NATIONAL GOVERNORS ASSOCIATION

State Strategies to Prevent Type 2 Diabetes and Manage Diabetes

Introduction

More than 34 million people in the United States—1 in 10—have diabetes, and most of these people have type 2 diabetes, which is preventable.[1] In addition, a staggering 88 million U.S. adults—about 1 in 3—have prediabetes, a serious health condition where blood sugar levels are elevated but not as high as in people with diabetes.[2] In terms of cost, the Centers for Disease Control and Prevention (CDC) estimates that $1 out of every $4 of U.S. health care costs is spent on caring for people with diabetes.[3]

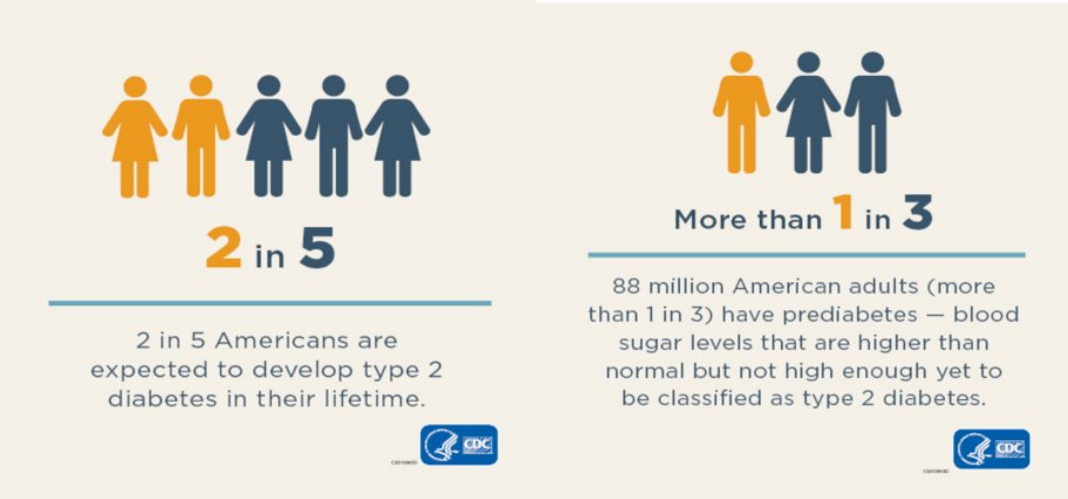

Figure 1: Diabetes Info Cards. Centers for Disease Control and Prevention (CDC). https://www.cdc.gov/diabetes/library/socialmedia/infocards.html

Though access to clinical care and behavioral choices are central to type 2 diabetes prevention and diabetes management, factors including educational attainment, income, housing stability, access to nutritious food, and employment security—known as social determinants of health (SDOH)—have a profound effect on health outcomes, including the likelihood of developing type 2 diabetes.[4] Conventional type 2 diabetes prevention and treatment strategies focus on clinical treatment combined with behavioral modifications, such as adoption and maintenance of increased physical activity and healthful eating. However, these strategies do not take into consideration the impact of poverty and material deprivation, which can

lead to chronic stress and amplify the likelihood of engaging in unhealthy behaviors, which in turn increases the likelihood of developing obesity and type 2 diabetes.[5]

Racial and ethnic minorities and low-income populations are disproportionately affected by prediabetes and type 2 diabetes.[6,7] In 2018, 12.5 percent of Hispanic or Latino persons, 9.2 percent of Asian persons, 14.7 percent of Native American or other Pacific Islander Persons, and 11.7 percent of non-Hispanic Black or African persons had diagnosed diabetes, compared to 7.5 percent of White persons.[8] Social and economic conditions contribute to the racial and ethnic health disparities observed in the development of chronic diseases like type 2 diabetes. This is in part due to the increased frequency of interrelated social and economic conditions such as reduced access to health insurance coverage, stable housing and employment, and healthy food in communities of color.[9,10]

Over the past year, the COVID-19 pandemic has exacerbated existing challenges related to food, housing and employment-related hardships.[11] Furthermore, people with diabetes, though not at additional risk of contracting the virus, are more likely to develop serious complications and die from COVID-19.[12] The COVID-19 pandemic has led many individuals to delay standard care and forego appointments and procedures.[13] For patients with or at risk of diabetes, access to consistent, quality health care is crucial to successfully managing their condition.

To reduce the incidence of type 2 diabetes across the nation, approaches must apply a comprehensive social-ecological framework, incorporating not only intensive individual lifestyle interventions but also policies and programs to enable neighborhoods, workplaces and other environments to contribute to lasting behavioral change. This is particularly critical during the pandemic, as social support networks, which are known to promote healthier behaviors and positive health outcomes (particularly in lower-income communities), have been frayed and rates of isolation and loneliness have risen.[14] Critical to type 2 diabetes prevention and diabetes management are interventions intended to create greater access to non-medical resources that address social needs linked to health and health outcomes.

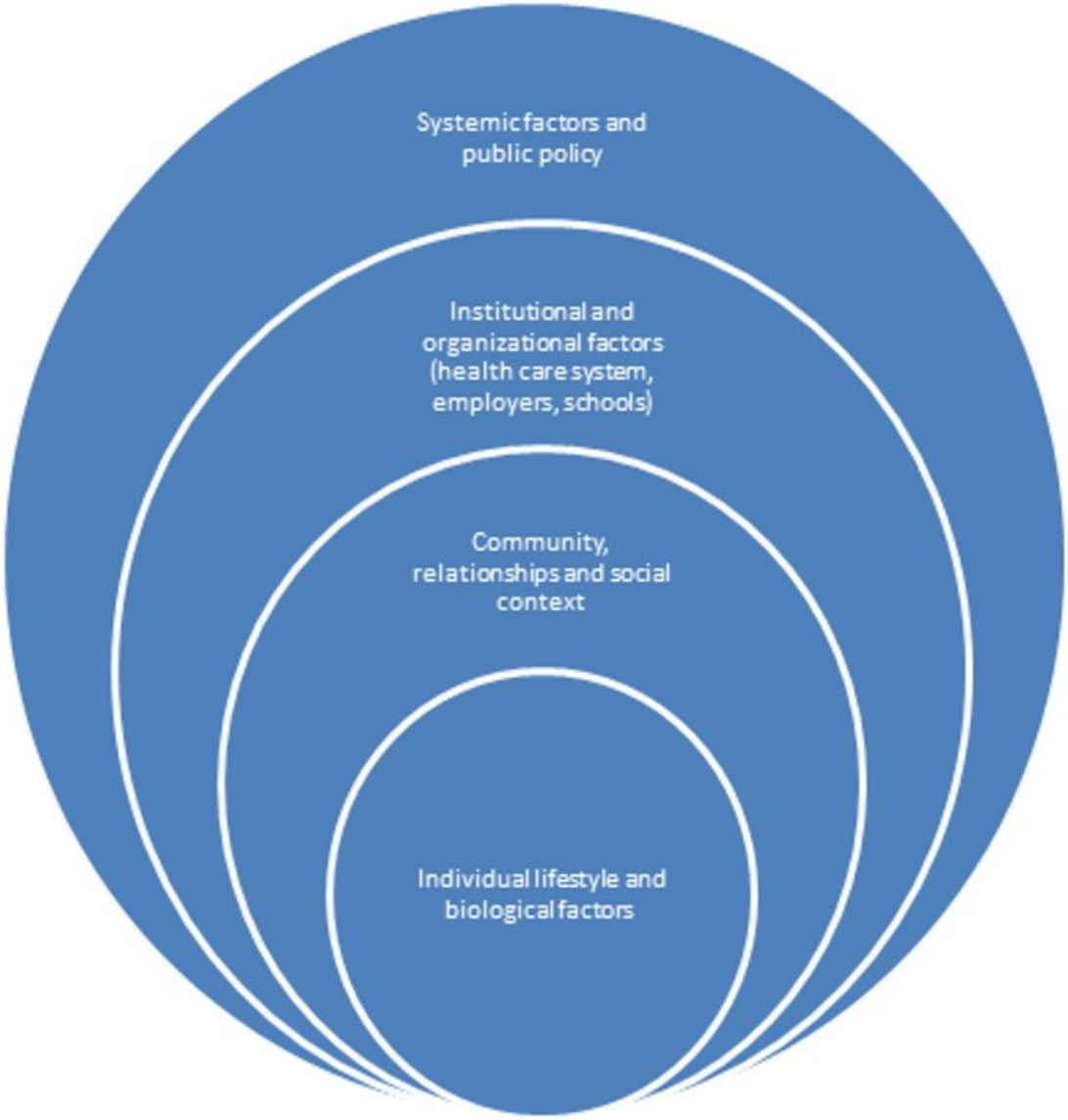

Figure 2: Social-ecological framework for diabetes prevention and management[15]

On January 21, 2021, the National Governors Association Center for Best Practices (NGA Center), with the support of the Centers for Disease Control and Prevention, convened national and state experts in a discussion about state strategies to address type 2 diabetes prevention and diabetes management. This issue brief includes key considerations emanating from the expert roundtable and associated research.

Considerations

The NGA Center identified several strategies states could use to address SDOH and ensure coverage for, access to, and affordability of evidence-based type 2 diabetes prevention and diabetes management programs, services and resources, including:

- Cover the National Diabetes Prevention Program (National DPP) lifestyle change program (LCP) and diabetes self-management education and support (DSMES) services through Medicaid and health insurance programs with delivery models that emphasize cross-sector collaboration.
- Direct Medicaid resources to pay for non-medical interventions related to SDOH.
- Promote collaboration between state agencies, local partners, and other stakeholders to support evidence-based type 2 diabetes prevention and diabetes self-management education and support strategies
- Develop Medicaid performance standards and incentives that address equity, cultural competency, and SDOH.
- Cover telehealth and remote patient monitoring services to support access to and continuity of care.
- Implement strategies to ensure affordability of prescription drugs.

Cover the National DPP LCP and DSMES Services Through Medicaid and Health Insurance Programs With Delivery Models That Emphasize Cross-Sector Collaboration.

The National DPP is a partnership of public and private organizations working to build a nationwide delivery system for an LCP proven to prevent or delay the onset of type 2 diabetes in adults with prediabetes or who are at risk for developing type 2 diabetes. Participation in the National DPP LCP reduces the incidence of diabetes by facilitating behavior modification through healthy eating, increasing physical activity and managing stress. This preventive approach has been shown to lower health care spending.[16]

DSMES is the active, ongoing process of facilitating the knowledge, skills and abilities necessary for diabetes self-care. It addresses important topics such as medication adherence, healthy eating, physical activity, blood sugar monitoring, and coping and problem-solving skills. The DSMES Joint Position Statement identifies the need to provide person-centered services, especially at four critical time points—at diabetes

diagnosis, annually, when complicating factors occur, and during transitions in care.[17] Recognition or accreditation of DSMES services is granted by the American Diabetes Association (ADA) and the Association of Diabetes Care & Education Specialists (ADCES). Effective diabetes self-management is a key indicator for success in preventing complications and maintaining positive outcomes.[18] Given the public health benefits and cost-effectiveness of these programs, Medicaid, commercial plans and self-insured employers may benefit from covering this service.

State Medicaid programs have multiple policy levers available to cover the National DPP LCP and DSMES services, including the Medicaid state plan, a state plan amendment, or a Medicaid waiver. As of September 2020, 17 states had made the decision to provide Medicaid coverage for the National DPP LCP, though stages of implementation vary. Additionally, at least 15 state Medicaid programs cover DSMES services.[19,20] States have taken a range of approaches regarding the types of providers who can refer individuals to DSMES and eligibility "triggers" for coverage such as diabetes diagnosis, change in treatment, or other changes in health status.[21]

As states have started covering the National DPP LCP through Medicaid, some have designed delivery models intended to foster cross-agency collaboration and create sustainable models of National DPP LCP coverage. For example, in 2016, **Maryland** Medicaid collaborated with the state's Center for Chronic Disease Prevention and Control (the Center) as part of the Medicaid Demonstration Project, funded by CDC and managed by the National Association of Chronic Disease Directors.[22] The goal of this project was to demonstrate how state Medicaid agencies can design and implement a delivery model for the National DPP for Medicaid enrollees in MCOs who are at risk of developing type 2 diabetes.[23] An evaluation of the program found a statistically significant increase in participants reporting that they exercised more often and were eating healthier foods.[24] The collaborative model between Medicaid and the Center proved to be a sustainable method of care delivery, and in 2018, Maryland Medicaid successfully implemented National DPP LCP coverage statewide under an 1115 waiver.

Currently, at least 46 states require private insurers to provide some coverage for DSMES services with varying eligibility.[25] Despite evidence that self-management programs improve patient outcomes, less than 6.8 percent of privately insured individuals with diabetes have used these services.[26] There are multiple reasons for this, including lack of promotion of the benefits to healthcare providers, payers, and potential participants. States can help private insurers by developing plans to

promote DSMES to these populations and providing clarity on eligible providers, program standards and benefits.[27]

Self-insured employers are not subject to state mandates requiring coverage of the National DPP LCP or DSMES services; however, some choose to offer these programs due to their cost-effectiveness.[28] The American Diabetes Association estimates that, in 2017, people with diabetes had medical expenditures 2.3 times higher than people without diabetes, and diabetes cost $90 billion in reduced productivity, theoretically giving self-insured employers significant incentive to help employees prevent type 2 diabetes and effectively manage diabetes.[29]

During the COVID-19 pandemic, physical distancing policies and the delay of in-person care prompted lifestyle coaches and DPP program delivery providers to make adaptations to offer programs like the National DPP LCP virtually.[30] Some state Medicaid programs that previously offered in-person learning allowed virtual delivery of the National DPP LCP for the duration of the emergency. Additionally, states have more flexibility to provide virtual options even outside of a public health emergency. Research suggests that there are no statistically significant differences in attendance and patient outcomes when the National DPP LCP is delivered virtually compared to in-person.[31] However, specific measures may be needed to reach certain populations who may lack broadband access or do not have the technology or data plans to participate from home.[32] For example, before the COVID-19 pandemic, **Montana** offered group National DPP LCP sessions streamed in multiple locations, including libraries, community centers, and health settings. Offering these programs in a virtual setting helps increase access for individuals in rural areas who may otherwise have to drive long distances. The community partnerships can also facilitate access for individuals who lack broadband in their home.

Direct Medicaid Resources to Pay For Non-Medical Interventions Related To SDOH

The Medicaid program is the nation's largest source of health coverage for people with low-incomes.[33] As diabetes disproportionately affects individuals with low-incomes, the program plays a particularly important role in providing care for those who have or are at risk of developing diabetes. Although the Medicaid program has historically paid primarily for clinical interventions, several states have leveraged Section 1115 Medicaid waivers and Medicaid managed care contracts to address SDOH alongside physical and behavioral health care needs.

In October 2018, **North Carolina** received authority from the Centers for Medicare & Medicaid Services (CMS), as part of its Section 1115 demonstration waiver, to conduct the Healthy Opportunities Pilots program.[34] The pilots will make available up to $650 million in Medicaid funding for services related to housing, food, transportation and interpersonal safety.[35] Though implementation of this pilot has been delayed by the COVID-19 pandemic, the state still plans to implement it in the future.[36]

As the state transitions its Medicaid program to managed care, it is also integrating SDOH into the managed care contracting process. Once the transition is complete, Managed Care Organizations (MCOs) will be required to report rates of completed screenings for unmet health-related resource needs, incorporate SDOH into their quality improvement strategies (including by developing one non-clinical performance improvement project per year), describe how they will incorporate social factors into value-based payment strategies, and use a standardized social needs screening questionnaire and NCCARE360, a statewide coordinated care and referral platform that connects members with community resources.[37]

As another example, **Washington** State launched the Accountable Communities of Health (ACH) model in 2015.[38] An ACH is a regional organization designed to serve as a neutral convener and connection between the health care system and local communities. In partnership with providers, community-based organizations, local health departments, and other stakeholders, they work to align resources and activities that improve whole-person health and wellness, with particular attention to health equity and SDOH. ACH serve as a crucial organizing feature of Washington State's Medicaid transformation 1115 waiver and they are working on projects to address community needs. For example, The Greater Columbia ACH created a Community Fund to address health-related needs, such as nutrition, transportation and housing, within its region. ACH in several regions are implementing the Pathways Community Hub model, which uses screening and referral questions and community health workers (CHWs) to meet enrollees' social needs.[39,40]

Several state Medicaid programs require MCOs to screen for unmet social needs and develop care plans for meeting these needs. For example, **Kansas** requires that MCOs create plans to assess members' unmet social needs and provides a sample screening tool. **North Carolina** requires health care providers to use standardized screening questions on health-related 'resource needs' developed by the state.[41] **Oregon** requires that its Coordinated Care Organizations collect data related to SDOH and partner with community-based organizations to address disparities.[42]

Promote Collaboration Between State Agencies, Local Partners, and Other Stakeholders to Support Evidence-Based Type 2 Diabetes Prevention and Diabetes Self-Management Education and Support Strategies

Given the complex social, economic and behavioral health needs associated with diabetes, there is significant opportunity for coordination across levels of government, between state agencies, and with local community organizations.

Twenty-five states have passed legislation to create diabetes action plans.[43] Though these action plans vary widely across states, they are typically informed by extensive input from state and community stakeholders and are intended to create specific goals and metrics to measure the state's success at reducing the burden of diabetes, including cross-agency strategies to achieve those goals.

The **Maryland** Department of Health released its diabetes action plan in November 2019.[44] In a press release, Governor Larry Hogan said the plan's purpose was to "promote greater coordination to enhance quality of life for Marylanders living with diabetes."[45] The plan has led to concrete investments in diabetes care and includes recommendations for health care providers, health systems, schools, employers and other stakeholders. In December 2020, Gov. Hogan announced a commitment of more than $94 million in new type 2 diabetes prevention and diabetes management initiatives across the state.[46] These initiatives include a five-year grant program to help hospitals launch interventions related to type 2 diabetes prevention and diabetes self-management education and support, as well as $1 million to Maryland's local health departments to help local health improvement coalitions expand capacity and build innovative partnerships, services, and programming in high risk communities.[47]

As part of its type 2 diabetes prevention and treatment strategy, **Oregon** started supporting the Sustainable Relationships for Community Health (SRCH) grant initiative in 2015. The grants strengthen local cross-sector partnerships to improve health outcomes and reduce racial, ethnic, and socioeconomic disparities in chronic disease burden. Grant requirements include improving collaboration with community partners (local public health, clinics, Coordinated Care Organizations (CCOs), tribes, and community-based organizations), collecting local data, promoting community-clinical linkages, and developing plans to reduce chronic disease burden. The grant has resulted in mutually beneficial relationships at the local level through data-sharing agreements and memoranda of understanding, as well as the

development of closed-loop referral systems to programs that manage chronic disease and promote healthy lifestyles. The referral systems serve as pathways that link individuals to programs, like the National DPP LCP, to meet their unique needs with a feedback loop to the referring partner. Localities in Oregon that have adopted these referral pathways have found increases in participation in evidence-based chronic disease prevention and self-management programs.[48]

Cross-sector collaboration can also facilitate braiding and blending of funding streams to holistically address public health priorities. **Rhode Island's** Department of Health is investing in place-based funding through the state's Health Equity Zone (HEZ) initiative which establishes or expands the infrastructure of community stakeholders in defined geographic areas. In each HEZ, these stakeholders conduct a needs assessment and implement a data-driven plan tailored to the community.[49] For example, one of the priorities the Pawtucket and Central Falls HEZ identified was connecting residents to type 2 diabetes prevention and diabetes self-management education and support programs. As a result, in 2019, HEZ partners developed a "full-service health station," where preventive and education programs in financial literacy, type 2 diabetes prevention, and nutrition were offered alongside culturally competent primary, behavioral and dental care.[50]

Oregon's Health Promotion and Chronic Disease Prevention Section within the Public Health Division integrates the programs funded by approximately 20 categorical funding grants to comprehensively address factors contributing to or protecting against high rates of chronic disease, including healthful eating, physical activity, tobacco, and alcohol and other substance use. The department organizes staff by function (such as disease surveillance, community engagement, communication, or policy) to work across the risk factors of chronic disease instead of by disease or topic area.[51]

Develop Medicaid Performance Standards and Incentives That Address Equity, Cultural Competency and SDOH

Several states, recognizing the importance of addressing the role of SDOH to control costs and improve outcomes, have integrated social and economic needs into Medicaid payment provisions, including through incentive arrangements and value-based purchasing models.

Rhode Island's Accountable Entities (AEs) are provider organizations eligible to contract with one of the state's MCOs. MCOs and AEs coordinate teams of providers to align financial incentives, improve capacity to manage complex conditions and address social needs. AE provider teams treat the whole person and integrate strategies to address SDOH, including through assessment of social needs, screening and referral, and using community partnerships to address needs. Each AE selects three key domains that they have the capacity to address, which can include housing support, education and literacy, food security, interpersonal safety, employment, and transportation. MCOs that enter into AE contracts are eligible to receive incentive funding from a pool of incentive dollars.[52] AE incentive measures include metrics related to diabetes care and outcomes (including Hemoglobin A1c (HbA1c) control), as well as a metric related to the percentage of members that receive social needs screenings.[53] [54]

Oregon has also integrated SDOH and equity into incentive measures for its CCOs. Recognizing that racial and ethnic health disparities can emerge from inadequate access to culturally competent care, the state includes a new incentive measure around "meaningful language access to culturally responsive health care services."[55] Two of the state's 14 incentive measures also relate directly to diabetes care, including one that monitors the rate of CCO members with poor control of HbA1c levels and another that tracks the percentage of adults with diabetes who have received oral health evaluations.[56] The state is currently working to develop an incentive measure related to SDOH, a process which involves conducting an environmental scan of existing social needs screening efforts within the state and nationally (including information about screening for social needs as part of COVID-19 screenings) and conducting research on best practices in social needs screening measures.[57] The state expects to roll out this measure in 2023.

Support Integration of Community Health Workers, Pharmacists, Health Educators, Physician Assistants, Nurse Practitioners, and Other Health Care Professionals With Different Backgrounds and Expertise Into Clinical Care Teams

Research indicates that integrating professionals with different kinds of expertise into clinical care teams for diabetes improves health outcomes.[58] A particularly robust evidence base exists for interventions related to community health workers (CHWs). CHWs are individuals trained to connect others within their communities to the supports they need to care for their health. This can mean facilitating connections with community organizations, setting up health care appointments, or simply providing a listening ear and source of emotional support.[59] Evidence-based CHW programs have demonstrated a positive return on investment, with one study finding that every dollar invested in a CHW intervention would save $2.47 per average Medicaid payer within one year.[60]

Some states have incorporated CHW services into their value-based payment arrangements and managed care contracting language. **New Mexico** uses a performance metric related to CHW services in its MCO contracts. Three percent of an MCO's total enrollment must be served by CHWs, community health representatives, or certified peer support workers. If this metric is not met, the state can impose performance penalties.[61] **Michigan** also incentivizes MCOs to hire CHWs through the managed care contracting process. The state's Medicaid managed care contract requires health plans to maintain a ratio of at least one full-time CHW per 20,000 enrollees.[62]

Evidence also exists to support the integration of other health care professionals with diverse backgrounds into diabetes care teams. In some communities, pharmacists are the most accessible health care professionals. People with diabetes see pharmacists, on average, seven times more often than they see primary care physicians. DSMES services have traditionally been delivered by nurses and dietitians.[63] Some states, however, have worked to integrate other professionals, including clinical pharmacists, to serve on care teams or deliver these services.

Since 2013, **Tennessee** has increased access to DSMES services by empowering pharmacists to participate in training to become diabetes care and education specialists. The Tennessee Department of Health and Tennessee Pharmacists Association identified interested pharmacists who work in underserved counties with high rates of chronic disease and assisted those pharmacy practice sites in

becoming accredited providers of DSMES with the Association of Diabetes Care & Education Specialists (previously the American Association of Diabetes Educators).[64] **North Carolina** has also integrated pharmacists into diabetes care teams through legislation allowing pharmacists with certain credentials to apply for clinical pharmacist practitioner (CPP) status. This legislation affords pharmacists with CPP status a certain level of independence and prescriptive authority.

Cover Telehealth and Remote Patient Monitoring Services to Support Access and Continuity Of Care

States, commercial payers and self-insured employers are increasingly using services provided via telehealth to expand access to patient education and self-management of chronic conditions. Telehealth services can include multiple modalities such as live-video visits, remote patient monitoring, text message reminders, email and other methods of consistent communication with a provider. The COVID-19 pandemic caused states to allow unprecedented flexibility for telehealth use and greater investments in telehealth infrastructure, resulting in significantly higher utilization of this option for health care delivery.[65] For an in-depth analysis of state telehealth flexibilities during the COVID-19 pandemic, see The Future of State Telehealth, a publication recently released by the NGA Center for Best Practices.

Remote patient monitoring (RPM), which allows providers to monitor their patients outside of a traditional care setting using technological devices, is a promising strategy to help patients manage diabetes.[66] Research regarding patients using RPM for chronic conditions has shown individuals participating in these services have fewer hospitalizations, fewer readmissions, shorter hospital stays, and lower overall health care costs.[67] [68] As of October 2020, 21 state Medicaid programs cover RPM services, though many states have coverage restrictions.[69] Examples of restrictions include only allowing reimbursement for home health agencies, limiting the types of technology that may be used or how information can be shared, or only allowing individuals with certain conditions, such as hypertension, to receive coverage. [70] As a result, individuals living in states where RPM is covered in some circumstances may still face obstacles to access.

There is wide variation in the coverage of specific technological innovations across Medicaid and commercial payers to help manage blood glucose levels. Currently, 37 state Medicaid programs provide some level of coverage for continuous glucose monitoring (CGM), which requires a wearable device that allows individuals to track their blood sugar throughout the day and night with fewer or no finger pricks.[71]

Some Medicaid plans only cover specific populations or may require complex prior authorizations, while other plans offer coverage through their pharmacy benefit. States and private payers may be hesitant to cover CGM, due to the upfront investment costing more than traditional finger-prick technology; however, research suggests the convenience and accuracy of CGM can save money through better health outcomes.[72] A study comparing the clinical impact of CGM to daily insulin injections found fewer instances of complications such as hypoglycemia and ketoacidosis.[73] The study also found lower costs associated with the wearable CGM device, particularly when the researchers factored in the better outcomes and fewer adverse events.[74]

Implement Strategies to Ensure Affordability of Prescription Drugs

A critical aspect of ensuring access to, and continuity of, effective diabetes management is drug affordability. Although first discovered in 1921 with a patent sale price of $1, insulin cost has increased significantly over recent years, roughly tripling in the last decade alone.[75] Some of these increases may be attributed to product improvements; however, experts have indicated price increases are largely out of pace with actual improvements in treatment.[76] Price increases, coupled with lack of transparency in factors driving cost, have resulted in significant affordability challenges for consumers. Lack of affordability is well-documented, with reports of individuals rationing supplies, not filling prescriptions, or stopping treatment altogether.[77]

Although some states have taken specific steps to address insulin affordability for consumers, such as establishing caps for copayments, as one Governor's advisor put it, "it's hard to tackle health reform one disease at a time" because lowering out of pocket costs for one condition or drug may result in cost shifting elsewhere and does not address systemic challenges.[78] More comprehensive approaches to tackling affordability are required to systematically address the cost of drugs for states, employers and consumers. Many states have implemented or are exploring strategies to address high and rising drug prices, including use of pharmacy benefit managers. Specific strategies include price transparency, rebate pass-through pricing models, alternative payment models, pooled and bulk purchasing, drug spending caps, and drug importation, among others. For more information on state strategies, see NGA report, Public Health Crises And Pharmaceutical Interventions: Improving Access While Ensuring Fiscal Sustainability.

As one example, in 2017, **Nevada** passed price transparency legislation requiring pharmaceutical companies and pharmacy benefit managers to report costs associated with production, sales and profits of drugs used to treat diabetes in the Medicaid program.[a] Diabetes drugs were the first category of pharmaceuticals subject to the reporting requirements due to high utilization rates. The law is enforced through financial penalties for companies that refuse to report their pricing information. As a result of the transparency law, state officials learned key information about the causes of price increases, like the fact that Pharmacy Benefit Managers retained a large percentage of rebates. The public nature of this reporting led some manufacturers to develop pharmacy assistance programs to increase access to drugs for individuals with low incomes.

Conclusion

States, payers, providers, and individuals each play a critical role in type 2 diabetes prevention and management. Through regulation, contracting, and partnerships, state policymakers can advance evidence-based strategies to provide access to services and interventions for individuals at risk of developing diabetes and those already diagnosed. Communities of color are disproportionately affected by diabetes as well as other chronic diseases, and the elevated incidence of chronic disease in lower-income communities and communities of color can be attributed largely to social and environmental factors.

Many strategies that are effective in preventing and managing diabetes can also be applied to other chronic diseases, such as heart disease, cancer and chronic kidney disease.[79] Like type 2 diabetes, many other chronic diseases are also caused, in part, by key health risk behaviors such as poor nutrition, excess weight, lack of physical activity, excessive alcohol use, and tobacco use.[80] Because the majority of people with type 2 diabetes have at least one other chronic disease and 40 percent have three or more,[81] state policy makers should consider developing frameworks for understanding the ways in which chronic conditions influence each other.

[a] Nevada policymakers found that analysis of Medicaid claims without the benefit of information from other coverage programs did not give lawmakers the full picture of which drugs should be included in the transparency law, and therefore did not provide a complete picture of where price increases were coming from. The state is interested in initiatives that bridge informational gaps across payers, health systems, and disease types.

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