

Beyond the meter:

How CVS Health® and Aetna® are upgrading diabetes care management and support



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It's time to rethink diabetes management

Blood glucose meters were revolutionary in the 1970s and '80s. However, advancements in medications and technology and a deeper understanding of diabetes have made it possible to rethink its management and move beyond the meter.

That's what CVS Health® and Aetna® have done. After looking at those advancements, listening to members and applying a new way of thinking, CVS Health and Aetna created **Transform Diabetes Care® (TDC)**.

This new approach may be as groundbreaking as meters were in the '70s and '80s because it helps individuals manage diabetes care on more than one front. And it does so in a way that reduces costs while providing a



Why we must move beyond the meter

When they came out half a century ago, meters that allowed for self-monitoring of blood glucose (SMBG) levels represented the latest in technology. They were game changers then and continue to play an essential part in diabetes care.

However, thanks to advancements in diabetes medications that reduce the risk of hypoglycemia, some people with diabetes no longer need meters. In fact, studies¹ show limited benefit to SMBG for people not on insulin. And for those who don't need it, self-testing can add unnecessary stress and costs.

So, while meters remain medically indicated for some, they can be redundant for others. Those findings led the American Diabetes Association (ADA) to change its standards in 2020, stating that some people not on insulin may not benefit from SMBG.²

Time has also brought about a change in mindset thanks to new technologies and a better understanding of the disease. Additional gaps in care for people with diabetes have been identified. Thanks to data and an ability to provide more personalized care, those gaps can be addressed, and people can be put on a better path — one that lowers their A1C and improves their health.

The meter was the beginning of personalization in diabetes management. Now, emerging tools allow us to expand on that personalization.



¹Kleefstra N, Hortensius J, van Hateren KJ, et al. Self-monitoring of blood glucose in noninsulin-treated type 2 diabetes: an overview. *Diabetes Metab Syndr Obes.* 2009;2:155-163. Published 2009 Sep 9.

²American Diabetes Association. Summary of Revisions: Standards of Medical Care In Diabetes - 2020. Dec. 16, 2019. Available at: https://diabetesjournals.org/care/article/43/Supplement_1/S4/30784/Summary-of-Revisions-Standards-of-Medical-Care-in. Accessed Jan. 3, 2022.

The evolution of diabetes care

From ancient Egypt to artificial intelligence (AI)



**1500 BCE -
300 BCE**



Egyptian papyrus shows the first known reference to diabetes, and physicians advise eating whole grain foods. Indian physicians discover urine from people with diabetes attracts ants, resulting in the diagnosis of “honey urine.” Later, Greeks and Romans name the disease “diabetes,” the Greek term for “to pass through.”

**1800s -
early 1900s**



Physicians realize the disease is related to the pancreas and not the kidneys, as previously thought. Sugar in the urine becomes the definitive diagnostic test for diabetes. Insulin is identified as a way to treat diabetes and was first administered in 1922 to a 14-year-old boy. Special diets and exercise are recommended.

**1960s -
1980s**



Blood glucose monitoring is developed, with self-monitoring blood glucose becoming the standard of care by the 1980s.

**1990s -
2000s**



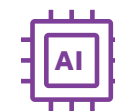
Medications are developed that treat hyperglycemia without inducing hypoglycemia, greatly reducing the need for people not on insulin to rely on SMBG. Obesity rates rise, as do rates of type 2 diabetes.

2000s



As obesity rates continue to climb, comorbidities associated with the disease rise, too. Healthy diets and exercise continue to be recommended. SMBG still remains the standard of care, though studies begin to show people not on insulin may not benefit.

2020s



The ADA changes its standards of care and states that people not using insulin may not benefit from SMBG.³ A better understanding of the disease and its care gaps, as well as tools like AI, offers a new way of managing diabetes care that moves beyond the meter.

³American Diabetes Association. Summary of Revisions: Standards of Medical Care In Diabetes - 2020. Dec. 16, 2019. Available at: https://diabetesjournals.org/care/article/43/Supplement_1/S4/30784/Summary-of-Revisions-Standards-of-Medical-Care-in. Accessed Jan. 3, 2022.

Issues beyond the meter

CVS Health and Aetna understand there are those who need SMBG and those who may not. And we also recognize there are clinically effective interventions that go beyond simply using or not using a meter that can help individuals manage their diabetes and ultimately lower their A1C. When we address these high-value opportunities, members can put themselves on a path to better health. So, what are these opportunities?



Lifestyle management:

A healthy diet and adequate exercise have long been identified as ways to manage diabetes. Yet people have not always been advised about the importance of these factors or gotten the information and help they need to implement changes. These behaviors are rooted in both personal experiences and external influences, including social determinants of health, and can be hard to change. For example, obesity, which is a significant factor in type 2 diabetes, can be influenced by genetics, race, ethnicity, income, culture, food environment, stress and more. This combination of factors means low-income people are less likely to consume fresh fruits and vegetables or get enough sleep. Both raise the risk of diabetes.

Guideline-driven screenings:

People with diabetes are at risk of developing complications, including damage to the eyes, nerves and kidneys. Those conditions can result in blindness, amputations and kidney failure. The last is a particular threat, as 37 percent of people with diabetes suffer from kidney disease.⁴ In addition, 73 percent of people with diabetes have hypertension,⁵ which can result in heart disease. Screening for these complications can catch conditions early, with treatment preventing further damage.

Medication optimization and adherence:

These are two key care gaps that have long been recognized as a problem in diabetes care management. Patients often aren't taking the appropriate medication, aren't getting enough medication or aren't taking it at all. Seemingly simple issues, they represent huge problems in diabetes care, with the ADA pushing for better management of both areas.

All of these issues represent particular types of care gaps. CVS Health and Aetna calculate that the average member with diabetes experiences **3.3 gaps**.

⁴cdc.gov.

⁵ncbi.nlm.nih.gov.

How we move beyond the meter



While these care gaps are serious issues, they also represent opportunities to improve diabetes management. CVS Health and Aetna diabetes care experts examined these clinical care gaps and then looked at what resources could be used to help close them. TDC is the result.

TDC leverages the latest in technology, modern behavioral science and the extensive footprint of CVS Health and Aetna. AI and machine learning can spot clinical care gaps, inform personalized care solutions, upgrade and expand monitoring capabilities, consolidate records and provide helpful educational information. TDC uses a patient's preferred communication channel (phone, text, email, etc.) and also learns how often members are interacting with their primary care providers, what screenings are taking place, and if they are monitoring their blood glucose. If a member is not getting the care or screenings they need, TDC then connects with members personally in a variety of ways, providing them an extra touch that is designed to help improve outcomes.

By using an omnichannel approach to outreach, TDC is able to provide a more personalized level of engagement. Engaging with an individual in the manner most effective for them, whether that is via telephone, text, email or even in person, makes it more likely they will play an active role in managing their diabetes. And because CVS Health is present in communities across the United States through CVS Pharmacy®, CVS HealthHub® and MinuteClinic® locations, our teams provide opportunities for face-to-face engagement. In fact, our pharmacists can play a unique and important role as part of the omnichannel approach, serving as trusted contacts who are able to address concerns about the proper medication usage, side-effects and costs.

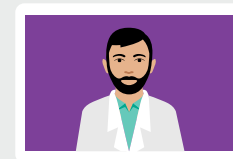
Diabetes care gaps

Here are five ways we can help improve diabetes care today



1 SMBG support for those who need it

For many people who are not taking insulin, SMBG may not be needed. SMBG adds unnecessary stress and extra costs to their treatment.



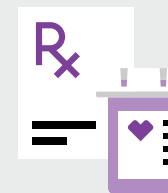
2 Help change lifestyle behaviors

Genetics, environment and a host of other factors are associated with diabetes. People with diabetes need hands-on, consistent advice and care to make healthy changes.



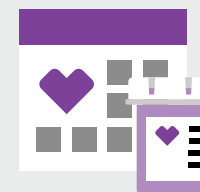
3 Encourage guideline-driven screenings

Educate people with diabetes on the importance of getting regular recommended screenings to help control and mitigate diabetes complications. They can also control comorbidities such as hypertension and kidney disease.



4 Get the right medication

There are people not getting the right medications for their condition.



5 Take the medication

There are people not taking enough of their medication or even not taking it at all.

Both are care gaps that can be bridged.



TDC helps address five clinical care gaps in the following specific ways:

Although the ADA says individuals who are not on insulin may not need SMBG, meters are made available to those who need or want them.

Depending on the severity of the disease and coaching offered, care management support is stepped up in the type of meter needed (cellular, Bluetooth, CGM) and the amount of coaching. All members, wherever they are in the course of their care, are provided with meters if they request one. Tellingly, only 14 percent of members were identified as people who could benefit from testing.⁶ Of the care gaps identified by TDC, SMBG, though important, affected the lowest percentage of members when compared to the others.

©CVS Health Analytics, 2021. Data through 7/31/21. All data sharing complies with applicable law, our information firewall and any applicable contractual limitations. Actual results may vary depending on benefit plan design, member demographics, programs implemented by the plan and other factors. (P1009530921)



Lifestyle behavior and comorbidity management are handled with education and digital help via certified diabetes care and education specialists and personalized apps.

Diabetes and its comorbidities are addressed through weight management education, while other risk factors are addressed with tobacco cessation counseling, sleep apnea assessment and more. Almost 40 percent of members needed help in modifying habits, underlining the importance of lifestyle and comorbidity in dealing with diabetes.⁷

Guideline-driven screenings are essential for members to maintain optimum health, as well as prevent and mitigate any further damage exacerbated by diabetes.

TDC is designed to help identify and inform members and providers about possible gaps in care related to important screenings members may need. In addition to other providers participating under their health plan, members can go to a convenient MinuteClinic[®] location to obtain ADA-recommended screenings — including A1C and blood tests, blood pressure readings, and foot and digital retinal exams (DREs) — and send the results to the member's primary care physician. A vast majority of members, 88 percent, are not getting their guideline-driven screenings,⁸ meaning this care gap represents an important opportunity to improve health outcomes.

Medication optimization, the problem of people not taking the appropriate medication, not getting enough medication, etc., is something that member records, AI and the pharmacist are perfectly positioned to address.

Together, they can show that a medication is not adequate, or perhaps a particular prescribed diabetes medication is contraindicated due to another condition. From there, further action can be taken and a solution found. This problem is actually quite an issue, with 40 percent of members not getting the most out of their medications.⁹

Medication adherence issues affect almost the same percentage of members, meaning 41 percent are not taking their medication regularly or at all.¹⁰

AI can also help identify and educate members about possible medication adherence gaps. Taken together, the number of people either not getting the most out of their medication or not getting the right amount demonstrates why the ADA is targeting this issue of therapeutic inertia.

⁷Ibid.

⁸Ibid.

⁹Ibid.

¹⁰Ibid.



The results are telling

It's clear that TDC is working, with results showing several health improvements.



Health improvements:

Members experienced a 1.9 percent average A1C reduction¹¹ and a 15mm/Hg reduction in systolic blood pressure.¹²

ROI:

Results showed a significant 2-to-1 guaranteed ROI.*

The results are also clear in individual stories.**



55-year-old woman, A1C lowered to 7.7%

One member, a 55-year-old woman who didn't have time to exercise and who frequently drank soda and fruit juices, was empowered by a CVS Health Coach who educated her about nutrition and exercise — and called her every other week. She started avoiding sweetened drinks and incorporating more exercise into her life. Not only did she start feeling better, but she also dropped her A1C level from 9.8 percent to 7.7 percent and now understands how small steps matter. She's also wearing her CPAP every night to address her sleep apnea.

63-year-old member, A1C lowered to 5.9%

A 63-year-old member was uncomfortable using a new cellular meter and, after back surgery, found his A1C levels increasing, leaving him frustrated. A CVS Health Coach helped him become more comfortable with the new meter and educated him on how surgery stresses the body, which can elevate blood glucose levels. She then provided him with stress-coping mechanisms. Within two months of starting the TDC program, he lowered his A1C to 5.9 percent — the lowest it's ever been.

63-year-old man, A1C lowered to 7.6%

Another member, a 63-year-old man with an A1C of 9.4 percent who was awaiting a kidney transplant as a result of his chronic kidney disease, lowered his A1C to 7.6 percent after a CVS Health Coach helped him feel supported. He's checking his blood glucose levels more often and trying to prevent further complications related to his condition.

¹¹Commercial member, uncontrolled A1C (A1C >= 7.1) and has high-value diabetic care gap. Fully compliant means that the member closes all open care gaps. CVS Health Analytics, 2020. P1004770420.

¹²For commercial members not achieving good blood pressure control with hypertension (Grade 1 or 2) requiring medical therapy - SBP > 140 or DBP > 90. All data sharing complies with applicable law, our information firewall and any applicable contractual limitations. Actual results may vary depending on benefit plan design, member demographics, programs implemented by the plan and other factors. Client-specific modeling available upon request. P1008050221.

*Conditions for ROI guarantee apply, and full guarantee requires final sign-off by CVS Caremark Actuarial and Underwriting.

**Patient stories are represented for illustrative purposes only. Statement is based on an actual patient's response. All data sharing complies with applicable privacy laws.

The past, present and future of diabetes care

More than 40 years have passed since groundbreaking SMBG technology was introduced, but recent strides in medication, disease knowledge and AI have given individuals a more personalized approach.

TDC embraces these new tools, combining innovative therapies and tech with caring human interaction to deliver better health for members and a significant ROI for plan sponsors. And while today's TDC represents a great leap forward, the commitment of CVS Health and Aetna to forward thinking and whole-person care means TDC will continue to evolve as we incorporate emerging technology and capabilities into the future of diabetes care management.

“At the end of the day, it’s that goal of being healthy. And so when we ask folks to do things, we want to make sure that what we’re doing meets that goal and not just simply checks off a box on the list, but rather it plays towards that ultimate outcome goal.”

Dr. Kenneth Snow, Medical Director, CVS Health Chronic Condition team



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