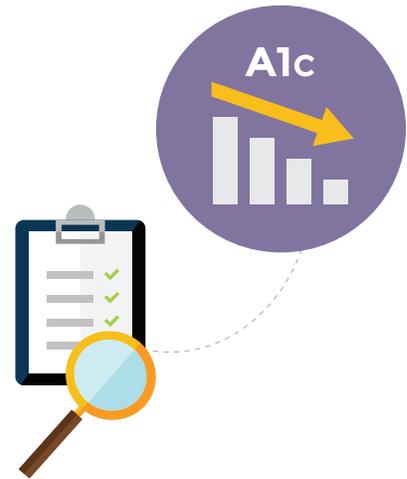


Managing Type 2 Diabetes: A Team-Based Approach



Help patients with type 2 diabetes achieve their glycemic goals

CME
CREDITS:
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How will this module help me improve glycemic control and prevent complications in my patients with type 2 diabetes?

- 1 Outlines six steps for developing an efficient team-based approach to managing diabetes
- 2 Provides answers to common questions about diabetes management for patients with type 2 diabetes
- 3 Provides examples from other practices on how they are helping patients achieve their glycemic goals

Increasing administrative responsibilities—due to regulatory pressures and evolving payment and care delivery models—reduce the amount of time physicians spend delivering direct patient care. Diabetes is a complex illness that requires a lot of effort to manage, by both patients and their care teams. This module explains a team-based approach to helping improve glycemic control and prevent complications in patients with type 2 diabetes. Included in this module are ways to evaluate the impact of poor glycemic control on your practice, recommended interventions to pilot with your team, guidance on how to optimize medications, and methods on how best to engage patients in their treatment plan.

Managing Type 2 Diabetes – a team based approach

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Objectives

At the end of this activity, participants will be able to:

1. At the end of this activity, learners will be able to develop an efficient team-based approach to managing diabetes.
2. At the end of this activity, physicians will be able to demonstrate shared decision-making with patients when selecting medication to manage Type 2 Diabetes.
3. At the end of this activity, physicians and care teams will be able to provide educational tools and resources to patients with Type 2 Diabetes.
4. At the end of this activity, physicians and practice managers will be able to select a practice improvement initiative aimed at improving health outcomes in patients with Type 2 Diabetes.

Target Audience

This activity is designed to meet the educational needs of practicing physicians, other clinicians and practice managers may also be interested in this activity.

Statement of Competency

This activity is designed to address the following ABMS/ACGME competencies: practice-based learning and improvement, interpersonal and communications skills, professionalism, systems-based practice and also address interdisciplinary teamwork and quality improvement.

Accreditation Statement

The American Medical Association is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Credit Designation Statement

The American Medical Association designates this enduring material for a maximum of 0.5 *AMA PRA Category 1 Credit™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Claiming Your CME Credit

To claim *AMA PRA Category 1 Credit™*, you must 1) view the module content in its entirety, 2) successfully complete the quiz answering 4 out of 5 questions correctly and 3) complete the evaluation.

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About the Professional Satisfaction, Practice Sustainability Group

The AMA Professional Satisfaction and Practice Sustainability group has been tasked with developing and promoting innovative strategies that create sustainable practices. Leveraging findings from the 2013 AMA/RAND Health study, “Factors affecting physician professional satisfaction and their implications for patient care, health systems and health policy,” and other research sources, the group developed a series of practice transformation strategies. Each has the potential to reduce or eliminate inefficiency in broader office-based physician practices and improve health outcomes, increase operational productivity and reduce health care costs.

Disclosure Statement

The content of this activity does not relate to any product of a commercial interest as defined by the ACCME; therefore, neither the planners nor the faculty have relevant financial relationships to disclose.

Media Types

This activity is available to learners through Internet and Print.

Hardware/software Requirements

Adobe Flash 9.0.115 or above
 Audio speakers or headphones
 Screen resolution of 800X600 or higher
 MS Internet Explorer 8.0 or higher, Firefox, Opera, Safari, etc.
 Adobe Reader 5.0 or higher

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Introduction

Diabetes is a complex illness that requires a lot of effort to manage, by both patients and their care teams. The good news is that there are simple interventions that can make a big difference and save time. Successful management can be achieved by taking multiple small steps.



Q&A

How big of a problem is diabetes in the US?

In the US, diabetes is the primary diagnosis for 37 million visits to a physician's office, emergency department or outpatient hospital-based clinic every year.¹ Approximately 9 percent of the US population has been diagnosed with diabetes, representing 22 million Americans.² Among adults, type 2 diabetes accounts for more than 90 percent of cases.² Diabetes is the seventh leading cause of death in the US and is responsible for 20 percent of health care spending in this country.³

Six STEPS Forward to develop an efficient team-based approach to managing diabetes

1. Engage your team
2. Evaluate the impact of poor glycemic control among patients on your practice
3. Choose one aspect of diabetes care to address first
4. Pilot an intervention with your team
5. Optimize medications
6. Engage your patients in their treatment plan



1 Engage your team

Lead change by engaging the entire clinic team early on, including front desk staff, medical assistants, nurses, and other care providers. They will feel more involved in any improvement initiatives and more willing to help shape the approach to change. Consider having periodic meetings with team members so everyone is on the same page and to answer questions and address any issues that may arise. Communicate the importance of improving the management of type 2 diabetes for patients in your practice. **Various resources are available** that offer direction on how to best coordinate engagement among your team members. Consider inviting pharmacists, diabetes educators, nutritionists, administrators and patients to these meetings to help your team understand all aspects of diabetes

Q&A

Why should we include a patient in our team meetings?

Having a patient attend is helpful for understanding the barriers to achieving optimal glycemic control from the patient’s perspective. Understanding these barriers is the first step toward addressing them effectively.

Why should we include an administrative leader?

Involving leadership in the improvement initiative will to help ensure proper support and protected time to accomplish the work.

What about team members who are personally impacted by diabetes?

It is likely that some members of your team have firsthand experience with diabetes, either personally or because a family member has the disease. Be sensitive to the possibility that your staff members may be struggling with diabetes themselves.

2

Evaluate the impact of poor glycemic control among patients on your practice

Analyze your practice data to determine how many of your patients have type 2 diabetes and the percentage that have poor glycemic control. To identify patients, work with your IT or billing staff to create a report listing all patients with type 2 diabetes by ICD10 code. Share the report with your team. Generally, staff are surprised at the number of patients who have poor glycemic control, are not being seen in clinic frequently enough, or have not had blood tests drawn. You can also increase your staff’s knowledge of diabetes to better address the needs of patients with type 2 diabetes. A [sample curriculum](#) is provided for your convenience.

Next, shift the focus toward the impact of poor glycemic control among patients with type 2 diabetes on the clinic itself. Ask each team member to identify the negative consequences of poor glycemic control and the benefits of improving glycemic control. Make a list and ensure that every team member’s perspective is included.

The list of consequences may include:

- Disruption of the schedule because of frequent unplanned or prolonged visits
- Delays in the schedule and a full waiting room because of prolonged visits
- Finishing work late because of numerous interruptions and extra calls from the emergency room, the pharmacy and patients
- Potentially lower income for the practice under new payment models

Q&A

Many of my patients have diabetes. How can I identify a smaller group of patients with which to work first?

Your staff and resources will determine the optimal size of the patient group to focus on. If this is your team’s first attempt at analyzing your patient population, be sure that the list of patients is a manageable size and that the work can be easily accomplished in a reasonable timeframe; a sample of 100 patients may be an optimal size to start. Some organizations choose to focus on those patients with an A1C greater than 9 percent, sometimes referring to this challenging group of patients as “diabetic 9’s.” In addition, while the Medicare-eligible age range is 18-75 years, you may want to limit your first report to a

smaller age range (e.g., 40-60 years). If the resulting report still includes too many patients for your initial project, narrow the age range even further (e.g., between 50 and 60 years).

Other examples of possible study populations include patients with type 2 diabetes who are:

- 40 to 50 years of age with no A1C test in the past 7 months*
- 40 to 65 years of age with A1C greater than 10 percent who have not been seen in the past 7 months
- 30 to 50 years of age with normal kidney function who are not taking metformin

*To accommodate a realistic timeframe for the scheduling of subsequent visits, a measurement window of 7 months can be used to reflect the guideline recommended interval of 6 months.

3

Choose one aspect of diabetes care to address first

Patients with diabetes often have a number of comorbid conditions and psychosocial factors that impair their ability to achieve optimal glycemic levels. To ensure that the team does not become overwhelmed, steer team members toward choosing a small, targeted initiative that is likely to succeed. Once your team develops the skills needed to succeed with one simple change, they are likely to feel more confident and enthusiastic about taking on a more complex challenge.

Places to consider starting include:

A Screen for depression

Depression affects nearly 1 in 10 patients with diabetes. There is evidence that depressive symptoms can affect physical symptoms related to glucose regulation because of poorer self-care.¹⁶ Therefore, effective treatment for depression in patients with diabetes may not only improve depressive symptoms and quality of life, but also indirectly improve disease outcomes and illness burden.⁴

Q&A

Won't screening for depression take a lot of time?

Depression screening can be easily added into your practice workflow. Some practices screen all patients for depression, but this may not be practical at first. During pre-visit planning, identify the patients you would like to screen for depression. Your staff can ask these patients to fill out a depression screening assessment, for example the [Patient Health Questionnaire-9 \(PHQ-9\)](#) or the [PHQ-2](#) as appropriate, in the waiting room or examining room before you see them.

B Help your patients understand their numbers

Q&A

How can I help my patients understand the purpose of the A1C test?

You can explain in simple language that the A1C test represents the average sugar levels in the body over the previous three months. It may help to show patients a table with the diagnosis, blood glucose level and A1C level, such as in the example shown below.

Your patient’s A1C goals will depend on his or her personal needs. Together with your patient, you can set the A1C goal and determine a plan for achieving this goal, maintaining overall health and minimizing diabetes-related complications.

DIAGNOSTIC TEST ²	NORMAL	PREDIABETES	DIABETES
HbA1C (%)	< 5.7	5.7-6.4	≥ 6.5
Fasting plasma glucose (mg/dL)	< 100	100-125	≥ 126
	Encourage patient to maintain a healthy lifestyle.	Refer to diabetes prevention program, provide brochure	Confirm diagnosis; retest if necessary.
	Continue with exam/conxult. Retest within three years of last negative test.	Consider retesting annually to check for diabetes onset.	Counsel patient re: diagnosis Initiate therapy.

Reprinted with permission from the American Medical Association.¹⁹

How can I help my patients understand the connection between the glucose meter results they see at home and their A1C results?

You can show patients a table that demonstrates the relationship between blood glucose level (the eAG or estimated average glucose) and the A1C test result. For example, you could say, “The A1C test shows your average blood sugar level over the last three months. It’s an average, so it reflects all the ups and downs of your blood sugar levels over that time. An A1C of 8 percent means that your average blood sugar level for the last three months was about 180.”

A1C	eAG
Percent	mg/dL
6	126
7	154
8	183
9	212
10	240
11	269
12	298

C Provide lifestyle education

Good nutrition and physical activity are important elements to achieving A1C targets for patients with type 2 diabetes. You can provide educational materials for patients, such as [4 Steps to Manage Diabetes for Life](#) or the guide from the American College of Physicians, *Living with Diabetes*. A staff member with experience using tools for diabetes or weight management can also be an asset as they can become your local expert on these subjects. Such expertise increases staff engagement and helps staff members better understand the challenges that patients face in trying to achieve glycemic control and a healthy weight.



Living with Diabetes: An Everyday Guide for You and Your Family ©2016 American College of Physicians, Inc. Courtesy of ACP. Living with Diabetes is provided electronically to STEPS Forward™ users for free individual and organizational use. To purchase a [print version of Living with Diabetes in bulk](#) please visit ACP's website.

Providing clear examples to your patients is also helpful. This could include using a simple, impactful tool to teach patients about the caloric content of beverages. To create this tool, add granulated sugar to an empty soda bottle in an amount equivalent to the sugar content of soda. (As an estimate, a 20-ounce bottle of soda contains about 16 teaspoons of sugar.) Place a bottle in each exam room.

Patients often pick up the bottle without being prompted and are very surprised to see the amount of sugar contained in soda. Take the opportunity to talk about reducing calories by cutting back on their intake of high-calorie beverages. Let them know that consuming one less 20-ounce soda (approximately 225 calories) a day could potentially result in weight loss of a half a pound per week or 25 pounds in one year. Most patients agree to try this simple dietary change. Sharing this educational tool with patients can be a fun and simple intervention to try for your first quality improvement (QI) effort.

Q&A

How can we encourage our patients to exercise?

To ensure success, start small. Research has shown that people with diabetes experience better glucose control from a 15-minute walk after each meal than from a single 45-minute workout session each day.⁵ A [daily exercise calendar](#) or online exercise tracker can help motivate some patients.

Another idea is to refer deconditioned or sedentary patients to physical therapy, which often helps patients build confidence and get moving again.



What diagnosis codes can be used for physical therapy referrals?

Appropriate diagnostic codes for a referral may include: deconditioning, generalized weakness, unsteady on feet, difficulty in walking, poor balance, osteoarthritis, and abnormality of gait. Each patient encounter is unique and any resulting referrals should be coded in accordance with appropriate coding standards.

What about referral to a diabetes educator?

Consider referring your patients to a diabetes educator. These professionals can provide supplemental support for the daily management of diabetes and counsel patients on healthy lifestyle changes, such as making **healthier dietary choices** and initiating an exercise routine.

Locate diabetes educators close to the patient’s home and develop a standing order for referral of patients with diabetes when medically appropriate. Talk with your leadership about the importance of investing in an in-house diabetes educator. If reimbursement is tied to metrics that reflect a population’s diabetic control, administrators may be more willing to invest in diabetes self-management programs.

Won’t addressing diet and exercise take a lot of time?

Referring your patient to a diabetes educator can help you address **diet** and exercise without taking time from your patient visit. During **pre-visit planning**, your team can identify patients with diabetes who have not visited with a diabetes educator in the past year. During the visit, recommend diabetes education and provide information on local services. Consider including a referral for diabetes education in your standing orders to save time.

“

I enjoyed the diabetes classes and had no idea there was so much sugar in soda, juices and sweet tea. I stopped drinking these one month ago and have lost three pounds already! I don’t miss them at all and I have saved money!

”

– A patient newly diagnosed with diabetes

How much diabetes education time is covered by insurance?

Most insurance plans, including Medicare, cover diabetes education at the time of diagnosis and annually thereafter. Medicare reimburses for 10 hours of education during the first year after diagnosis and 2 hours each year thereafter.¹⁵ Many other insurance plans provide similar coverage. Consider referring all your patients to a diabetes educator every year.

How can I find a diabetes educator near my office?

You can ask team members and other care providers for the names and contact information of local diabetes educators. You can also use an online tool that identifies **local diabetes educators**. Begin and maintain a list of these service providers.

What if a patient with diabetes is overweight and smokes? Which behavior change should we address first?

It is probably unreasonable to expect a patient to tackle smoking cessation and weight loss at the same time, especially because many patients gain a small amount of weight while attempting to quit smoking. Ask your patient which challenge he or she wants to address first. Smoking cessation is likely to result in greater health improvement than weight loss, but the choice should be the patient’s. After several

months of success in one area, you can help your patient address the other. Visit www.smokefree.gov for resources to support your patient in quitting smoking.

D Screen for early renal dysfunction

Monitoring renal function and screening for microalbuminuria are important in patients with diabetes. The urine albumin-to-creatinine ratio (ACR) should be determined for each patient on an annual basis. Assessing renal dysfunction is a relatively straightforward area to improve on and can be addressed with [pre-visit planning](#) and [standing orders](#). (Standing orders for patients with diabetes might also include serum lipid testing, referral for dilated eye exam, and referral for diabetes education).

E Perform foot exams

Patient education about foot care and careful examination of both feet at each visit are important for the early identification and treatment of foot ulcers. Ensure that removal of patients' footwear is a regular component of the rooming process. Putting a sign in the exam room, such as one that reads, "If you have diabetes, please take off your shoes and socks," can also help. Perform and document the foot exam at each visit.

Q&A

How big of a problem are diabetic foot ulcers?

Foot ulcers occur in 4 to 10 percent of patients with diabetes, with a lifetime risk as high as 25 percent.⁶ Patients are often unaware of foot wounds due to impaired sensation caused by diabetic neuropathy.

Can team members perform the foot exam?

In some practices the medical assistant or nurse is taught to [examine the feet for ulcers](#) at every visit and performs the diabetic foot exam, including annual microfilament testing for neuropathy. When patients see that care providers prioritize the foot exam, they may be more likely to perform regular foot exams at home.

It also is helpful to educate patients about footwear that can help prevent foot wounds, such as special shoes or inserts. Many patients are unaware that Medicare Part B may cover part of the cost of these items.

4

Pilot an intervention with your team

Improving diabetes management in your practice is a great opportunity for your team to learn about quality improvement (QI) strategies while making a positive impact on your patient population. A commonly used strategy for engaging in QI projects is the Plan-Do-Study-Act (PDSA) cycle.

Teams can use a PDSA cycle to conduct small tests of specific change—doing a process in a slightly different way and then observing the results. If this is the first time your team is engaging in a QI project, it is important they understand how a PDSA cycle works. You will also want to ensure that your team chooses an intervention that is simple, sustainable and achievable. See the following table for some simple improvement projects with which to start.

As you advance in your improvement projects, post simple tick chart's where all staff can see the progress being made (see examples and a downloadable chart for your team to use).

QI Project Goal	Example of Intervention to Test with PDSA
Increase percentage of patients with whom your staff discusses high-calorie beverages	Place an empty soda bottle containing granulated sugar in each exam room
Increase percentage of patients referred annually for diabetes education	Create standing orders for diabetes education referral
Screen patients for depression	Implement depression screening questionnaire in waiting room or exam room
Improve frequency of foot exam	Ensure that all patients remove footwear at every visit
Decrease percentage of patients with diabetes and obesity who are taking a medication associated with weight gain	Review chart to consider substitute drug
Increase percentage of patients with an A1C measurement in past 6 months	Call patient to schedule appointment and order A1C

If the results from a QI project do not result in the chosen outcome, take time to reflect on why the outcome was not achieved while also acknowledging the teamwork that went into planning and carrying out the initiative. **Celebrate and reward** the hard work of trying something new. Then, as a team, continue to work together to repeat the PDSA cycle with different small tests of change until the desired result is achieved.

5

Optimize medications

While some patients with type 2 diabetes can control their blood glucose levels through diet and exercise, many will require some form of medication. Because some drugs promote weight gain, it is important to review patients' medication lists and replace these drugs if possible.

Q&A

Reviewing each patient's medication list takes so much time. How can I review the list and still have time to build a relationship with my patients and address their concerns?

Many patients spend at least 20 minutes in the waiting room and/or exam room before seeing a health care provider. This time can be used to engage patients in the medication reconciliation process and prioritize their concerns for that visit. For example, front desk staff can hand each patient a list of their medications upon check-in, along with instructions and a place to write concerns they would like addressed that day. The patient can review the list for accuracy and identify priorities for the visit. These **paper forms** are only used to improve the team's efficiency and can be discarded after the **visit**.

What if I have patients who are still not achieving their A1C goals?

If you have a patient who is not achieving their A1C goal, scan his or her medication list for drugs that promote weight gain such as certain antidepressants, sulfonylureas or steroids and try to find a substitute.

Once you have reviewed the patient's medications for weight-promoting drugs, consider **patient nonadherence** to their medications. Studies have shown that approximately 50 percent of patients do

not take medications as prescribed,^{7,8} while three-quarters of physicians assume that their patients are adherent.⁹ Often patients hide medication nonadherence for fear of being admonished or disappointing their health care provider. Although some nonadherence is due to forgetfulness or circumstances out of the patient’s control, studies suggest that in many cases, nonadherence is intentional, meaning it is due to an active decision on the patient’s part not to take the medication.¹⁰ Approaching patients in a non-judgmental way to discuss adherence can yield important information about their medication-taking behavior. You may find that your patient is having undesirable side effects such as weight gain or an upset stomach. This information can be helpful in adjusting the treatment plan so your patient can successfully manage their diabetes.

“

No one ever told me that the diarrhea from metformin would go away if I kept using the medicine. Now that I take it every day, I have no problem. But if I miss it for 3 days, the diarrhea comes back. That keeps me from forgetting to take my pills!

”

– A patient with diabetes

What is the best way to ask patients about their adherence to medications?

Patients may not feel comfortable being truthful if they sense their care provider may judge them. Instead of saying, “Did you take your metformin as prescribed?” say, “Everyone forgets to take their medication sometimes. How often in the last week would you say you forgot your metformin?”

Many of my patients tell me they cannot tolerate metformin due to diarrhea. How can I help them?

Metformin, if not contraindicated and if tolerated, is the preferred initial pharmacologic agent for the treatment of type 2 diabetes.¹¹ Most patients develop diarrhea upon initiation of metformin that usually resolves within a week of continued use. These side effects almost always resolve when the patient’s body becomes accustomed to the drug.

It is important to educate patients so that they anticipate this side effect and teach them how to titrate the metformin dosage to manage side effects. Surprisingly, if a patient misses their metformin for as few as 2 days, once restarted the diarrhea will return. Explain to patients that the more consistently they take their medication, the more likely the diarrhea will resolve. For more details on how to provide this information to patients, see case 1 under the STEPS in practice tab.

DOWNLOAD [Antihyperglycemic therapy in type 2 diabetes and combination injectable therapy](#)

6

Engage your patients in their treatment plan

Step description: Patients are more likely to adhere to their treatment plan if they helped design it. Here are some tools that can help engage your patients:

A Decision aids

The Mayo Clinic has developed [decision aids](#) to support shared decision-making conversations between clinicians and patients with diabetes about treatment options related to diabetes medication and statin therapy to reduce cardiovascular risk.

Disclaimer: No decision aid replaces the conversation patients should have with their clinicians to make

important, clinical decisions. Use of these decision aids carries no liability to its developers or to the Mayo Clinic Foundation for Education and Research.

Q&A

What is shared decision-making?

Shared decision-making is a process in which patients share their values and preferences and clinicians share the best clinical evidence available to arrive at a decision regarding a test or treatment that is consistent with outcomes that matter most to the patient.^{12,13} Shared decision-making, including empathic conversations between patients and clinicians, is essential to providing personalized care. Determining the best management plan for a patient requires a consideration of each individual’s personal, social, and biomedical context; the patient’s values and how these values relate to the available options; and the benefits, harms, cost and inconvenience of each option.

B Teach back

Use the [teach-back method](#) to check that your patient understands their treatment plan. Ask that they repeat back to you the plan you’ve just discussed.

C “What questions do you have for me?”

At the conclusion of your visit, ask the patient, “What questions do you have for me?” rather than “Do you have any questions?” Using an open-ended question creates an opportunity for your patient to ask about any last-minute concerns or areas of confusion. Responding to these questions during the visit will save time in the long run and improve patient care by correcting any misunderstandings about medications or the treatment plan.

D Patient education tools

You can provide education tools that patients and their families can review at home. Here is a list of [helpful resources for patients](#), including some engaging videos. You can give this list of resources to patients to take home or add it as a template to the electronic health record as part of your after-visit summary.



AMA Pearls

Start with small, achievable goals for your first improvement projects.

Make sure to celebrate your team’s decision to take on a change project, as well as any improvements in outcomes as a result of their work.

Conclusion

Patients with type 2 diabetes often have numerous other chronic conditions, which can make improving the health (and measurable outcomes such as A1C) of these patients very challenging. Avoid frustration by approaching the challenge with your team and choosing interventions that are likely to result in success. It is important to take small, simple steps and engage your team in a way that results in long-lasting change. Also, always remember to celebrate the success of your patient's health achievements, the care team's dedication to working together to improve patient care, and your overall practice improvements.



Additional Resources

- [NIDDK: Know your blood sugar numbers](#)
- [National Diabetes Education Program](#)
- [National Diabetes Education Program Patient Fact Sheets](#)
- [National Diabetes Education Program Toolkit](#)

STEPS in practice

1 How's it working in Oak Forest, IL?

Oak Forest Health Center is a community-based medical clinic that delivers healthcare services to residents of Cook County, IL, regardless of their ability to pay for care. In 2016, the clinic had 15,000 primary care visits from 6737 unique patients. Nearly one-quarter of these patients had a diagnosis of type 2 diabetes. It quickly became apparent that the team would need to take steps to effectively manage these complex patients. Specifically, they started using **team-based care techniques**, such as **pre-visit laboratory testing** and a daily **huddle**, to streamline their workflows.

Much of the streamlining took place at points in the workflow that happen well before a patient with diabetes enters the exam room. Pre-visit laboratory testing was implemented, with patients encouraged to visit the lab before their clinic appointments. Reminder calls are made to all patients who have pending lab orders (including for A1C, lipids, and urine microalbumin). Then, one to two days prior to each clinic, the medical assistant (MA) prints the patient schedule for each medical team and notes the A1C value for each patient on the summary sheet used for the huddle. On the day of the clinic, the medical team huddles with the patient schedule and summary sheet to share information and set expectations for each visit. Patients also receive a self-management goal survey to complete when they check in.

During rooming, the MA administers the Ambulatory Health Risk Screen, which includes assessment for depression using the PHQ2/PHQ9, a health literacy screen, and a smoking and social history questionnaire. Patients are also screened for food insecurity, which is prevalent within the clinic's patient population. Next, the patient and the physician review available laboratory test results, home blood glucose test logs and self-management goals. Goals are usually specific and timed, and may include weight loss, decreasing A1C and making lifestyle changes. Other measurable goals are as simple as taking medications regularly over a certain period of

time. These are recorded in the electronic health record (EHR) and tracked across visits. Before the visit ends, successes are celebrated with patients and improvements are encouraged.

Patients with a new diabetes diagnosis and those with A1C greater than nine percent are referred for diabetes education as well as care management (CM) visits with a registered nurse (RN). Education takes place in small group classes led by our diabetes educator who is also a licensed dietician. A CM visit with a RN is an invaluable resource for the management of the clinic's patients with diabetes, especially those who are newly diagnosed or have difficulty meeting their A1C goal. The CM visits are interspersed between physician visits, allowing nurses to work at the top of their license and provide patients with additional face-to-face interactions with the RN. The CM visit is a prime opportunity for the patient to exchange and clarify information with the medical team.

Social services are also instrumental for helping patients with additional needs beyond clinical care. Patients with uncontrolled diabetes and comorbid obesity are referred to The Lifestyle Center, where they are taught to read and understand food labels, prepare healthy meals, exercise and make additional healthy choices. Those who have food insufficiency are given vouchers for fresh fruits and vegetables that are delivered by a "fresh truck" to the clinic every couple of months by the Greater Chicago Food Depository, under the Food As Medicine Project (a collaboration between the Cook County Health & Hospitals System [CCHHS] and the Greater Chicago Food Depository). In addition to the fresh produce from the truck, patients receive recipes for preparing food and are also given information about neighboring food banks.

Ezike Chukwuemeka, MD, attributes the clinic's successes and its ability to better care for patients with diabetes to teamwork and planning ahead. Further stating "Working as a team has definitely improved our care of patients with diabetes, especially those who are having difficulty controlling their blood sugar levels. One case in particular that comes to my mind involves a woman with chronically uncontrolled diabetes who was complaining of having "shakes" when her blood sugar reaches 200 mg/dL. Through CM visits and diabetes education, we were able to successfully bring her diabetes under control, and her A1C under 7 percent. I believe we would not have been successful without a team effort."

2

How's it working in Oak Park, IL?

Rush Primary Care at Oak Park, located just outside Chicago, IL, is a three-physician primary care practice affiliated with Rush University Medical Center. The practice has a strong focus on preventing complications from chronic illnesses like diabetes and hypertension. Dr. Marie Brown, a physician with the group, has a particular interest in improving medication adherence among patients with chronic conditions. She has found the following three strategies to be especially effective.

First, Dr. Brown has found it is helpful to recognize the prevalence of nonadherence among her patients with type 2 diabetes, which may be as high as 50 percent. "Many of our patients with diabetes, or other chronic conditions such as hypertension, obesity, hyperlipidemia, and depression, are not taking their medications as prescribed. As physicians, we often incorrectly assume that patients adhere to all medication prescriptions and when their conditions are not improving, we add more medications." She now routinely asks her patients multiple times—in a respectful and tactful manner—about their medication-taking behavior. "It takes several visits to establish a trusting relationship, so the patient knows I'm not going to blame or admonish him or her. Only when patients feel comfortable and respected, will they tell me how they're actually taking—or not taking—the drug."

Next, recognizing that people are motivated more by immediate rewards than those in the distant future, Dr. Brown helps her patients identify the short-term benefits of taking medications as prescribed. "In the past, I would speak with my diabetic patients about preventing foot amputation or kidney dysfunction but those complications are too far away to motivate change." Now Dr. Brown tells her patients with type 2 diabetes that if they take their medications as directed, they will potentially avoid such complications in the future but are also likely to experience more immediate benefits, such as:

- Urinating less frequently
- Having fewer sleep interruptions (due to fewer visits to the bathroom)

- Having less fatigue from hyperglycemia
- Losing weight (if insulin or sulfonylureas can be avoided)
- Avoiding daily finger sticks to check blood glucose, if they are able to transition from insulin or a sulfonylurea to an agent that does not cause hypoglycemia (e.g., metformin)
- Avoiding the weight gain and leg swelling associated with insulin, if they are able to take an oral agent consistently
- Needing eyeglass prescriptions less frequently (visual acuity is more likely to remain stable)
- Saving money (if they can use first-line drugs, which are less expensive)

Finally, Dr. Brown and her colleagues have found it especially helpful to provide patients with specific advice about medication dosing and adherence when appropriate. For example, patients with type 2 diabetes who are new to the practice often tell Dr. Brown that they cannot take metformin, a commonly prescribed first-line drug to treat diabetes, due to side effects such as diarrhea and stomach upset. She has found that providing additional education about metformin and its dosing enables many of her patients to restart and continue this drug.

Dr. Brown engages in these types of conversations with her patients using a two-step approach (see Box): providing information and providing specific instructions. First, she explains the purpose of the drug and the relationship between dosage and side effects. She stresses that the GI symptoms usually resolve within a week if the patient continues taking the medication as prescribed. Then Dr. Brown provides a specific plan for titrating the drug.

Step 1: Provide information:

Metformin can help you lose weight and lower your blood sugar. Metformin is derived from the French lilac bush and is very safe. One of the good things about metformin is that it will not make your sugar go too low. It is very inexpensive as well.

Some patients experience a mild upset stomach and diarrhea when they begin taking metformin. These symptoms usually go away within a few days as your body gets used to the medication. The stomach upset and diarrhea may return every time you increase the dose. These symptoms will go away within a few days if you keep taking the medication.

Try to avoid missing your metformin doses. If you stop taking metformin for even two days, the stomach upset and diarrhea is likely to return when you begin taking it again.

Step two: Provides specific instructions:

1. Take of [the usual starting dose] once a day. Taking the pill with food can help reduce stomach symptoms and diarrhea.
2. After you have had no stomach symptoms or diarrhea for one week, start taking [the usual starting dose] once a day.
3. If you do miss doses, start again at the lower dose (Step 1) and wait until the stomach symptoms go away before increasing the dose (Step 2).

Dr. Brown reports that it can take three to six months for some patients to reach the full metformin dose, but with slow titration, many are able to tolerate the drug.

Encouraging and educating patients takes more time initially, but saves time in the long run because patients meet their treatment goals more easily and require escalating therapy less often. By supporting medication adherence in these ways, Dr. Brown and her colleagues have seen many positive outcomes among their patients.

Specifically, among patients with type 2 diabetes who are able to switch from second-line drugs to metformin, within six months they often experience:

- Weight stabilization or weight loss
- Fewer required medications

- Improved well-being
- Improved control of blood glucose levels
- Fewer costs in terms of copays or out-of-pocket cost of medications

Having such conversations with patients also benefits the practice's clinicians and staff by reducing the time spent obtaining preauthorization for second-line drugs.

To learn more about medication adherence and how to implement it in your practice, view the STEPS forward module on this topic entitled [Medication Adherence](#).



To demonstrate completion of this module and claim *AMA PRA Category 1 Credits™*, please visit:
www.stepsforward.org/ManagingType2Diabetes

Get implementation support

The AMA is committed to helping you implement the solutions presented in this module. If you would like to learn about available resources for implementing the strategies presented in this module, please call us at (800) 987-1106 or [click here](mailto:StepsForward@ama-assn.org) to send a message to StepsForward@ama-assn.org



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