence related. Current adherence metrics, also known as Part D measures, are the Medication Adherence for Diabetes (non-insulin therapy), Medication Adherence for Hypertension (renin-angiotensin system antagonists), and Medication Adherence for Cholesterol (statins).<sup>17</sup> According to the Centers for Medicare & Medicaid 2019 Part C & D Star Ratings Technical Notes, these metrics measure the “percent of plan members with a prescription for [disease state] medication who filled their prescription often enough to cover 80% or more of the time they are supposed to be taking the medication.”<sup>17</sup> Those patients with PDC < 80% are considered to be failing the measure and would be prime candidates for targeted adherence intervention. The cut-off values for star measures are shown in Table 3.

As previously stated, adherence is known to influence disease state control. Subsequently, MAPD also encompasses metrics that assess the control of certain disease states. These Part C measures tend to correlate with Part D adherence measures (Table 4). Current Part C measures include Diabetes Care – Blood Sugar Controlled, Controlling Blood Pressure, and Statin Therapy for Patients with Cardiovascular Disease. One 2016 study aimed to assess the relationship between Part D adherence measures and Part C measures.<sup>16</sup> The study included the current Part C measures but also a previous one, Diabetes Care – Cholesterol Controlled. There was a moderate positive association found between the Part D and Part C measures, and “the strongest association was observed between the Part D diabetes medication adherence and Part C Diabetes Care – Blood Sugar Controlled measures ( $R^2 = 0.36$ ,  $p < 0.001$ ).”<sup>16</sup> The authors concluded that patient improvement in Part D adherence measures may lead to better outcomes for their Part C measurements.

Therefore, it is prudent to continue to assess adherence in the MAPD population. Pharmacy professionals are well positioned to influence these adherence measures while providing high caliber patient care. In order to best do this, it is helpful to have a standardized process in place. While the process should be individualized based on each healthcare organization, each pharmacy intervention process should be established with a goal to achieve optimal success.

One such process was the focus of a 2014 study which assessed methods to help improve medication adherence in southeastern Wisconsin.<sup>18</sup> The study identified members who were at high risk of nonadherence and placed them in a care

management program, which consisted of monthly phone calls and offered free monthly medication delivery. The study looked at adherence before and after the intervention for the two groups: care management alone versus medication delivery in addition to care management.<sup>18</sup>

Criteria for nonadherence in this study were PDC < 80% over the past 6 months, a newly initiated medication, or one or more of the medications identified by MAPD metrics, specifically for treatment of diabetes, hypertension, and cholesterol.<sup>18</sup> The authors did not have a particular script for the phone calls, however common questions included “I see you have not filled your high blood pressure medicine in a while – do you still take that medication?”, “How often do you forget to take your medicine?”, or “Do you have trouble getting to the pharmacy to get your medicine?”.<sup>18</sup>

Results showed that the pre-post absolute adherence rates increased for the care management alone group for diabetes, hypertension, and cholesterol medications with rates of 15.1%, 10.1%, and 13.6%, respectively (p<0.001).<sup>18</sup> Rates also increased with the combination group with rates of 30.9%, 25.5%, and 29.4% (p<0.001). Furthermore, MAPD adherence measures increased from 1 star to 3 stars for oral diabetes medications, from 1 star to 2 stars for antihypertension medications, and from 1 star to 3 stars for cholesterol medications. This helped increase the plan’s overall rating from a 3 to 3.5 stars. The authors concluded that “members in this MAPD plan dual-eligible population benefited from multiple points of contact to achieve increased adherence.”<sup>18</sup> This study illustrates that frequent patient touch points and medication delivery are methods that can be utilized to help improve patient adherence.

Aside from adherence guidelines, MAPD also has a metric for MTM Program Completion Rate for CMR. To successfully achieve the measure, patients must have their medications reviewed and discussed with either a pharmacist or other qualified healthcare professional. Part of this discussion is the identification of action items to improve understanding of the medications. The discussion concludes with the creation of a written summary that

**TABLE 4. Part C vs Part D Star Measures**

<i>Part C</i>	<i>Part D</i>
Diabetes Care – Blood Sugar Controlled	Medication Adherence for Diabetes Medications
Controlling Blood Pressure	Medication Adherence for Hypertension
Statin Therapy for Patients with Cardiovascular Disease	Medication Adherence for Cholesterol
	MTM Program Completion Rate for CMR

the patient may use to reference. The goal of these encounters is to improve patient understanding of their medication regimen and directions for use of each medication.<sup>17</sup> These requirements incorporate many of the 5 core elements of MTM and have a goal to improve patient healthcare. During these medication reviews, adherence should be addressed. Completion of a CMR, therefore, provides an additional opportunity to positively affect patient adherence.

Given the impact that Star Measures can have on health care systems, it is arguably prudent to be proactive with working these metrics. Many of the MAPD metrics are influenced by patient adherence, whether directly or indirectly. The above studies demonstrate that increased adherence can not only lead to increased star ratings but also increased disease state control. As pharmacists work to improve patient adherence, overall patient and healthcare-related costs may drop as diseases are more controlled, exacerbations become less frequent, and fewer patients are admitted or readmitted to the hospital.

### Interdisciplinary Teamwork

In Wisconsin, pharmacy technicians are not allowed to participate in the clinical decision making of patient care, however they can help the pharmacist complete their duties in acting as a pharmaceutical care provider.<sup>19,20</sup> Often, technicians in a retail pharmacy are delegated to prescription order processing, prescription dispensing activities, and managing inventory. Technicians who are properly trained, however, can be leveraged to allow the pharmacist more time to provide additional, personalized patient care

services, such as targeted or comprehensive medication reviews.

In a retail pharmacy, the technicians are usually the ones with the most contact with patients. They can use these relationships to build awareness and promote an adherence program. Technicians can be trained to contact patients to schedule appointments, gather demographic information and medication histories, complete a medication adherence assessment, organize medication lists, and complete follow up assessments.<sup>3</sup> Technicians can also make scheduled phone calls to a list of patients who do not pick up their medications regularly. Initial patient contact, whether in person or via phone, to schedule an appointment and gather basic demographic information, typically lasts five minutes.<sup>21,22</sup> If the technician is trained to provide additional services, such as administer an adherence tool, additional time may be needed. The patient could then be scheduled for an appointment or could be transferred to the pharmacist for a medication discussion.

A survey by Bright, Lengel, and Powers found that 70% of pharmacists in a Midwest retail chain would like a technician’s help with scheduling visits for medication therapy management encounters, billing for services, and follow up correspondence.<sup>23</sup> Bright and colleagues surmised that proper technician training could potentially increase the number of MTM encounters offered by the pharmacies.

Another option is to get technicians involved in the Star Rating management of patients by developing a list of MAPD patients who are failing the metric. A pharmacy professional, including a properly trained technician, pharmacy student,

or pharmacy resident, can use the list to address the incidences of nonadherence. Completing cold calls to patients can be uncomfortable for some as the patient may wonder the reasoning behind the outreach. This makes patient-friendly dialogue that is devoid of accusatory verbiage essential. Training for such conversations may be necessary. An example for such an encounter is below:

*Hi, my name is [your name]. I am a pharmacy [your title] working with Dr. [PCP]. We received a notification from your insurance that you are filling [medication name] less than expected. I wanted to check in and see if you were having any trouble with side effects or cost. Are you having difficulty getting to the pharmacy? How often do you estimate missing this medication?*

While nonadherence is a concern associated with pharmacy professionals for obvious reasons, it is not solely the pharmacy profession's responsibility to assess patient adherence. Nonadherence provides an opportunity to foster interdisciplinary practices and relationships. Education on risks associated with nonadherence and strategies to improve medication taking behavior starts when these professionals are still students. The National Consumers League has created an annual two-month long competition, the Script Your Future Medication Adherence Team Challenge, to encourage professional students from various healthcare backgrounds to create innovative solutions for medication nonadherence.<sup>7,24</sup> The Medication Adherence Team Challenge launched in 2011 and provide<sup>s</sup> healthcare professionals an opportunity to brainstorm and implement creative resolutions to medication nonadherence while engaging in interdisciplinary partnerships. The competition focuses on diabetes, respiratory diseases, and cardiovascular diseases. Several national pharmacy organizations support this challenge, including the American Association of Colleges of Pharmacy and the American Pharmacists Association.<sup>7,24</sup>

One 2019 winner was the Pacific University School of Pharmacy.<sup>23</sup> The school held several adherence events in partnership with a primary care clinic, teaming with students in psychology,

audiology, dental hygiene, and optometry. These adherence events were focused in low-income communities and communities of color. During the challenge, 152 patients were directly counseled with an emphasis on cultural competency and health literacy barriers. The other 2019 winner, the University of Pittsburg, utilized a radio platform to reach roughly 125,000 listeners and ultimately complete 2,107 direct patient consultations. This team consisted of dental, health and rehabilitation, medicine, public health, nursing, and social work students.

While less than a decade old, this competition is a unique way for healthcare providers from all disciplines to work together to identify creative solutions to help improve medication nonadherence on a community level.

## Conclusion

Nonadherence continues to be a problem among patients, and there are a variety of reasons for people to not take their medications as prescribed. Fortunately, there are also a multitude of opportunities for pharmacists to help patients start or get back to taking their medications as directed. Ultimately, increasing medication adherence will help reduce the risk for disease complications and reduce overall costs to the patient and to the healthcare systems. Nationwide, services such as the Medicare Part D Star Ratings are a useful tool to help identify therapy and adherence gaps in addition to providing incentives for patients and providers to improve adherence in select chronic disease state management, specifically diabetes, hypertension, and cholesterol. Additionally, MAPD allows for Comprehensive Medication Reviews which has the potential to improve patient medication adherence. In Wisconsin, the WPQC services also allow for Comprehensive Medication Reviews through billable level II services in addition to the quicker, more targeted level I interventions.

One struggle for completing such in-depth services for patients is simply the lack of pharmacist time. Some pharmacists may have access to learners such as pharmacy residents, pharmacy interns, or students completing an introductory or advanced

pharmacy practice experience. These team members may allow for additional services to be completed, whether by the pharmacist or by the learner. Unfortunately, not every pharmacist will have steady access to a learner. One solution is to engage the services of constant, already-present front-line participants, namely pharmacy technicians. Typically, technicians are key to establishing working relationships with patients and would be ideal for making initial adherence phone call checks or providing information about additional services provided by the pharmacist. Another essential component of improvement in adherence is to bring in other members of the healthcare team as ultimately, all providers are responsible for the patient's health and well-being. While nonadherence continues to be a problem among patients, there are a variety of opportunities to help patients improve taking their medications as directed.

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## Assessment Questions

1. A patient lives in a rural town with limited access to healthcare facilities. English is her second language. She is in good health overall, but when she feels sick, she prefers to drive the 30 minutes to the urgent care facility rather than drive the hour to her primary care provider's office. Her provider feels she may be nonadherence to her medications. What factors may be influencing her nonadherent behavior?
  - a. Healthcare team and system-related factors
  - b. Patient-related factors
  - c. Therapy-related factors
  - d. Social and economic factors

### Use the following case to answer questions 2 and 3

AP is a 52-year-old female who admits that she does not take her medication because the drug information sheet she received from her pharmacy said that the medication can increase her risk for kidney damage. Her brother needed a kidney transplant and she is afraid to go on dialysis.

2. What factors are impacting her nonadherence according to the World Health Organization?
  - a. Social and economic factors
  - b. Healthcare system related factors
  - c. Condition related factors
  - d. Therapy related factors
3. What is the best way to help AP improve her adherence?
  - a. Change the medication information sheet to minimize the emphasis on renal toxicity
  - b. Educate the providers on proper counseling on this medication
  - c. Explain the purpose of the medication and identify ways to reduce the risk for renal toxicity
  - d. Contact the provider and change to a

different medication

4. Which of the following is not one of the five core elements to Medication Therapy Management:
  - a. Medication Therapy Review
  - b. Personalized Medication Plan
  - c. Plan-Do-Study-Act
  - d. Documentation and Follow-up

### Use the following case to answer questions 5 and 6.

You work an independent pharmacy and receive transfer prescriptions for a patient who is new to your system. You also receive a request from the patient's provider to complete a TMR for this patient.

5. What does the term TMR stand for?
  - a. Targeted Management Review
  - b. Targeted Medication Review
  - c. Therapeutic Management Review
  - d. Therapeutic Medication Review
6. Which of the following could you complete to satisfy the provider's request for a TMR?
  - a. Evaluating a patient's medication refill history
  - b. Reviewing a patient's medication profile
  - c. Gathering a patient's medication history
  - d. Assessing a patient's adherence to Alzheimer's Disease medications
7. You review a patient's PDC and find it to be at 92%. You are pleased to say this patient is adherent to his medications, but at what level would the patient be considered failing a MAPD Part D for the adherence metric?
  - a. PDC < 70%
  - b. PDC < 80%
  - c. PDC < 85%
  - d. PDC < 90%
8. Which diseases are included in the disease-state adherence measures for MAPD Part D Star Measures?
  - a. Cholesterol, hypertension, diabetes
  - b. Cholesterol, hypertension, chronic obstructive pulmonary disease
  - c. Chronic obstructive pulmonary disease, diabetes, congestive heart failure
  - d. Hypertension, diabetes, congestive heart failure
9. As a pharmacist at Happy Pharmacy, you would like to ensure your patients are picking up their medication refills on time. You are in a very busy pharmacy and have limited space for face to face visits. Which of the following could be an

- appropriate first step towards improving your patients' refill adherence?
- Employ your technician to contact patients who are 5 or more days overdue for a refill
  - Schedule medication therapy management services for a patient each time a new prescription is received
  - Call each patient who is 5 or more days overdue for a refill at the start of your shift
  - Complete a Targeted Medication Review for each patient with a new prescription
10. Did the activity meet the stated learning objectives? (if you answer no, please email sarahs@pswi.org to explain)
- Yes
  - No

11. On a scale of 1 – 10 (1-no impact; 10-strong impact), please rate how this program will impact the medication therapy management outcomes or safety of your patients.
12. On a scale of 1 – 10 (1-did not enhance; 10-greatly enhanced), please rate how this program enhanced your competence in the clinical areas covered.
13. On a scale of 1 – 10 (1-did not help; 10-great help), please rate how this program helped to build your management and leadership skills.
14. How useful was the educational material?
- Very useful
  - Somewhat useful
  - Not useful

15. How effective were the learning methods used for this activity?
- Very effective
  - Somewhat effective
  - Not effective
16. Learning assessment questions were appropriate.
- Yes
  - No
17. Were the authors free from bias?
- Yes
  - No
18. If you answered “no” to question 17, please comment (email info@pswi.org).
19. Please indicate the amount of time it took you to read the article and complete the assessment questions.

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March/April 2020

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| 1) a b c d | 11) _____ |
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| 4) a b c d | 14) a b c |
| 5) a b c d | 15) a b c |
| 6) a b c d | 16) a b   |
| 7) a b c d | 17) a b   |
| 8) a b c d | 18) _____ |
| 9) a b c d | 19) _____ |
| 10) a b    |           |

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