

# THE IMPACT OF DIABETES IN DELAWARE 2023



HEALTH CARE / COMMUNITY / ECONOMICS / EDUCATION / NEIGHBORHOOD



DELAWARE HEALTH AND SOCIAL SERVICES  
Division of Public Health



DELAWARE HEALTH AND SOCIAL SERVICES  
Division of Medicaid & Medical Assistance



*The Impact of Diabetes in Delaware, 2023* is prepared for the Delaware General Assembly in accordance with 16 *Del. Code*, Chapter 1, Subchapter II, §140A. The report is a collaboration of the following three agencies:

- Delaware Department of Health and Social Services (DHSS), Division of Public Health (DPH)
- DHSS, Division of Medicaid & Medical Assistance (DMMA)
- Delaware Department of Human Resources (DHR), Statewide Benefits Office (SBO)

DPH oversees diabetes activities and programming statewide. DMMA provides medical assistance to Delaware Medicaid members through a variety of programs; most activities related to diabetes are administered through contracted Medicaid Managed Care Organizations (MCOs). SBO administers health benefits to State Group Health Insurance Plan (GHIP) members and works directly with health plan vendors to provide resources tailored to meet the needs of members with diabetes and those at risk for the disease. The agencies work together and with partner stakeholders to achieve the four long-term goals outlined in the Delaware Diabetes Plan.

*The Impact of Diabetes in Delaware, 2023* provides Delaware legislators with up-to-date information on diabetes prevalence, programming, costs, and progress in the First State.

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## Executive Summary

*The Impact of Diabetes in Delaware* is published biennially to provide Delaware legislators with up-to-date information on diabetes prevalence, programming, costs, and progress in the First State. The 2023 report is the third iteration of *The Impact of Diabetes in Delaware*. This report includes Delaware diabetes prevalence, programming, and health care utilization data for the 2021-2022 time period.

Diabetes is a chronic disease that affects how your body uses food for energy. Left untreated, diabetes can lead to a host of poor health outcomes including heart disease, stroke, kidney disease, lower limb amputations, blindness, and death. The good news is that diabetes is largely preventable through basic prevention steps like eating a healthy diet, getting regular physical activity, and losing a small amount of extra weight. The American Diabetes Association (ADA) recommends at least 150 minutes per week of moderate-intensity physical activity and weight loss of 5%-7% to prevent or delay the onset of diabetes in populations at high risk for the disease [1]. Those who develop diabetes can effectively manage the condition through healthy lifestyle behaviors and a medication regimen to control blood glucose levels.

### Diabetes in Delaware

In 2021, 12.0% of all Delaware adults reported that they had been diagnosed with diabetes [2]. This means that more than 95,000 Delaware adults know they have diabetes. Another 12.6% of Delaware adults report being told they have prediabetes, a condition that places them at greater risk of progressing to diabetes. In total, 24.6% of Delaware adults have either diabetes or prediabetes.

In 2021, there was no significant difference in diabetes prevalence between males (12.2%) and females (11.7%) in Delaware [2]. While the difference in diabetes prevalence between non-Hispanic Black (15.0%) and non-Hispanic White (11.4%) adults was not statistically significant in 2021 [2], the trend has shown that non-Hispanic Black Delaware adults consistently have a higher diabetes prevalence compared to non-Hispanic White Delaware adults.

Diabetes becomes more prevalent with age. Among Delawareans ages 45-54, a significantly lower percentage (9.6%) report having diabetes compared to those ages 55-64 (18.2%) and those ages 65 and older (23.4%) [2]. In 2021, diabetes prevalence in Sussex County (13.2%) was higher than in Kent (11.4%) and New Castle (11.6%) counties [2].

## **Diabetes Management**

Although diabetes can be effectively managed through healthy lifestyle behaviors and a medication regimen to control blood glucose levels, a high proportion of Delaware adults with the disease do not have their diabetes under control. Only six in 10 Delaware adults with diabetes check their blood glucose level at least once a day [2]. Just over half (52.0%) of Medicaid members with diabetes have their diabetes under control, as defined by a Hemoglobin A1C level of less than 8%. High rates of co-occurring conditions, or comorbidities, make it harder for a person with diabetes to achieve diabetes control. In Fiscal Year 2022 (FY22), 78.7% of active employee and early retiree members with diabetes covered by the State Group Health Insurance Plan (GHIP) had at least one of the most frequently diagnosed comorbidities: congestive heart failure, coronary artery disease, chronic obstructive pulmonary disease (COPD), hypertension, osteoarthritis, HIV/AIDS, rheumatoid arthritis, obesity, and low back disorder.

## **High Risk Populations**

The Delaware Department of Health and Social Services, Division of Public Health (DPH), Division of Medicaid & Medical Assistance (DMMA), and the Delaware Department of Human Resources, Statewide Benefits Office (SBO) recognize eight groups of Delaware adults who are at elevated risk for diabetes and diabetes-related complications:

1. Adults ages 55+ (especially males)
2. Black males and females
3. Adults with overweight/obesity
4. Adults in Kent and Sussex counties
5. Adults with prediabetes who have not participated in the National Diabetes Prevention Program (National DPP)
6. Adults with uncontrolled diabetes
7. Adults with diabetes and co-occurring conditions
8. Adults with diabetes who have not participated in Diabetes Self-Management Education and Support (DSMES).

## **Economic Impact**

Prediabetes and diabetes cost Delaware \$1.1 billion each year [3] – \$818 million in direct medical expenses and \$293 million in indirect costs. On average, medical expenditures for a person with diabetes are 2.3 times higher than for a person without diabetes [3]. Prevention, early diagnosis, and management can prevent and reduce the costly outcomes associated with diabetes.

In FY22, Delaware Medicaid Managed Care Organizations (MCOs) directly reimbursed providers \$49.0 million for diabetes-related care. An additional \$2.6 million was paid directly to providers via fee-for-service claims for diabetes-related care among Delaware Medicaid clients. Diabetes is the costliest clinical condition by episodes of care among GHIP members. The FY22 total allowed amount for diabetes reached \$85.3 million – an increase of almost \$9 million compared to FY21. In FY22, costs related to diabetes episodes of care represented 5.0% of all GHIP net payments made on behalf of active employees and early retirees.

## **Delaware Diabetes Plan**

DPH, DMMA, and SBO are guided by the Delaware Diabetes Plan, a framework for reducing the burden of diabetes among Delawareans. The Delaware Diabetes Plan aligns with Centers for Disease Control and Prevention (CDC) recommendations and addresses Healthy People 2030 objectives. DPH, DMMA, and SBO represent leading stakeholders within the Plan; the agencies work with each other and partner stakeholders to achieve four long-term goals:

1. Reduce the incidence of diabetes in Delaware
2. Increase the proportion of adults with diabetes who achieve diabetes control
3. Advance health equity among adults with diabetes and those at risk for the disease
4. Improve clinical processes and reduce health care costs.

The Delaware Diabetes Plan is a call to action for all Delawareans to work together to improve health outcomes through diabetes prevention, early diagnosis, and management.

## **Recommendations**

The agencies recommend seven steps to continue reducing the burden of diabetes in Delaware. Recommendations are evidence-based and can be implemented using two parallel approaches: (1) widespread implementation to reach all Delawareans; and (2) targeted implementation to identified high-risk populations.

**Recommendation 1:** Continue to educate Delawareans about diabetes risk factors while encouraging healthy lifestyle behaviors.

**Recommendation 2:** Increase referrals to the nationally recognized, evidence-based National Diabetes Prevention Program (National DPP) for Delawareans at high risk for diabetes.

**Recommendation 3:** Increase referrals to DSMES programs for adults with diabetes.

**Recommendation 4:** Increase medication adherence among Delawareans with high blood pressure and/or high cholesterol.

**Recommendation 5:** Increase the proportion of Delawareans with diabetes who follow the evidence-based CDC Diabetes Care Schedule.

**Recommendation 6:** Leverage electronic health record (EHR) capabilities to promote the adoption of organizational guidelines for the clinical care of patients with or at risk for diabetes.

**Recommendation 7:** Enhance care coordination to improve the clinical care of Delawareans with or at risk for diabetes, share resources, and reduce health care costs.



## Chapter 1: Collaborating Agencies

*The Impact of Diabetes in Delaware, 2023* is a collaboration between the Delaware Department of Health and Social Services (DHSS), Division of Public Health (DPH) and Division of Medicaid and Medical Assistance (DMMA), and the Delaware Department of Human Resources, Statewide Benefits Office (SBO).

DPH oversees diabetes activities and programming statewide. DMMA provides medical assistance to Delaware Medicaid members through a variety of programs; most activities related to diabetes are administered through contracted Medicaid Managed Care Organizations (MCOs). SBO administers health benefits to State Group Health Insurance Plan (GHIP) members and works directly with health plan vendors to provide resources tailored to meet the needs of members with diabetes and those at risk for the disease. The agencies work together and with partner stakeholders to achieve the four long-term goals outlined in the Delaware Diabetes Plan.

### Division of Public Health (DPH)

- Target Population: All Delawareans, an estimated 1,013,736 individuals [4]

Diabetes prevention and treatment activities are carried out by the DPH Diabetes and Heart Disease Prevention and Control Program (DHDPCCP). DHDPCCP is funded by a cooperative agreement with the Centers for Disease Control and Prevention (CDC) with support from the Delaware Health Fund.

DHDPCCP is tasked with decreasing the emotional, physical, and financial burden of diabetes among all Delawareans. DHDPCCP programs target Delaware's most vulnerable populations, including minorities, people of lower socioeconomic status (SES), older adults, people with disabilities, and those with diabetes risk factors. Special diabetes resources are in place for those who do not meet health insurance qualifiers and/or whose insurance excludes needed diabetes services and supplies.

DHDPCCP performs the following duties:

- Collects, analyzes, and publicizes health surveillance data.
- Uses evidence-based strategies to reduce the prevalence of prediabetes, diabetes, and hypertension.
- Promotes health equity among Delawareans.
- Fosters partnerships between clinical and community resources.
- Coordinates public and private joint initiatives related to diabetes and heart disease.
- Supports health information technology (HIT) to improve clinical quality.

## **Division of Medicaid & Medical Assistance (DMMA)**

- **Target Population:** Approximately 300,000 eligible Delawareans whose incomes are insufficient to meet the costs of necessary medical services

The Division of Medicaid & Medical Assistance (DMMA) was established within DHSS in 2005 to improve health outcomes and ensure that Delaware's most vulnerable populations receive high-quality medical services in a cost-effective manner. DMMA oversees multiple programs under the umbrella category of the Delaware Medical Assistance Plan (DMAP). Medicaid is the largest DMAP program and provides medical assistance to eligible, low-income individuals and families whose incomes are insufficient to meet the costs of necessary medical services. Medicaid is jointly funded by states and the federal government. At least 50% of states' total Medicaid funds come from the Federal Medical Assistance Percentages (FMAP), and states are responsible for generating the remaining funds through a combination of general revenues, taxes, local governments, and other sources.

Approximately 90% of Medicaid clients are enrolled in the Diamond State Health Plan (DSHP), Delaware's Medicaid MCO. DMMA contracts with AmeriHealth Caritas Delaware, Delaware First Health, and Highmark Health Options to provide managed care services to clients covered through the DSHP.<sup>1</sup>

## **Statewide Benefits Office (SBO)**

- **Target Population:** More than 129,000 individuals are covered under the State Group Health Insurance Plan (GHIP)

The Statewide Benefits Office (SBO), Department of Human Resources (DHR) is responsible for the strategic planning, daily administration, and financial management of all health and related benefit programs available to members covered by the State Group Health Insurance Plan (GHIP). GHIP members include active employees, retirees and dependents affiliated with state agencies, school districts, charter schools, higher education, and participating non-state groups. SBO staff administer health, prescription, wellness/disease management, vision, dental, and other benefits to more than 129,000 GHIP members.

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<sup>1</sup> Delaware First Health began providing services to enrolled members in January 2023; data pertaining to this MCO will be included in the 2025 biennial report.

## Chapter 2: Diabetes in Delaware

### What is Diabetes?

Diabetes is a chronic disease that affects how your body uses food for energy. Left untreated, diabetes can lead to a host of poor health outcomes including heart disease, stroke, kidney disease, lower limb amputations, blindness, and death. The good news is that diabetes is largely preventable through basic prevention steps like eating a healthy diet, getting regular physical activity, and losing a small amount of extra weight. The American Diabetes Association (ADA) recommends at least 150 minutes per week of moderate-intensity physical activity and weight loss of 5%-7% to prevent or delay the onset of diabetes in populations at high risk for the disease [1]. Those who develop diabetes can effectively manage the condition through healthy lifestyle behaviors and a medication regimen to control blood glucose levels.

Type 2 diabetes is the most common form of diabetes, accounting for 90-95% of all diabetes diagnoses. Prediabetes, a condition characterized by higher than normal blood sugar levels that do not meet the threshold for type 2 diabetes, is also a recognized medical condition. Type 1 diabetes and gestational diabetes are diagnosed less frequently than type 2 diabetes. About 5%-10% of people with diabetes have type 1 diabetes [5]. Gestational diabetes is a type of diabetes that can develop during pregnancy in women who do not already have diabetes. Gestational diabetes usually goes away after giving birth but increases the risk for type 2 diabetes later in life [6].

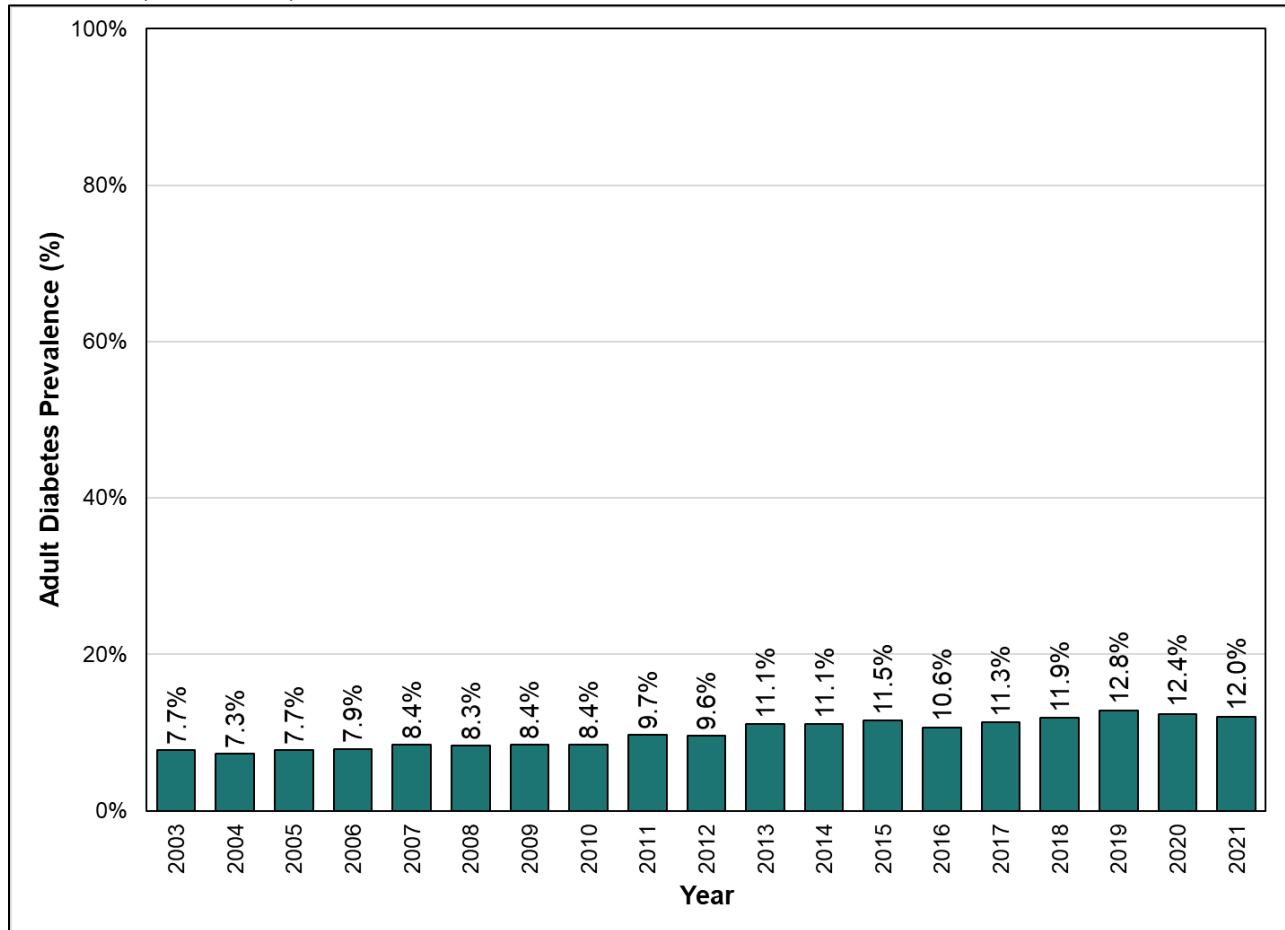
### Diabetes Prevalence

In 2021, 12.0% of Delaware adults reported they had been diagnosed with diabetes. This means that more than 95,000 Delaware adults know that they have diabetes<sup>2</sup> [7]. Another 12.6% of Delaware adults report being told they have prediabetes, a condition that places them at greater risk for developing diabetes. In total, 24.6% of Delaware adults have either prediabetes or diabetes. After increasing throughout the early 2000s and peaking in 2019, Delaware's diabetes prevalence began declining. From 2019 to 2021, Delaware's diabetes prevalence rate fell from 12.8% to 12.0% (Figure 1).

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<sup>2</sup> This prevalence does not include gestational diabetes. Although the BRFSS survey question does not distinguish between type 1 and type 2 diabetes, the National Diabetes Information Clearinghouse estimates that between 90% to 95% of people with diabetes have type 2.

**Figure 1. Adult Diabetes Prevalence as a Percentage of the Total Population Age 18 and Older, Delaware, 2003-2021**



Source: Delaware Department of Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey, 2003-2021

Diabetes prevalence varies among different groups of people. Some differences in diabetes prevalence estimates reach a threshold of statistical significance. A statistically significant difference is one that is not attributed to chance. Other differences in diabetes prevalence do not reach the threshold of statistical significance. If a difference is not statistically significant, chance cannot be ruled out as an explanatory factor for the difference.<sup>3</sup>

In 2021, the diabetes prevalence rate among Delaware males (12.2%) was not significantly different than the rate among Delaware females (11.7%) (Table 1). In 2021, 15.0% of non-Hispanic Black adults and 11.4% of non-Hispanic White adults had been diagnosed with diabetes. While the difference in diabetes prevalence between non-Hispanic Black and non-Hispanic White Delaware adults was not statistically significant in 2021, the trend has shown that non-Hispanic Black Delaware adults

<sup>3</sup> Significant differences between prevalence estimates were identified by non-overlapping 95% confidence intervals.

consistently have a higher diabetes prevalence compared to non-Hispanic White Delaware adults. In some years over the past decade, the difference has been statistically significant, and reaching statistical significance appears to be a factor of sampling.

Diabetes becomes more prevalent with age. Among Delawareans ages 45-54, a significantly lower percentage (9.6%) report having diabetes compared to those ages 55-64 (18.2%) and those ages 65 and older (23.4%). In 2021, diabetes prevalence in Sussex County (13.2%) was higher than in Kent (11.4%) and New Castle (11.6%) counties.

**Table 1. Diabetes Prevalence by Demographic Characteristics, Delaware, 2021**

	Diabetes Prevalence	Statistical Significance
Total, All Adults	12.0%	
<b>Sex</b>		
Male	12.2%	There is no significant difference in diabetes prevalence between males and females.
Female	11.7%	
<b>Race</b>		
White	11.4%	There is no significant difference in diabetes prevalence between Black and White adults.
Black	15.0%	
<b>Age</b>		
18-44	3.1%	Diabetes prevalence for adults ages 55-64 and 65+ is significantly higher than for adults ages 18-44 and 45-54.
45-54	9.6%	
55-64	18.2%	
65+	23.4%	
<b>Education</b>		
< High School	16.1%	Diabetes prevalence does not differ significantly by educational level.
High School or GED	12.8%	
Some Post-High School	11.4%	
College Graduate	10.6%	
<b>County</b>		
New Castle County	11.6%	Diabetes prevalence does not differ significantly by county of residence.
Kent County	11.4%	
Sussex County	13.2%	

Note: Significant differences between prevalence estimates were identified by non-overlapping 95% confidence intervals. Source: Delaware Behavioral Risk Factor Survey (BRFS), 2021.

In FY22, 14,903 Delaware Medicaid clients were living with type 2 diabetes; another 1,878 clients had been diagnosed with prediabetes.<sup>4</sup> Among Medicaid clients with diabetes, 68.0% were age 51 or older. Females accounted for 57.4% of Medicaid clients with type 2 diabetes.

In FY22, 13,123 GHIP members had diabetes, reflecting a diabetes prevalence rate of 94.1 per 1,000 members or 9.4% (Table 2).<sup>5</sup> Prevalence was highest among the Medicare retiree population, consistent with the fact that diabetes prevalence increases with age. An additional 11,246 GHIP members had prediabetes in FY22, a prediabetes prevalence rate of 80.6 per 1,000 members or 8.1%.<sup>6</sup> Prediabetes prevalence was highest among the active employee population, indicative that prediabetes status fluctuates over time.

**Table 2. Number and Rate (and Percentage) of Group Health Insurance Plan Members with Prediabetes and Diabetes, Delaware, Fiscal Year 2022**

GHIP Member Group	Prediabetes		Diabetes	
	Number of Members	Rate per 1,000 Members	Number of Members	Rate per 1,000 Members
Active Employee	8,810	89.0 (8.9%)	5,167	52.2 (5.2%)
Early Retiree	888	75.9 (7.6%)	1,213	103.7 (10.4%)
Medicare Retiree	1,586	55.6 (5.6%)	6,155	215.6 (21.6%)
<b>Total</b>	<b>11,246</b>	<b>80.6 (8.1%)</b>	<b>13,123</b>	<b>94.1 (9.4%)</b>

Note: Member groups overlap due to member movement during the year; frequencies do not sum to totals.  
Source: Delaware Department of Human Resources, Statewide Benefits Office, 2022

## Diabetes Risk Factors

A person’s risk of developing diabetes increases if they have one or more risk factors. Some risk factors are non-modifiable, meaning they cannot be changed. Other risk factors are modifiable and can be reduced or eliminated through lifestyle changes. Table 3 summarizes non-modifiable and modifiable diabetes risk factors recognized by the CDC and the ADA.

<sup>4</sup> In FY22, 1,459 Delaware Medicaid clients were living with type 1 diabetes and 657 Delaware Medicaid clients had been diagnosed with gestational diabetes.

<sup>5</sup> GHIP members were identified as having diabetes if they experienced a diabetes episode during FY22. A diabetes episode is a summary of care (i.e., a claims record) related to a condition or disease that includes inpatient, outpatient, and prescription drug treatment.

<sup>6</sup> GHIP members were identified as having prediabetes if they did not have an indication of diabetes, but had been diagnosed with prediabetes, metabolic syndrome, or obesity.

**Table 3. Non-Modifiable and Modifiable Diabetes Risk Factors**

Risk Factor Category	Diabetes Risk Factor
Non-Modifiable Diabetes Risk Factors [8]	<ul style="list-style-type: none"> <li>• Have a parent, brother, or sister with type 2 diabetes</li> </ul>
	<ul style="list-style-type: none"> <li>• Are 45 years or older</li> </ul>
	<ul style="list-style-type: none"> <li>• Are a Black, Latino, American Indian, or Alaskan Native person. Some Pacific Islanders and Asian American people are also at higher risk for diabetes.</li> </ul>
	<ul style="list-style-type: none"> <li>• Have ever had gestational diabetes or previously given birth to a baby who weighed over 9 pounds</li> </ul>
Modifiable Diabetes Risk Factors [9]	<ul style="list-style-type: none"> <li>• Are overweight or obese</li> </ul>
	<ul style="list-style-type: none"> <li>• Have prediabetes</li> </ul>
	<ul style="list-style-type: none"> <li>• Have hypertension</li> </ul>
	<ul style="list-style-type: none"> <li>• Have elevated cholesterol (lipid) levels</li> </ul>
	<ul style="list-style-type: none"> <li>• Heavy alcohol intake</li> </ul>
	<ul style="list-style-type: none"> <li>• Are a smoker</li> </ul>
	<ul style="list-style-type: none"> <li>• Poor dietary intake</li> </ul>
	<ul style="list-style-type: none"> <li>• Sedentary lifestyle</li> </ul>
	<ul style="list-style-type: none"> <li>• Excessive stress</li> </ul>
	<ul style="list-style-type: none"> <li>• Insufficient sleep</li> </ul>

Source: Centers for Disease Control and Prevention, 2022; American Diabetes Association, 2021

## Chapter 3: High-Risk Populations

Some groups have a higher diabetes prevalence rate, poorer diabetes control, or are more likely to experience diabetes complications. DPH, DMMA, and SBO identify eight groups of Delawareans at highest risk for diabetes and related complications (Table 4). The eight high-risk populations are categorized by diabetes status: (a) adults at elevated risk for development of diabetes and (b) adults who have already been diagnosed with diabetes.

**Table 4. Identified Populations at High-Risk for Diabetes, Poor Diabetes Control, or Diabetes-Related Complications by Diabetes Status, Delaware, 2023**

Diabetes Status	High-Risk Population
Delaware Adults at Elevated Risk for Diabetes	1. Adults ages 55+ (especially males)
	2. Black males and females
	3. Adults with overweight/obesity
	4. Adults in Kent and Sussex counties
	5. Adults with prediabetes who have not participated in the National Diabetes Prevention Program (National DPP)
Delaware Adults Already Diagnosed with Diabetes	6. Adults with uncontrolled diabetes
	7. Adults with diabetes and co-occurring conditions
	8. Adults with diabetes who have not participated in Diabetes Self-Management Education and Support (DSMES)

Source: Delaware Department of Health and Social Services, Division of Public Health and Division of Medicaid & Medical Assistance, and Delaware Department of Human Resources, Statewide Benefits Office, 2023

The eight populations at high risk of diabetes are:

### 1. Adults Ages 55+ (especially males)

Diabetes becomes more prevalent with age [10]. In 2021, 3.1% of Delaware adults ages 18-44 had been diagnosed with diabetes, compared to 9.6% of Delaware adults ages 45-54 and 18.2% of Delaware adults ages 55-64 (Table 5) [2]. Nearly one-quarter (23.4%) of Delaware adults ages 65 and older had been diagnosed with diabetes in 2021 [2].

Health surveillance data for active employee and early retiree GHIP members confirms the correlation between age and diabetes (Figure 2). In FY22, diabetes prevalence for active employee and early retiree GHIP members ages 40-49 was more than double the prevalence for those ages 30-39; this trend holds true for men and women. Focusing



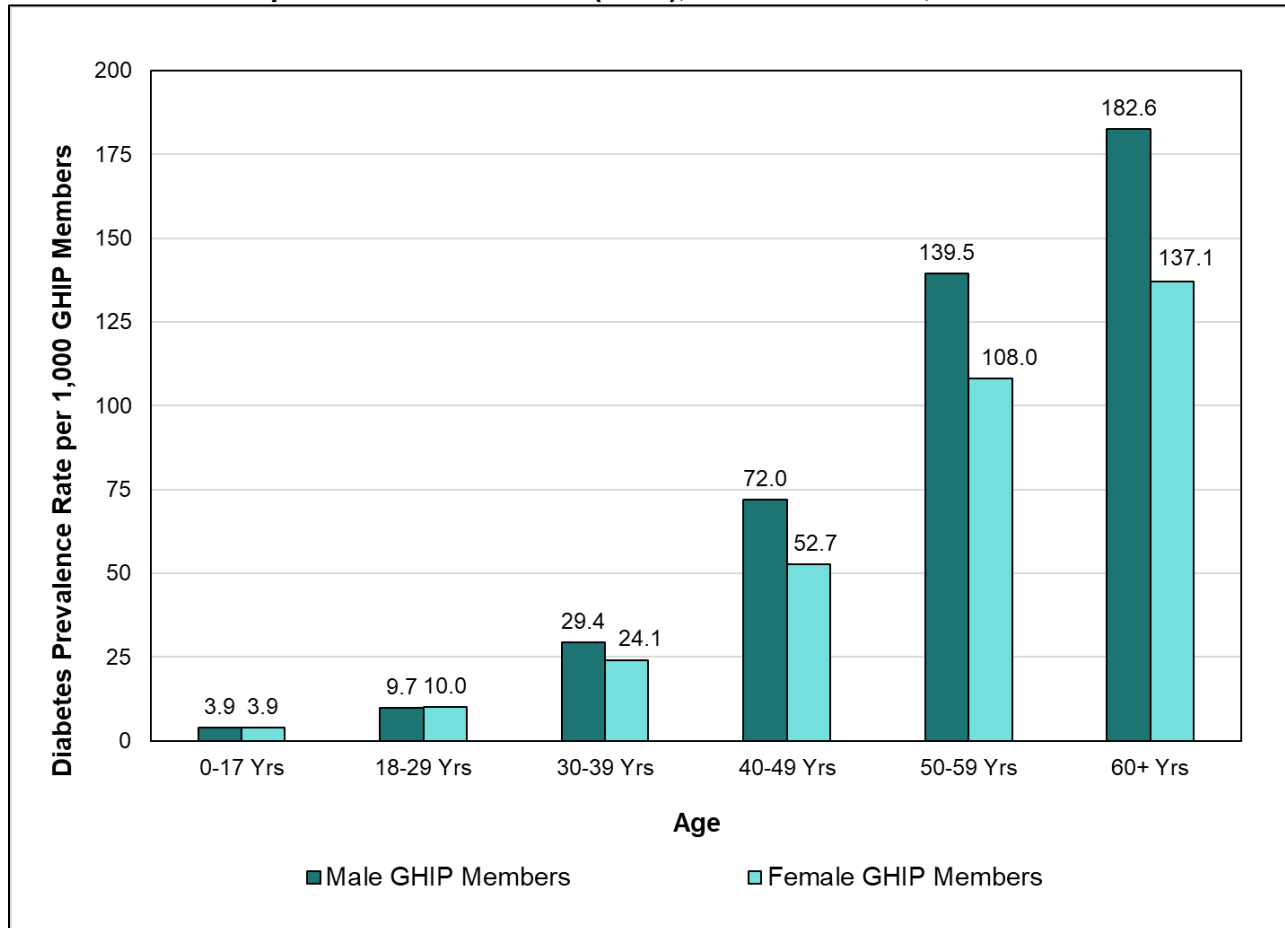
diabetes prevention and management efforts among adults approaching their 50s is key to reducing the number of Delawareans who develop diabetes or experience complications. Inequities in diabetes prevalence between male and female active employee and early retiree GHIP members suggest that additional outreach to males ages 55 and older may be an effective strategy to reduce their burden of diabetes.

**Table 5. Adult Diabetes Prevalence by Age Group, Delaware, 2021**

Age Group	Diabetes Prevalence	Statistical Significance
18-44	3.1%	Diabetes prevalence for adults ages 55-64 and ages 65+ is significantly higher than for adults ages 45-54.
45-54	9.6%	
55-64	18.2%	
65+	23.4%	

Note: Significant differences between prevalence estimates were identified by non-overlapping 95% confidence intervals.  
 Source: Delaware Department of Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey, 2021

**Figure 2. Diabetes Prevalence Rate by Age per 1,000 Active Employees and Early Retirees in the Group Health Insurance Plan (GHIP), State of Delaware, Fiscal Year 2022**



Note: Includes Active Employee and Early Retiree GHIP Members; Medicare retirees excluded due to incomplete medical and prescription costs and utilization captured through available claims.

Source: Delaware Department of Human Resources, Statewide Benefits Office, 2022

## 2. Black Males and Females

In Delaware, Black males and females are more likely than White males and females to develop diabetes and die from the disease. While the difference in diabetes prevalence rates between non-Hispanic Black (15.0%) and non-Hispanic White (11.4%) Delaware adults was not statistically significant in 2021 [2], Black adults consistently have a higher diabetes prevalence compared to White adults.

Delaware’s five-year age-adjusted mortality rate (AAMR) for diabetes conveys how many people with diabetes die from the disease over a five-year period. Delaware’s overall diabetes AAMR has declined over time, indicating that a smaller proportion of people with diabetes are dying from the disease today compared to the past. While this is positive news, improvements in the diabetes AAMR have not been equal across all groups. From 2004-2008 to 2016-2020, Delaware’s five-year diabetes AAMR declined 44% for non-Hispanic Black females, 19% for non-Hispanic White females, and 13% for

non-Hispanic White males [11]. In contrast, the diabetes AAMR increased 5% for non-Hispanic Black males.

Despite improvements in Delaware's overall diabetes AAMR, Black males and females continue to die from diabetes at rates higher than White males and females. From 2016-2020, the five-year AAMR for diabetes was 34.5 deaths per 100,000 population for non-Hispanic Black Delawareans – a rate twice that of the AAMR for non-Hispanic White Delawareans (17.2 deaths per 100,000 population) [11]. From 2016-2020, the AAMR for non-Hispanic Black women in Delaware was 22.3 deaths per 100,000 population, a rate 62% higher than the AAMR for non-Hispanic White women in Delaware (13.8 deaths per 100,000 population) [11]. Similarly, the 2016-2020 diabetes AAMR for non-Hispanic Black males in Delaware was 52.5 deaths per 100,000 population, a rate 144% higher than the diabetes AAMR for non-Hispanic White women in Delaware (21.5 deaths per 100,000 population) [11].

### **3. Adults with Overweight/Obesity**

Overweight and obesity are major diabetes risk factors, and individuals affected by excess weight are more likely to develop diabetes compared to adults with normal weight. In 2021, 18.7% of Delaware adults living with obesity had been diagnosed with diabetes compared to 3.4% of adults who reported normal weight [7]. About 91% of Delaware adults with diagnosed diabetes were overweight or obese in 2021. Not only does obesity increase the likelihood of developing diabetes, but it also increases the likelihood of diabetes-related complications [12]. A person who has both obesity and diabetes is at high risk for negative health outcomes like heart disease and stroke.

### **4. Adults in Kent and Sussex counties**

Adults in Delaware's central and southern counties are at higher risk for diabetes due to higher rates of diabetes risk factors. In Kent County, increased obesity prevalence increases the likelihood that adults will develop the disease. In 2020, 40% of Kent County residents were living with obesity compared to 32.2% of New Castle County residents and 33.3% of Sussex County residents. In Sussex County, the relatively large proportion of older adults increases the number of residents at risk for diabetes. In 2020, 26.4% of Sussex County adults were age 65 or older compared to 16.4% of Kent County adults and 15.9% of New Castle County adults [4].

## **5. Adults with Prediabetes who Have Not Participated in the National Diabetes Prevention Program (National DPP)**

The National DPP is a structured, evidence-based lifestyle and health behavior change program developed by the CDC and endorsed by the Centers for Medicare and Medicaid Services (CMS). The National DPP works to prevent or delay type 2 diabetes among at-risk adults. Over the course of a year, National DPP participants work to reduce body weight by 5%-7% and gradually increase physical activity to at least 150 minutes per week.

The National DPP is a cost-effective way to delay or prevent the progression from prediabetes to diabetes. Adults who participate in the National DPP have a diabetes incidence rate lower than adults who receive diabetes medication alone [13]. Impressively, the National DPP prevents the onset of diabetes by an average of nearly four years [13].

In Delaware, adults eligible for the National DPP are referred to the program through a health care provider or community-based organization. The National DPP is a covered benefit for Medicaid members and GHIP members at no additional cost. Despite evidence that the National DPP is a cost-effective and proven method to prevent or delay diabetes, participation among high-risk Delawareans is low.

## **6. Adults with Uncontrolled Diabetes**

For those diagnosed with the disease, achieving diabetes control is possible with daily effort. The hemoglobin A1C (A1C) blood test is the gold standard for gauging diabetes control. The A1C reflects average blood glucose level for the past two to three months and test results are reported as percentages. An A1C value below 5.7% is considered normal, whereas A1C values from 5.7%-6.4% indicate prediabetes. An A1C value above 8% indicates that a person's diabetes is uncontrolled, placing them at higher risk for diabetes-related complications [14].

DMMA monitors Healthcare Effectiveness Data and Information Set (HEDIS) measures to learn more about the proportion of Medicaid-enrolled members with diabetes who have achieved diabetes control.<sup>7</sup> In FY22, 52.0% of Medicaid members with diabetes had an optimal A1C level of less than 8%. Nearly 40% of Medicaid members with diabetes had an A1C greater than 9%.

Table 6 summarizes the CDC Diabetes Care Schedule recommended for people who have been diagnosed with diabetes [15]. Adults with diabetes who do not follow

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<sup>7</sup> Healthcare Effectiveness Data and Information Set (HEDIS) measures are used by more than 90% of U.S. health plans to measure clinical care quality and service [26].

recommended Diabetes Care tasks are at greater risk for uncontrolled diabetes and related complications.

**Table 6. Centers for Disease Control and Prevention Diabetes Care Schedule, 2022**

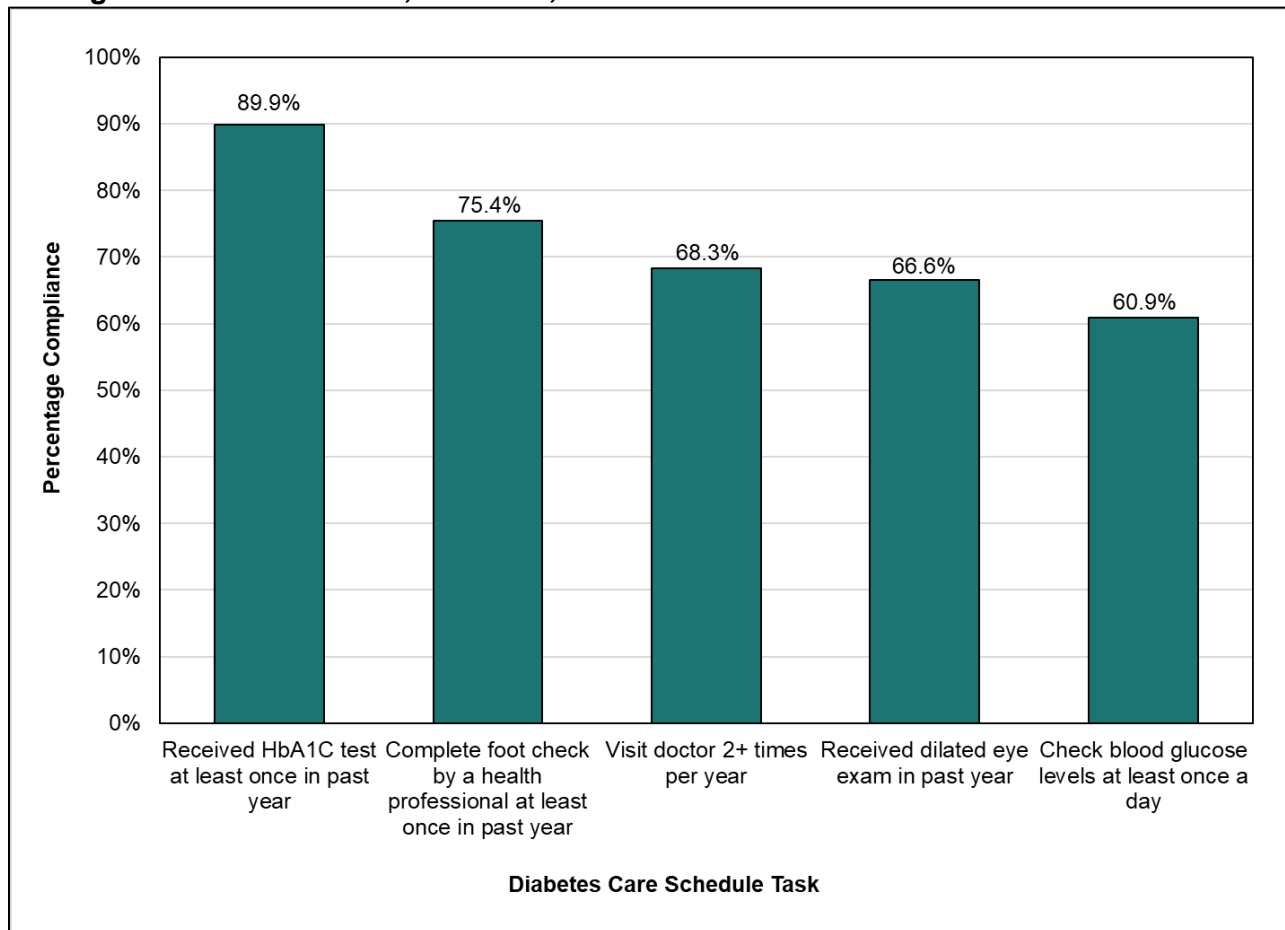
Diabetes Care Task	Recommended Frequency
• Check blood glucose levels	• Daily (at least once per day)
• Self-administered foot check	• Daily
• Proper medication use	• Daily
• Moderate physical activity	• Daily (at least 150 minutes per week)
• Healthy eating	• Daily
• Hemoglobin A1C (A1C) test	<ul style="list-style-type: none"> <li>• Every 3 months for those having trouble achieving blood glucose control goals</li> <li>• Every 6 months for those meeting blood glucose goals</li> </ul>
• Doctor visit	<ul style="list-style-type: none"> <li>• Every 3 months for those having trouble achieving blood glucose control goals</li> <li>• Every 6 months for those meeting blood glucose goals</li> </ul>
• Dental exam	• Every 6 months
• Flu shot	• Once a year
• Kidney function test	• Once a year
• Cholesterol test	• Once a year
• Dilated eye exam	• Once a year
• Complete foot check by a medical professional	• Once a year
• Pneumonia vaccine	• Just once
• Hepatitis B vaccine	• Just once
• Mental health screening and support	• As needed

Source: Centers for Disease Control and Prevention, 2022.

Among Delaware adults with diabetes, compliance with the recommended CDC Diabetes Care Schedule varies by the specific care task (Figure 3). In 2021, 89.9% of Delaware adults with diabetes reported receiving an A1C test at least once during the past year [2]. In 2021, 75.4% of adults with diabetes reported receiving a complete foot check by a health care professional in the past year; 68.2% reported visiting their doctor at least two times in the past year; and 66.6% reported receiving a dilated eye exam in the past year [2].

In 2021, just 60.9% of adults with diabetes reported checking their blood glucose levels at least once a day [2]. This finding is particularly concerning because regular blood sugar monitoring is the most important tool for managing diabetes [16]. Daily monitoring allows a person with diabetes to get real-time feedback about what causes their blood glucose numbers to go up and down.

**Figure 3. Percentage of Self-Reported Compliance with Diabetes Care Schedule Tasks Among Adults with Diabetes, Delaware, 2021**



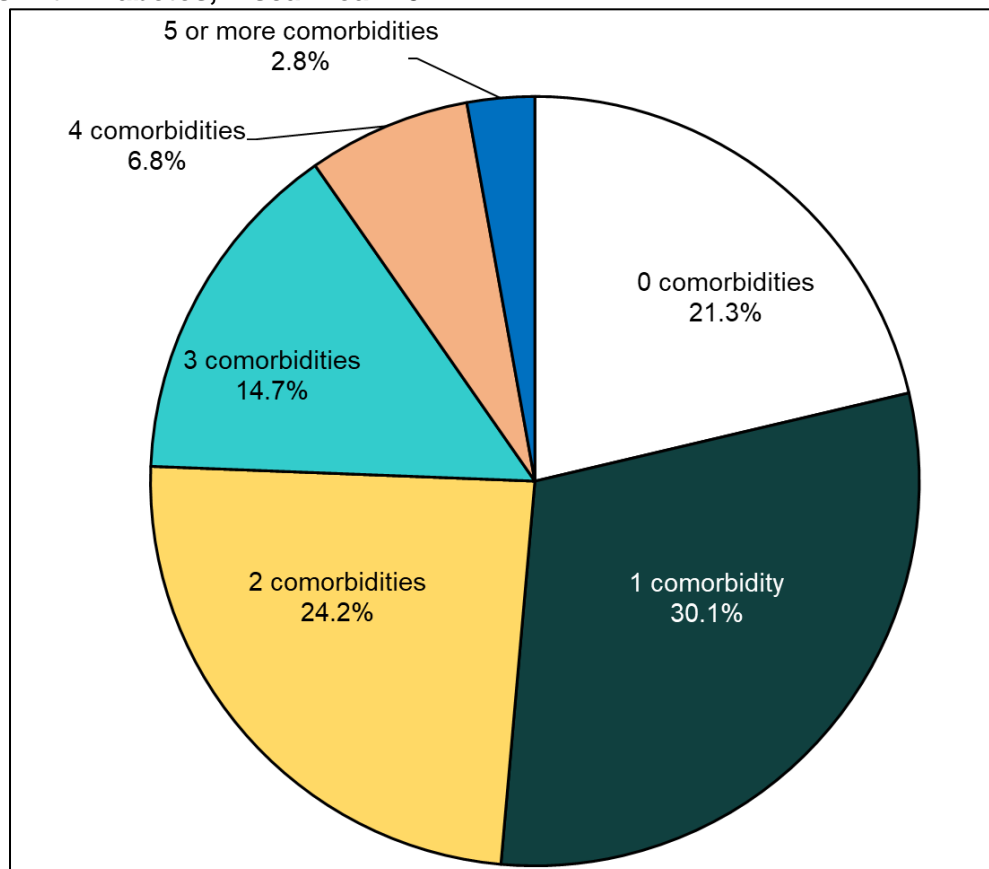
Source: Delaware Department of Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey, 2021

## 7. Adults with Diabetes and Co-Occurring Conditions

Comorbid conditions reduce the likelihood of achieving diabetes control and can complicate diabetes treatment. In FY22, 78.7% of active employee and early retiree GHIP members with diabetes had at least one top comorbidity: congestive heart failure, coronary artery disease, chronic obstructive pulmonary disease (COPD), hypertension, osteoarthritis, HIV/AIDS, rheumatoid arthritis, obesity, and low back disorder (Figure 4).

Hypertension and high cholesterol are independent risk factors for developing diabetes and for experiencing diabetes complications. In FY22, 73% of active employee and early retiree GHIP members with diabetes complied with statin medication prescribed to treat high cholesterol, and 67% percent of Medicaid members with diabetes had blood pressure control (defined as less than 140/90 mm Hg). Improving medication management of hypertension and high cholesterol is an important strategy to reduce the number of adults who develop diabetes and experience related complications.

**Figure 4. Number of Top 10 Comorbidities Among Group Health Insurance Plan (GHIP) Members with Diabetes, Fiscal Year 2021**



Note: Includes Active Employee and Early Retiree GHIP Members; Medicare retirees excluded due to incomplete medical and prescription costs and utilization captured through available claims.

Source: Delaware Department of Human Resources, Statewide Benefits Office, 2022

## **8. Adults with Diabetes Who Have Not Participated in Diabetes Self-Management Education and Support Services**

Diabetes Self-Management Education and Support (DSMES) is an evidence-based program to help people with diabetes develop the skills they need to manage their condition. Through DSMES, people with diabetes learn the skills needed to check their blood sugar regularly, eat healthy foods, take medications as prescribed, and build physical activity into their daily routines. DSMES is tailored to an individual's specific needs, goals, and life circumstances. Classes are facilitated by Certified Diabetes Care and Education Specialists (CDCES), and program content incorporates behavioral goal setting, theoretically grounded empowerment models, shared decision-making, and ongoing support [17]. Delaware adults who are eligible for DSMES are referred to an outpatient or hospital affiliated DSMES site. Classes are offered in person or virtually to meet participants' needs.

Despite being a cost-effective strategy to improving diabetes management and outcomes, DSMES participation rates are low compared to other diabetes management recommendations for achieving and maintaining diabetes control. In 2021, half (51%) of all Delaware adults with diabetes had taken a course or class in how to manage the condition [2].



## Chapter 4: The Financial Impact of Diabetes in Delaware

Prediabetes and diabetes cost Delaware an estimated \$1.1 billion each year. Nearly three-quarters of the total cost of prediabetes and diabetes – \$818 million – reflects direct medical expenses. Diabetes is a lifelong medical condition, and the cost of care increases as the disease progresses. On average, people with diabetes accrue \$16,750 each year in medical costs, 57% of which is directly attributable to diabetes [3]. People with diabetes have medical expenditures an average of 2.3 times higher than those without diabetes [3]. Prevention, early diagnosis, self-management, and high-quality clinical care reduce costs by preventing or delaying expensive diabetes complications.

### Costs of Diabetes Care Among Delaware Medicaid Members

DMMA administers benefits to Medicaid beneficiaries via managed care plans and on a fee-for-service (FFS) basis. Under a managed care model, DMMA pays a fee to a managed care plan for each beneficiary enrolled in the plan; the plan reimburses providers for services provided to a beneficiary that are included in the plan's contract with the State. Approximately 90% of Delaware Medicaid enrollees receive services through a Medicaid Managed Care Organizations (MCO). DMMA works closely with each MCO to offer a range of diabetes prevention and management services to improve health outcomes for eligible members. Under an FFS model, DMMA reimburses providers directly for each covered service received by a Medicaid beneficiary.

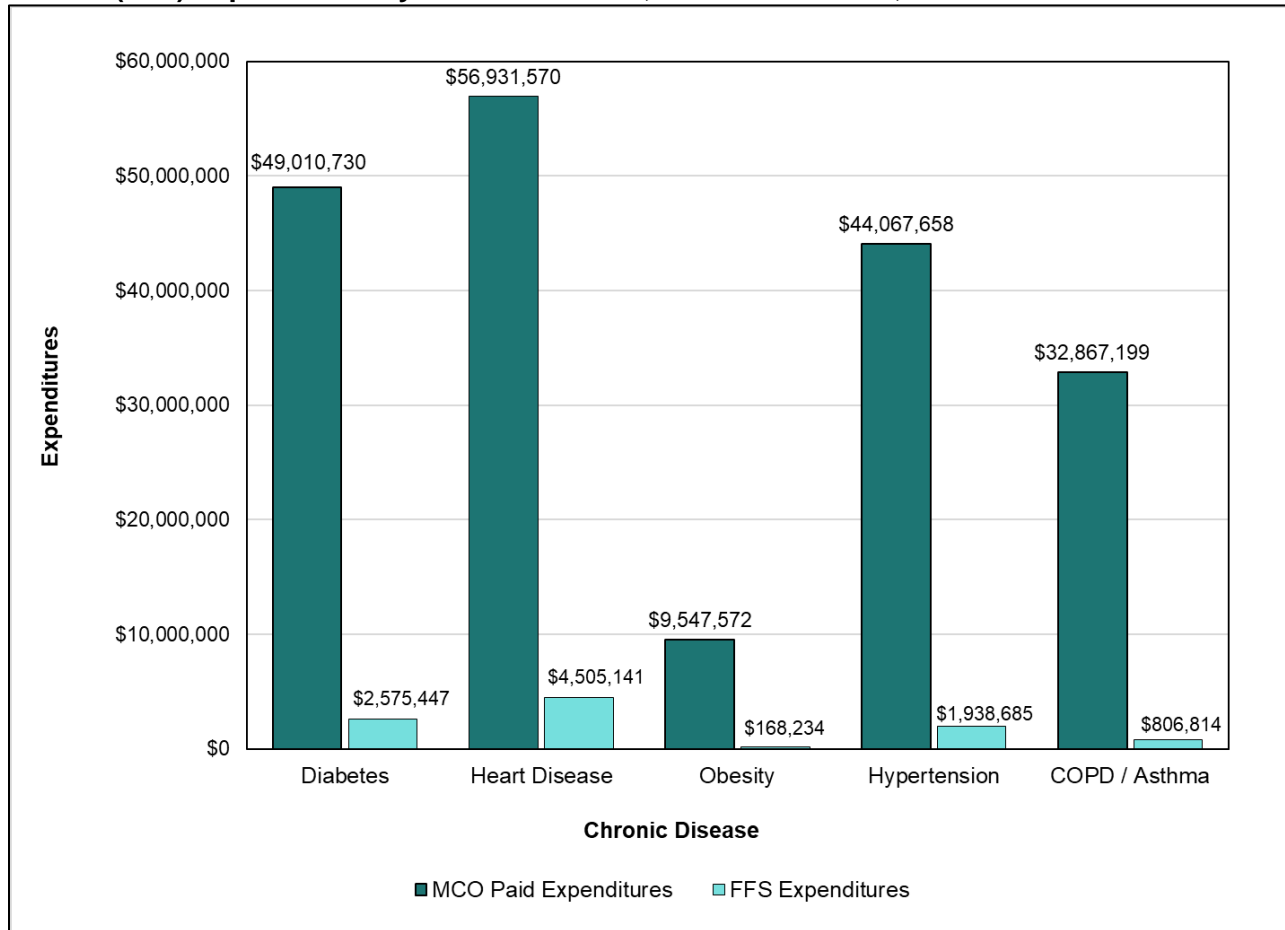
In FY22, Delaware Medicaid MCOs directly reimbursed providers \$49.0 million in diabetes-related care, a 15% increase in diabetes-related expenditures compared to FY20.<sup>8</sup> An additional \$2.6 million in FFS expenditures was paid directly to providers for diabetes-related care among Delaware Medicaid clients.<sup>9</sup> MCO-paid amounts and FFS expenditures related to diabetes rivaled those of other chronic diseases among Delaware Medicaid clients in FY22 (Figure 5).

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<sup>8</sup> These payments, referred to as "MCO Paid amounts" are payments made by MCOs to service providers. Medicaid MCOs are paid a monthly capitation payment for which they accept financial responsibility for most services provided to a client during the month. Actuaries set monthly capitation rates using MCO paid amounts; as MCO paid amounts increase, monthly capitation rates – paid using State and/or Federal Medicaid funds – increase accordingly.

<sup>9</sup> FFS expenditures reflect direct payments from the State of Delaware and/or Federal Medicaid funds.

**Figure 5. Medicaid Managed Care Organization (MCO) Paid Expenditures and Fee-for-Service (FFS) Expenditures by Chronic Disease, State of Delaware, Fiscal Year 2022**



Source: Delaware Department of Health and Social Services, Division of Medicaid & Medical Assistance, 2023

### Cost of Diabetes Care Among GHIP Members

Diabetes is the costliest clinical condition by episode of care among GHIP members (Figure 6) inclusive of Medicare retirees. The FY22 total allowed amount for diabetes, reflective of net payments from the GHIP as well as member costs, reached \$85.3 million – an increase of almost \$9 million compared to FY21. The total allowed amount for diabetes care was 88.3% more than for osteoarthritis, the second costliest condition by episode of care. In FY22, costs related to diabetes episodes of care represented 5% of all GHIP net payments made on behalf of active employees and early retirees.

The cost of treating diabetes increases as the disease progresses. SBO categorizes each diabetes episode of care into one of three disease stages:

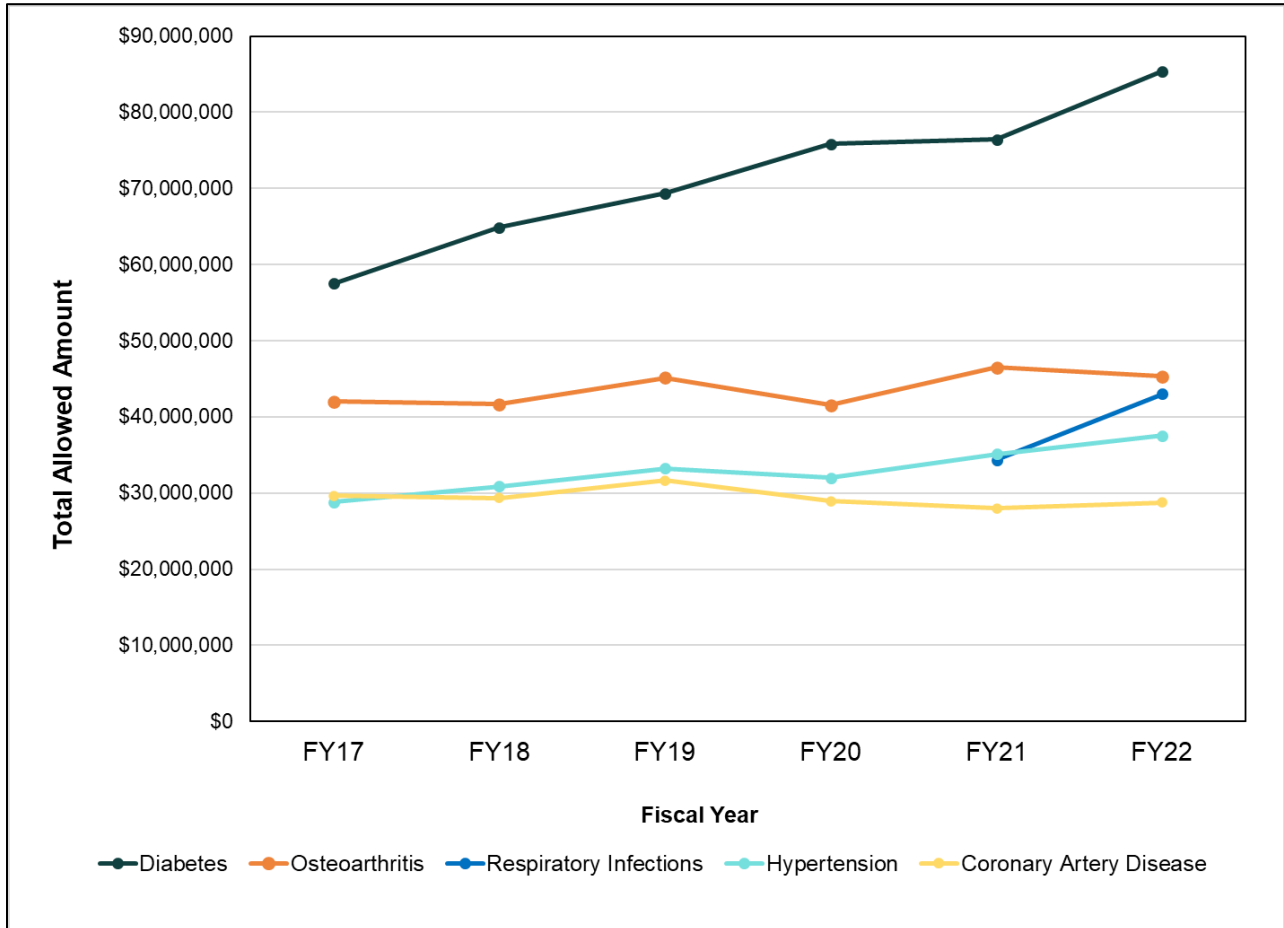
- Stage 1 episode: An uncomplicated, asymptomatic diabetes episode or a diabetes episode with minimal complications.
- Stage 2 episode: A diabetes episode with some degree of complication, such as vascular disease, neuropathy, or retinopathy.
- Stage 3 episode: The most severe category of diabetes episodes, including comorbidities such as renal failure, heart attack, or stroke.

In FY22, GHIP payments for Stage 1, Stage 2, and Stage 3 diabetes episodes were \$10.0 million, \$23.9 million, and \$5.1 million, respectively. Although Stage 3 diabetes episodes accrued the lowest total payments of all three disease stages, the per-episode payment rate for Stage 3 episodes was \$19,907, compared to per-episode costs of \$7,108 for Stage 2 episodes and \$3,415 for Stage 1 episodes.

From FY16-FY22, active employee and early retiree GHIP members with diabetes had higher rates of hospital admissions, avoidable admissions, hospital readmissions, Emergency Room visits, office visits, and prescriptions compared to the total active employee and early retiree GHIP population (Figure 7). Rates of preventive visits were lower among active employee and early retiree GHIP members with diabetes relative to the total active employee and early retiree GHIP population. For some utilization categories, such as office visits and prescriptions, higher utilization rates among members with diabetes may reflect improved quality of and access to care and self-management efforts. In contrast, higher rates for hospital admissions, avoidable admissions, and readmissions highlight opportunities for improvements in diabetes management among active employee and early retiree GHIP members.

For most service categories shown in Figure 7, the difference in utilization is increasing between active employee and early retiree GHIP members with diabetes compared to all active employee and early retiree members. For example, in FY16, members with diabetes experienced avoidable admissions at a rate 240% greater than the total active employee and early retiree GHIP population (17.0 per 1,000 patients with diabetes vs. 5.0 per 1,000 total GHIP population). By FY22, the avoidable hospital admission rate for members with diabetes (17.7 per 1,000 patients) was 785% greater than the rate for the total active employee and early retiree GHIP population (2.0 per 1,000 patients).

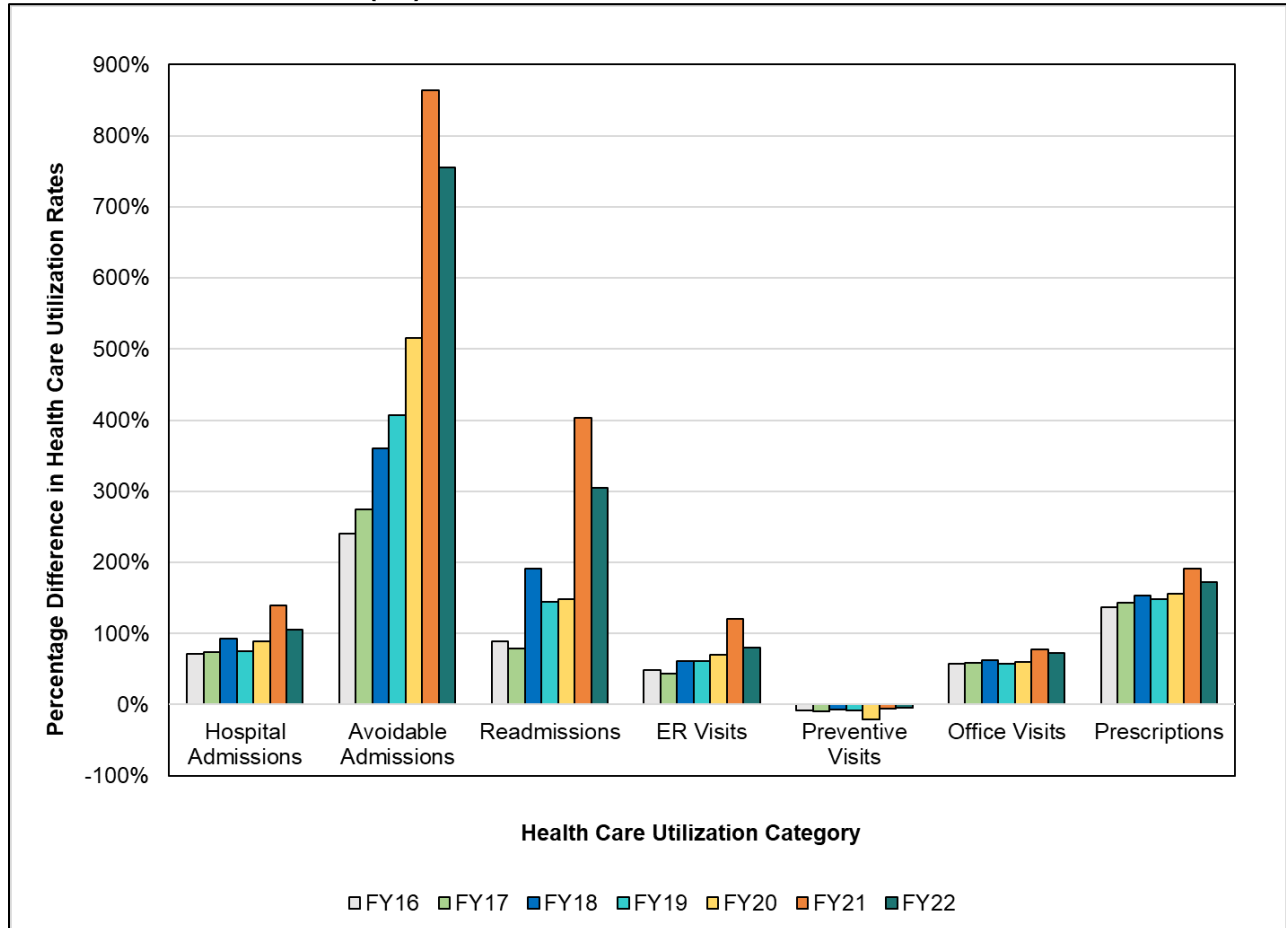
**Figure 6. Total Allowed Amount in Millions for the Five Costliest Episode Disease Categories among Group Health Insurance Plan (GHIP) Members by Fiscal Year, State of Delaware, Fiscal Years 2017-2022**



Note: Includes data for Active Employee, Early Retiree, and Medicare Retiree GHIP Members. FY17-FY20 data unavailable for Respiratory Infections.

Source: Delaware Department of Human Resources, Statewide Benefits Office, 2022

**Figure 7. Percentage Differences in Health Care Utilization Rates among Members with Diabetes Compared to the Group Health Insurance Plan (GHIP) Member Population, State of Delaware, Fiscal Years (FY) 2016-2022**

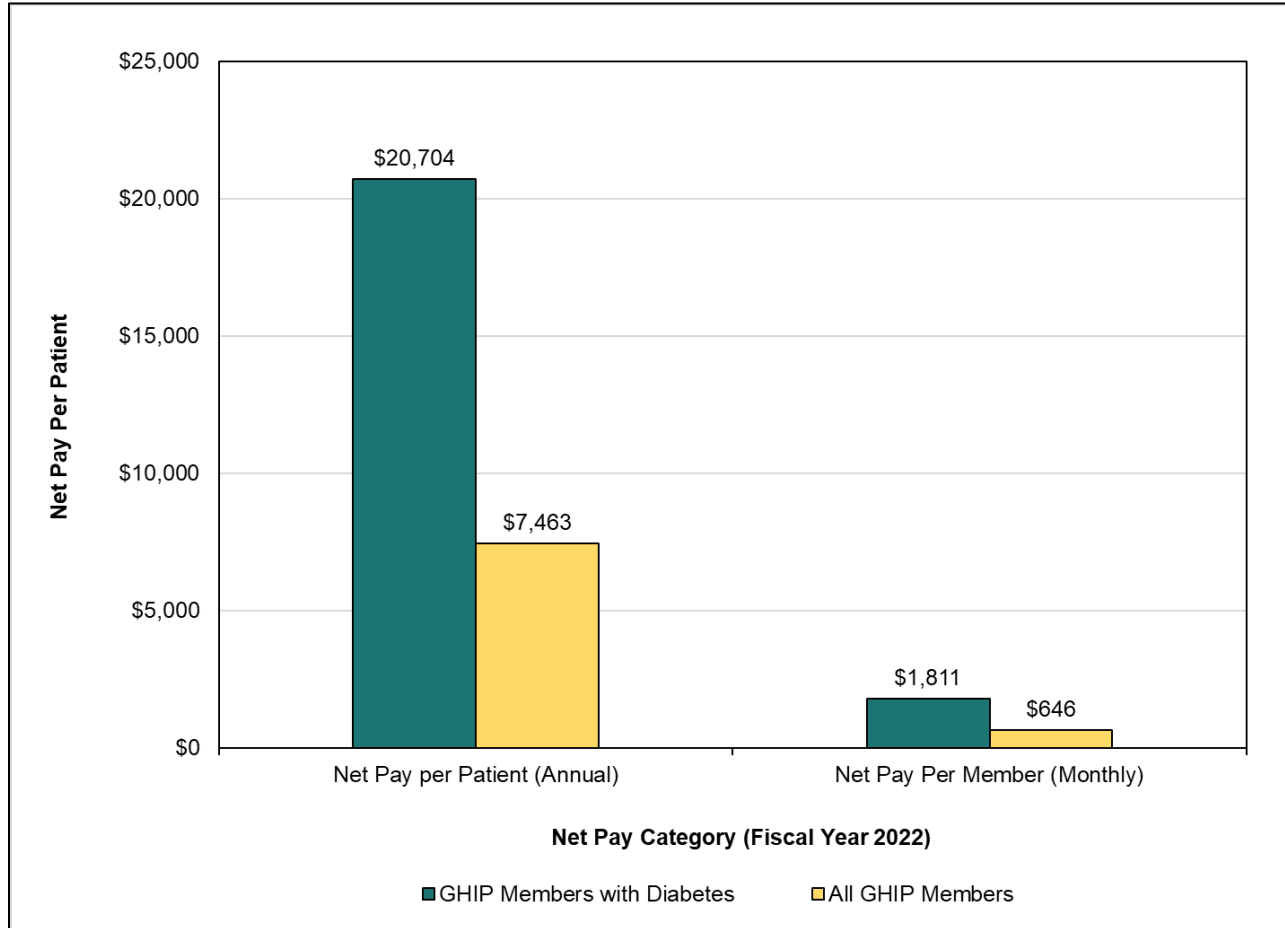


Note: Includes Active Employee and Early Retiree GHIP Members; Medicare retirees excluded due to incomplete medical and prescription costs and utilization captured through available claims.

Source: Delaware Department of Human Resources, Statewide Benefits Office, 2022

Higher health care utilization among members with diabetes yield higher per member costs. In FY22, the annual net payment per patient (NPPP) was higher for active employee and early retiree GHIP members with diabetes (\$20,704) relative to the total active employee and early retiree GHIP population (\$7,463) (Figure 8). On a per-member-per-month (PMPM) basis, non-Medicare GHIP payments averaged \$1,811 per member with diabetes relative to \$646 per member among all non-Medicare GHIP members.

**Figure 8. Annual and Monthly Net Pay per Patient, Group Health Insurance Plan (GHIP) Members with Diabetes and GHIP Members, State of Delaware, Fiscal Year 2022**



Note: Includes Active Employee and Early Retiree GHIP Members; Medicare retirees excluded due to incomplete medical and prescription costs and utilization captured through available claims.

Source: Delaware Department of Human Resources, Statewide Benefits Office, 2022

SBO prioritizes diabetes prevention and management as important levers for reducing overall health care costs and improving health outcomes. A goal specific to reducing diabetes costs was included as part of the State Employee Benefits Committee (SEBC) GHIP Strategic Framework. The SEBC and SBO aim to achieve a reduction of GHIP diabetic cost PMPM by 8% by the end of FY23 using FY21 spend as a baseline. Over time, SBO expects to see a decline in the rate in which diabetes member costs increase as outreach efforts attempt to increase member participation and engagement in diabetes management programs.

## Chapter 5: The Delaware Diabetes Plan

Together, DPH, DMMA, and SBO developed the Delaware Diabetes Plan – a framework to ease the impact of diabetes in the First State (Figure 9). The Delaware Diabetes Plan (hereafter referred to as “the Plan”) summarizes how stakeholders coordinate diabetes activities across the state to achieve four long-term goals (Table 7).

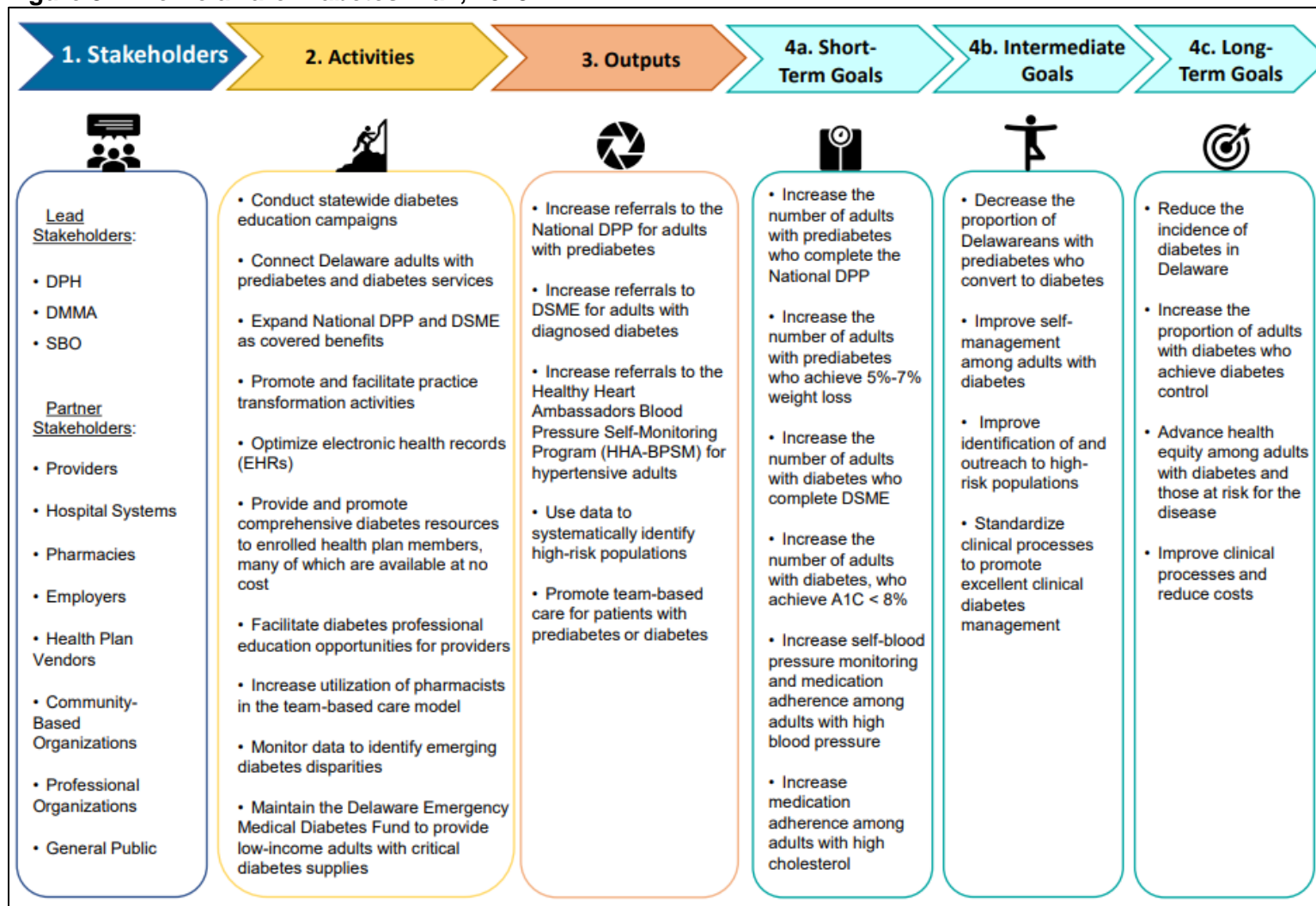
**Table 7. Delaware Diabetes Plan Long-Term Goals, 2023**

Delaware Diabetes Plan Long-Term Goals
1. Reduce the incidence of diabetes in Delaware
2. Increase the proportion of adults with diabetes who achieve diabetes control
3. Advance health equity among adults with diabetes and those at risk for the disease
4. Improve clinical processes and reduce health care costs

Source: Delaware Department of Health and Social Services, Division of Public Health, Diabetes and Heart Disease Prevention and Control Program, Delaware Diabetes Plan, 2023

The Plan aligns with national CDC recommendations [18] and Healthy People 2030 objectives [19], and is a call to action for all Delawareans to coordinate efforts and resources to promote diabetes prevention, early detection, and disease management. The following sections provide additional detail about each of the Plan’s components.

Figure 9. The Delaware Diabetes Plan, 2023



Source: Delaware Department of Health and Social Services, Division of Public Health (DPH), Diabetes and Heart Disease Prevention and Control Program (DHDPCP) and Division of Medicaid & Medical Assistance (DMMA); and the Delaware Department of Human Resources, Statewide Benefits Office (SBO), 2023



## Stakeholders

The Plan is made actionable through the coordinated efforts of engaged stakeholders. DPH, DMMA, and SBO serve as lead stakeholders and work alongside partner stakeholders (Table 8) to implement diabetes activities and resources across Delaware.

**Table 8. Delaware Diabetes Plan Partner Stakeholders, 2023**

Delaware Diabetes Plan Partner Stakeholders, 2023	
• Administration for Community Living	• DHSS Division of State Service Centers
• AbleTo, Inc.	• Easter Seals
• Aetna	• EyeMed
• American Diabetes Association	• Faith-based organizations
• Centers for Disease Control and Prevention (CDC)	• Federally Qualified Health Centers (FQHCs)
• CHEER Foundation	• Greater Philadelphia Business Coalition on Health
• ComPsych® Guidance Resources®	• Highmark Delaware
• CVS	• Livongo®
• Delaware Aging Network	• Medicaid Managed Care Organizations (MCOs)
• Delaware Department of Corrections	• Million Hearts®
• Delaware Department of Education	• National Association of Chronic Disease Directors
• Delaware Department of Health and Social Services (DHSS) Aging and Disability Resource Center	• National Council on Aging
• Delaware Department of Labor, Division of Vocational Rehabilitation	• Quality Insights
• Delaware Diabetes Coalition	• Rent-assisted senior housing facilities
• Delaware hospital systems	• RespondDE
• Delaware Hypertension Control Network	• Rite-Aid
• Delaware Pharmacists Society	• Self-Management Resource Center
• Delaware providers	• Solera®
• Delaware State Police	• University of Delaware
• DHSS Division for the Visually Impaired	• Walgreens
• DHSS Division of Aging and Adults with Physical Disabilities	• YMCA of Delaware

Source: Delaware Department of Health and Social Services, Division of Public Health, Diabetes and Heart Disease Prevention and Control Program and Division of Medicaid & Medical Assistance; and Delaware Department of Human Resources, Statewide Benefits Office, 2023

## Activities

DPH, DMMA, and SBO tailor diabetes resources and activities to meet the needs of their target populations. DPH coordinates a population-based diabetes prevention and education approach designed to reach all Delawareans, while DMMA and SBO work directly with health plans to empower members to adopt proactive healthy attitudes and effectively manage chronic conditions. The agencies also work with each other to extend programmatic reach and amplify the impact of diabetes resources and activities statewide. The following sections outline the core diabetes activities by agency.

### DPH Diabetes Activities

Within DPH, DHDPCC and the Chronic Disease Prevention Bureau (CDPB) manage a range of activities that address diabetes at the population level. For 2021-2022, these activities were categorized into nine core functions (Table 9) that support the Delaware Diabetes Plan’s short-term, intermediate, and long-term goals.

**Table 9. Nine Core Functions for Diabetes Activities, Delaware Department of Health and Social Services, Division of Public Health, 2021-2022**

Delaware Department of Health and Social Services, Division of Public Health Diabetes Activities, 2021-2022
1. Develop impactful media campaigns to communicate the signs and symptoms of diabetes and promote healthy lifestyle choices.
2. Connect Delaware adults with prediabetes and diabetes to services (including Healthydelaware.org and the Delaware Diabetes Coalition).
3. Manage the Self-Management Resource Center’s Diabetes Self-Management Program.
4. Partner with employers to expand the National Diabetes Prevention Program (National DPP) and Diabetes Self-Management Education and Support (DSMES) as covered benefits for public and private sector employees.
5. Partner with providers to implement practice transformation activities to improve health outcomes for adults with prediabetes and diabetes.
6. Optimize health care practices’ Electronic Health Record capabilities to promote the adoption of diabetes clinical care workflows.
7. Facilitate professional education opportunities for providers, diabetes educators, and care team members.
8. Partner with pharmacists to improve medication adherence among adults with diabetes, hypertension, and/or high cholesterol.
9. Ensure access to the Emergency Medical Diabetes Fund for high-risk adults with diabetes who do not have medical insurance or whose medical insurance does not cover diabetes medications, testing supplies, or other diabetes services.

Source: Delaware Department of Health and Social Services, Division of Public Health, Diabetes and Heart Disease Prevention and Control Program, 2023

DPH's nine core functions for diabetes activities in 2021-2022 are described here:

- 1. Develop impactful media campaigns to communicate the signs and symptoms of diabetes and promote healthy lifestyle choices.** Media campaigns incorporate social marketing research, and message saturation is greater in identified priority areas. Spanish language translations reach Hispanic Delawareans. Media campaigns use broad media channels (e.g., television and targeted video streaming ads) as well as small-scale media channels (e.g., employer pamphlets).
- 2. Connect Delaware adults with prediabetes and diabetes services (including Healthydelaware.org and the Delaware Diabetes Coalition).** Through Healthydelaware.org, adults learn how to access the National Diabetes Prevention Program (National DPP), Diabetes Self-Management Education and Support (DSMES), and the six-week Diabetes Self-Management Program (DSMP). The Diabetes and Heart Disease Prevention and Control Program (DHDPCP) also supports the Delaware Diabetes Coalition (DDC), a statewide nonprofit organization comprised of a network of health care organizations. DHDPCP assists the DDC in hosting the annual Delaware Diabetes Wellness Expo, a free, public event held annually that attracts between 250 and 400 Delawareans.
- 3. Manage the Self-Management Resource Center's Diabetes Self-Management Program (DSMP).** The Chronic Disease Prevention Bureau (CDPB) within DPH manages the Delaware Self-Management Resource Center's Diabetes Self-Management Program (DSMP), a six-week program developed by Stanford University to help people with diabetes manage their physical, mental, and emotional health. Workshop topics include team-based health care strategies, healthy meal planning, appropriate medication use, and self-monitoring of blood glucose and blood pressure [20]. DSMP curricula is delivered across six 2.5-hour sessions that take place virtually or in community settings. Participants attend sessions in groups of eight to 16, and two lay-trained leaders facilitate content using standardized program manuals; at least one lay-trained leader is living with diabetes.
- 4. Partner with employers to expand the National DPP and DSMES as covered benefits for public and private sector employees.** DHDPCP works directly with employers to expand the National DPP and DSMES as covered benefits for employees enrolled in health plans. Worksite wellness initiatives identify employees at high risk for prediabetes, diabetes, and/or hypertension; equip employees with self-monitoring skills; and connect employees to evidence-based National DPP and DSMES.

5. **Partner with Delaware providers to implement practice transformation activities to improve health outcomes for adults with prediabetes and diabetes.** Practice transformation is an evidence-based process that supports providers as they develop strategies to optimize practice efficiencies and improve patient outcomes [21]. The DHDPCP works with over 292 provider practices in Delaware that collectively provide care to more than 300,000 patients.

Practice transformation activities related to diabetes include the following:

- a. Support providers' routine reporting of National Quality Forum (NQF) measure 0059 (NQF0059), a metric that captures the percentage of patients ages 18-75 with diabetes whose most recent A1C level is greater than 9%
- b. Distribute electronically to providers a Care Teams Educational Module to reinforce the importance of team-based care for patients with prediabetes, diabetes, hypertension, and elevated cholesterol
- c. Implement practice outreach efforts such as patient text messaging and patient portal notifications that alert patients to upcoming opportunities to participate in the National DPP and DSMES
- d. Develop practice-level workflows to empower at-risk patients to self-monitor their blood pressure and report readings through a secure patient portal.

6. **Optimize health care practices' Electronic Health Record (EHR) capabilities to promote the adoption of diabetes clinical care workflows.** Sophisticated EHRs offer opportunities to capture diabetes quality care metrics, personalize treatment goals, and manage clinical actions for patients with diabetes [22]. The DHDPCP works directly with practices' EHR vendors to accomplish the following:

- a. Establish a dashboard portal to provide practices with real-time data about the number of patients with prediabetes, diabetes, hypertension, and elevated cholesterol who take medication as prescribed
- b. Create patient access portals for patients to directly enter at-home blood pressure monitoring data
- c. Identify lists of patients eligible for the National DPP and DSMES.

7. **Facilitate professional education opportunities for providers, diabetes educators, and care team members.** Through professional education events, DHDPCP presents the latest diabetes research to providers, diabetes educators, and care team members in a condensed format. As one example, the DHDPCP supports an initiative between DPH, the Delaware Diabetes Coalition, and the Delaware Department of Education to meet the needs of school nurses and other allied health professionals who provide care to children with diabetes.

8. **Partner with pharmacists to improve medication adherence among adults with diabetes.** DHDPCCP offers licensed pharmacists the opportunity to complete the Medication Therapy Management Services Certificate Training Program and the Patient-Centered Diabetes Care Program. Training includes case studies and hands-on skill training related to evaluating drug therapy regimens for patients with diabetes, counseling patients on lifestyle interventions, and analyzing results of self-monitored blood glucose levels. Integrating pharmacists into the care team model increases accessible support for adults with prediabetes and diabetes.
  
9. **Ensure access to the Emergency Medical Diabetes Fund (EMDF) for high-risk adults with diabetes who do not have medical insurance or whose medical insurance does not cover diabetes medications, testing supplies, or other diabetes services.** Delaware's EMDF is managed by the DHDPCCP and administered by staff in the Delaware State Service Centers. The EMDF provides Delawareans in emergency need with prediabetes and diabetes services, medications, testing supplies, and funds for non-reimbursable items directly related to prediabetes or diabetes management.

### **DMMA Diabetes Activities and Medicaid MCO Member Resources**

DMMA contracts with Medicaid Managed Care Organizations (MCOs) to provide diabetes resources to covered members. Resources focus on diabetes prevention, education, and access to clinical care (Table 10).

**Table 10. Delaware Department of Health and Social Services, Division of Medicaid & Medical Assistance, Diabetes Activities and Resources Available to Medicaid Managed Care Organizations, 2023**

<b>Delaware Department of Health and Social Services, Division of Medicaid &amp; Medical Assistance, Diabetes Activities</b>
<ul style="list-style-type: none"> <li>• Monitor Healthcare Effectiveness Data and Information Set measures, standardized performance measures that provide information on dimensions of clinical care and service.</li> </ul>
<ul style="list-style-type: none"> <li>• Partner with the Diabetes and Heart Disease Prevention and Control Program to promote member enrollment in the National Diabetes Prevention Program, Diabetes Self-Management Education and Support, and the Diabetes Self-Management Program.</li> </ul>
<ul style="list-style-type: none"> <li>• Participate in the annual Delaware Diabetes Wellness Expo.</li> </ul>
<ul style="list-style-type: none"> <li>• Partner with Medicaid Managed Care Organizations and Medicaid-approved Accountable Care Organizations to promote diabetes awareness, self-management, and compliance with Diabetes Care Schedule recommendations.</li> </ul>
<b>Medicaid Managed Care Organization Resources</b>
<ul style="list-style-type: none"> <li>• National Diabetes Prevention Program</li> </ul>
<ul style="list-style-type: none"> <li>• Diabetes Self-Management Program</li> </ul>
<ul style="list-style-type: none"> <li>• Member incentives for timely A1C testing</li> </ul>
<ul style="list-style-type: none"> <li>• Home glucose monitoring kits mailed to members with A1C &gt; 8%</li> </ul>
<ul style="list-style-type: none"> <li>• Wellness Center with in-person exercise classes</li> </ul>
<ul style="list-style-type: none"> <li>• LEAN Program (Lifelong Essentials for Activity and Nutrition) with YMCA of Delaware</li> </ul>
<ul style="list-style-type: none"> <li>• Two-way text messaging for member access to Medicaid Managed Care Organizations' Care Coordination services</li> </ul>
<ul style="list-style-type: none"> <li>• Food as Medicine Program for Diamond State Health Plan members recently discharged from the hospital, with specific diagnoses (including diabetes)</li> </ul>
<ul style="list-style-type: none"> <li>• Outreach to members with gaps in care related to A1C screening and appointment scheduling</li> </ul>
<ul style="list-style-type: none"> <li>• Educational newsletters highlighting advances in diabetes prevention and clinical care</li> </ul>
<ul style="list-style-type: none"> <li>• Performance Improvement Projects that focus on targeted outreach to members with a dual diagnosis of diabetes and schizoaffective disorder. Outreach includes education on diabetes self-management and assistance with appointment scheduling.</li> </ul>
<ul style="list-style-type: none"> <li>• Community Resource Registry that provides online and local, in-person access to health and wellness resources</li> </ul>

Source: Delaware Department of Health and Social Services, Division of Medicaid & Medical Assistance, 2023

## **SBO Diabetes Activities and GHIP Member Resources**

The Statewide Benefits Office (SBO) contracts with health plan vendors (Highmark Delaware and Aetna) to offer diabetes resources to Group Health Insurance Plan (GHIP) members, many of which are available at no cost. Many resources focus directly on diabetes prevention and management while others indirectly target diabetes through overall health and wellness promotion (Table 11).

**Table 11. Delaware Department of Human Resources, Statewide Benefits Office Diabetes Activities and Resources Available to Group Health Insurance Plan non-Medicare Members, by Plan, 2023**

Statewide Benefits Office Diabetes Activities	
<ul style="list-style-type: none"> <li>• Monitor Healthcare Effectiveness Data and Information Set measures, standardized performance measures that provide information on dimensions of clinical care and service.</li> </ul>	
<ul style="list-style-type: none"> <li>• Partner with the Diabetes and Heart Disease Prevention and Control Program to promote member enrollment in the National Diabetes Prevention Program, Diabetes Self-Management Education and Support, and the Diabetes Self-Management Program.</li> </ul>	
<ul style="list-style-type: none"> <li>• Participate in the Delaware National Diabetes Prevention Program State Engagement and Pillar Meetings coordinated by the Delaware Division of Public Health.</li> </ul>	
<ul style="list-style-type: none"> <li>• Partner with health plan vendors to promote diabetes awareness, self-management, and compliance with care recommendations.</li> </ul>	
Resources Available to Group Health Insurance Plan non-Medicare Members, by Plan	
Highmark Delaware	Aetna
<ul style="list-style-type: none"> <li>• National Diabetes Prevention Program (National DPP)*</li> </ul>	<ul style="list-style-type: none"> <li>• National Diabetes Prevention Program (National DPP)*</li> </ul>
<ul style="list-style-type: none"> <li>• Diabetic Medication &amp; Supplies Program (as part of the CVS Caremark Prescription Plan)*</li> </ul>	<ul style="list-style-type: none"> <li>• Diabetic Medication &amp; Supplies Program (as part of the CVS Caremark Prescription Plan)*</li> </ul>
<ul style="list-style-type: none"> <li>• Diabetic education</li> </ul>	<ul style="list-style-type: none"> <li>• Diabetic education</li> </ul>
<ul style="list-style-type: none"> <li>• 24/7 Informed Health Line*</li> </ul>	<ul style="list-style-type: none"> <li>• 24/7 Informed Health Line*</li> </ul>
<ul style="list-style-type: none"> <li>• Nutritional counseling</li> </ul>	<ul style="list-style-type: none"> <li>• Nutritional counseling</li> </ul>
<ul style="list-style-type: none"> <li>• Member website*</li> </ul>	<ul style="list-style-type: none"> <li>• Member website*</li> </ul>
<ul style="list-style-type: none"> <li>• Livongo® Diabetes Monitoring Program*</li> </ul>	<ul style="list-style-type: none"> <li>• Transform Diabetes Care® Program*</li> </ul>
<ul style="list-style-type: none"> <li>• Custom Care Management Unit*</li> </ul>	<ul style="list-style-type: none"> <li>• Aetna One Advisor*</li> </ul>
<ul style="list-style-type: none"> <li>• Wellness discounts*</li> </ul>	<ul style="list-style-type: none"> <li>• Wellness discounts*</li> </ul>
<ul style="list-style-type: none"> <li>• Employee Assistance Program (administered by ComPsych®GuidanceResources®)*</li> </ul>	<ul style="list-style-type: none"> <li>• Employee Assistance Program (administered by ComPsych®GuidanceResources®)*</li> </ul>
	<ul style="list-style-type: none"> <li>• Able To, Inc. *</li> </ul>

\*Available at no cost to members.

Notes: Group Health Insurance Plan members enrolled in the State Vision Plan administered by EyeMed also have access to the Diabetic Eye Care Benefit.

Source: Delaware Department of Human Resources, Statewide Benefits Office, 2023



- **National Diabetes Prevention Program (National DPP) (Highmark and Aetna):** The National DPP is available to employees, spouses, dependent children, and early retirees (non-Medicare) with prediabetes or elevated diabetes risk and who meet eligibility criteria. Highmark Delaware members access the National DPP through Livongo® National DPP or the YMCA. Aetna members access National DPP services through Solera or the YMCA. Depending on members' specific health plan, GHIP members can choose to participate in the National DPP in person or virtually.
- **Diabetic Medications & Supplies Savings Program (as part of the CVS Caremark Prescription Plan) (Highmark and Aetna):** Under the State of Delaware prescription plan administered by CVS Caremark, diabetes supplies (including lancets, test strips, and syringes/needles) are provided at no cost when the prescription is filled at a retail participating pharmacy or via mail-order-based CVS Caremark Home Delivery. Multiple diabetes medications may be obtained for just one copay when the prescriptions are filled at the same time at a 90-day participating pharmacy or the mail-order-based CVS Caremark Pharmacy.
- **Diabetic Education (Highmark and Aetna):** Diabetic education provides members with skills and knowledge related to diabetes management including foot care, daily glucose monitoring, medication management, and nutrition counseling. Diabetic education is performed in individual or group settings and is facilitated by physicians or Certified Diabetes Care and Education Specialists (CDCES), health care professionals who specialize in teaching people with diabetes to develop the necessary skills and knowledge to manage their chronic condition.
- **24/7 Informed Health Lines (Highmark and Aetna):** Members have continuous access to 24/7 Informed Health Lines staffed by Registered Nurses (RNs). RNs answer members' health questions and provide medical guidance on specific health conditions, including diabetes.
- **Nutritional Counseling (Highmark and Aetna):** Nutritional counseling is available to members with eligible diagnoses, including diabetes, malnutrition, eating disorders, and cardiovascular disease. Nutritional counseling services are also advised for members at nutritional risk due to nutritional history, current dietary intake, medication use, or chronic illness.
- **Member Websites (Highmark and Aetna):** Through Highmarkbcbsde.com and Aetna.com, members can access discounts on gym memberships, health and wellness products and services, weight loss programs, and alternative health services. Member websites also include an extensive library of articles, recipes, and videos created to inspire members to live happier, healthier lives.
- **Livongo® Diabetes Monitoring Program (Highmark):** Livongo® is a free diabetes monitoring program available to employees, pensioners, and their covered spouses and dependent children living with diabetes. Livongo® Expert Coaches are available

24/7 to answer diabetes questions and provide real-time acute interventions, and participating members are provided test strips at no cost. Through Livongo®, diabetes management information can be shared with members' primary care providers, enhancing team-based care.

- **Transform Diabetes Care® Program (Aetna):** Launched July 1, 2022, this 12-month program provides customized diabetes guidance based on members' specific needs. Participants receive reminders about medication refills, doctor appointments, preventive screenings, and nutrition plans. Through an app, participants monitor glucose and blood pressure, track and share readings, and more. Additional support is available through CDCES.
- **Customer Care Management Unit (CCMU) (Highmark):** Dedicated Customer Care Management Unit (CCMU) Advocates serve as members' one-call resource for health care services and health plan coverage. CCMU Advocates create tailored care plans, ensure members receive appropriate diabetes services, connect members with diabetes management resources, and assist with scheduling appointments. When appropriate, CCMU Advocates connect members with an RN or health coach who serves as a point of accountability for ongoing health management and improvement. RNs and health coaches can connect with members' providers to promote team-based care.
- **Aetna One Advisor (Aetna):** Launched July 1, 2022, Aetna One Advisor provides a support team to members to assist with managing their health conditions, coordinating care, and meeting health goals. The support team includes social workers, behavioral health specialists, dietitians, pharmacists, and nurses.
- **Wellness Discounts (Highmark and Aetna):** Members save on gym memberships, eyeglasses and contacts, weight loss programs and meal plans, massage therapy and more with the discount programs and services offered through Highmark and Aetna.
- **Employee Assistance Program (administered by ComPsych®GuidanceResources®) (Highmark and Aetna):** Members are provided confidential access to the State of Delaware's Employee Assistance Program (EAP) administered by ComPsych®GuidanceResources®. Through the EAP, members receive confidential emotional support from highly trained clinicians for issues including anxiety, depression, stress, grief, and relationship or marital conflicts. Members also have access to online support, webinars, interactive digital tools, work-life solutions (including finding child and elder care), legal and financial consultation, and more.

- **AbleTo, Inc. (Aetna):** AbleTo, Inc. is a national outpatient provider group that specializes in behavioral health support. Through AbleTo, members identified as having certain medical conditions such as diabetes can access virtual therapy programs, motivational and behavioral coaching, and customized treatment plans.
- **Diabetic Eye Care Benefit (available to members enrolled in the EyeMed State Vision Plan):** Eligible members with type 1 or type 2 diabetes can obtain a vision evaluation every six months, up to two times per benefit year, to monitor for signs of eye-related diabetes complications. Eligible members may also qualify for retinal imaging, extended ophthalmoscopy, gonioscopy, or laser scanning.

## Chapter 6: Funding for Diabetes Activities

DPH, DMMA, and SBO use different funding arrangements to deliver diabetes resources and activities to their target populations. DPH receives federal and state funding to implement activities to reduce the impact of diabetes, hypertension, and shared chronic disease risk factors for all Delawareans. In FY22, the DHDCPCP received \$2.36 million in funding to support statewide diabetes programming activities (Table 12). The federal CDC 1815 grant provided 80% of this funding to carry out work to prevent and manage diabetes, heart disease, and stroke, especially in high-risk populations for five years (2018-2023). In FY22, the DHDCPCP also received \$267,400 from the Delaware Health Fund and \$200,000 from the National Association of Chronic Disease Directors to help offset the cost of diabetes programming in Delaware.

**Table 12: Division of Public Health, Diabetes and Heart Disease Prevention and Control Program (DHDCPCP) Funding Sources and Amounts, Delaware, Fiscal Year (FY) 2022**

Funding Source	Funding Type	Amount Funded
Delaware Health Fund	State	\$267,400
CDC 1815 Grant (Diabetes and Heart Disease)	Federal	\$1,888,596
National Association of Chronic Disease Directors	Federal	\$200,000
Total FY22 DHDCPCP Funding		\$2,355,996

Source: Delaware Department of Health and Social Services, Division of Public Health, 2023

Rather than allocate specific funds for diabetes programming, DMMA and SBO include the cost of disease management resources and activities in health plan vendor contracts. Disease management program fees are not specific to diabetes; they reflect the cost of vendor programming and activities aimed at helping enrolled members prevent and manage all chronic conditions.

Using funds from the State of Delaware Group Health Fund, SBO pays health plan vendors approximately \$500,000 per month in disease management program fees for all members across all plans. Vendors submit monthly administration invoices. The billed amount fluctuates monthly based on the number of enrolled members. For FY22, disease management program fees varied by vendor and plan and ranged from \$1.66 to \$9.25 per member per month.

A critical component of disease management programming for GHIP enrollees is access to the National DPP, the CDC-recognized diabetes prevention program for enrollees at high-risk for diabetes. Health plans invoice SBO for National DPP fees separate from disease management program fees. The maximum total cost per National DPP participant ranges from \$555.00 to \$695.00.

## Chapter 7: Celebrating Achievements and Looking Ahead

### Recent Achievements

From creating public health campaigns with statewide reach to providing targeted diabetes resources to meet the needs of enrolled members impacted by the disease, DPH, DMMA, and SBO are making strides to reduce the burden of diabetes in Delaware. The agencies are pleased to share a curated selection of achievements that have taken place since the 2021 biennial report (Table 13).

**Table 13. Selected Achievements by Agency, Division of Public Health, Division of Medicaid & Medical Assistance, and the Statewide Benefits Office, Delaware, 2021-2022**

Agency	Achievement
Division of Public Health	<ul style="list-style-type: none"> <li>Piloted an Electronic Health Record referral letter campaign resulting in over 1,400 patients with diabetes receiving letters, text messages, and/or portal messages about the availability of Diabetes Self-Management Education and Support programs.</li> </ul>
	<ul style="list-style-type: none"> <li>Partnered with one health system Emergency Department to add educational information to summary of care discharge documents for patients with diabetes.</li> </ul>
	<ul style="list-style-type: none"> <li>Partnered with two Delaware Managed Care Organizations to provide health coaching services to identified high-risk members.</li> </ul>
	<ul style="list-style-type: none"> <li>Hosted a <i>Prediabetes: Screen, Test, and Refer</i> webinar as a professional development opportunity to Delaware providers. More than 75 providers attended; 43 attendees submitted for Continuing Medical Education/Continuing Education Unit credits.</li> </ul>
	<ul style="list-style-type: none"> <li>Provided clinical training in cardiovascular disease and hypertension control to 15 pharmacists.</li> </ul>
	<ul style="list-style-type: none"> <li>Partnered with the Statewide Benefits Office to develop and implement a marketing campaign for the National Diabetes Prevention Program as a covered benefit for members.</li> </ul>
	<ul style="list-style-type: none"> <li>Developed and shared a standardized Diabetes Self-Management Education and Support referral pathway document with 30 independent pharmacies.</li> </ul>

Source: Delaware Department of Health and Social Services, Division of Public Health, Diabetes and Heart Disease Prevention and Control Program and Division of Medicaid & Medical Assistance; and Delaware Department of Human Resources, Statewide Benefits Office, 2023

**Table 13, Continued. Selected Achievements by Agency, Division of Public Health, Division of Medicaid & Medical Assistance, and the Statewide Benefits Office, Delaware, 2021-2022**

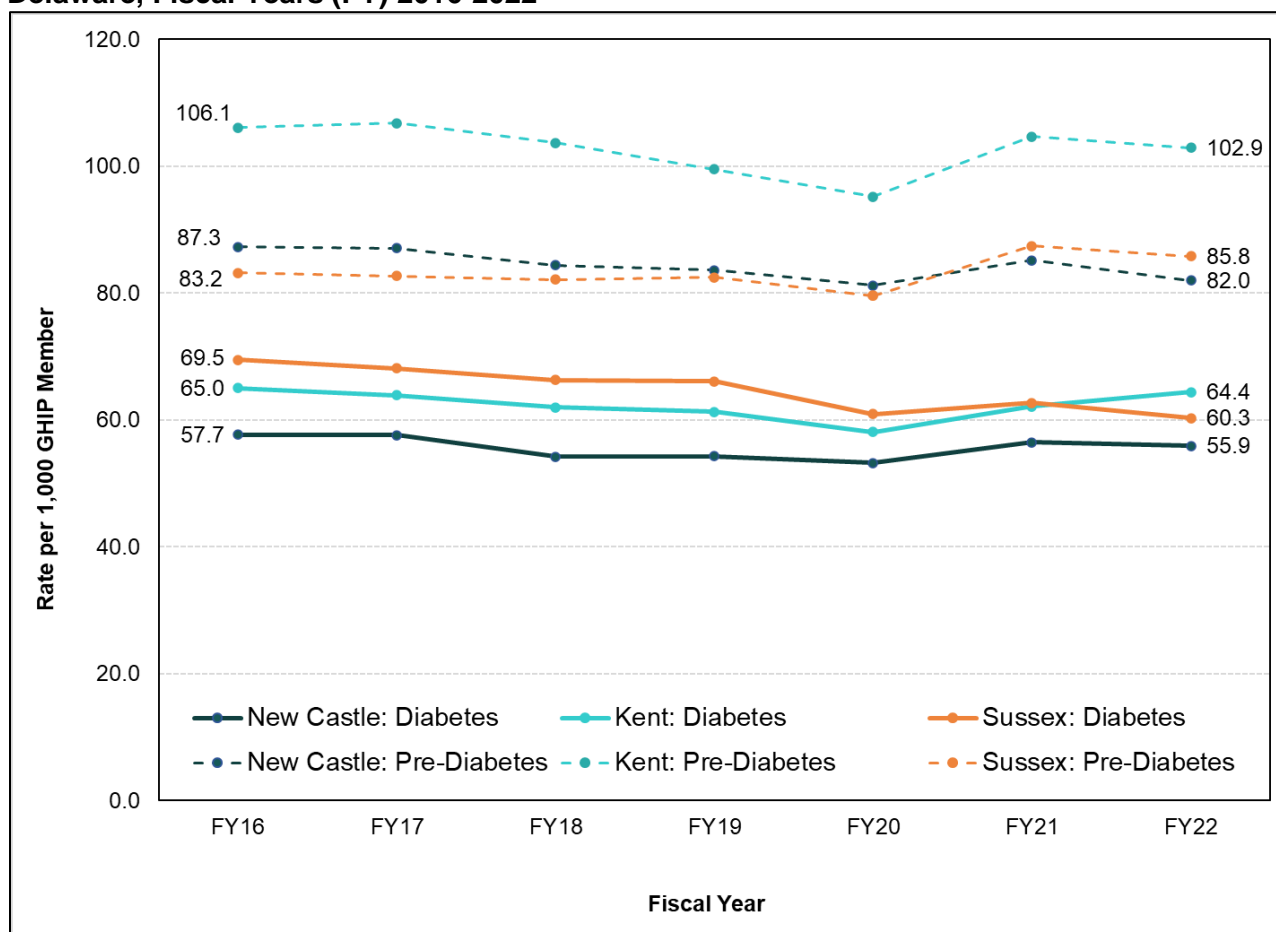
Division of Public Health	<ul style="list-style-type: none"> <li>Implemented the Healthy Heart Ambassador-Blood Pressure Self-Monitoring (HHA-BPSM) Program in June 2021. To date, Delaware has a total of 55 HHA-BPSM program facilitators. Since inception, the HHA-BPSM has received over 260 referrals, and 138 Delaware adults have completed the four-month program.</li> </ul>
	<ul style="list-style-type: none"> <li>Hosted virtual Nutrition Education in collaboration with the University of Delaware. Program facilitators completed a total of 63 nutrition coaching sessions.</li> </ul>
	<ul style="list-style-type: none"> <li>Successfully recruited four new employers to begin offering the National DPP as a covered benefit for 2021-2022.</li> </ul>
	<ul style="list-style-type: none"> <li>Developed and implemented a culturally relevant media campaign aimed at reaching populations at high-risk for diabetes, including Black and Hispanic males.</li> </ul>
Division of Medicaid & Medical Assistance	<ul style="list-style-type: none"> <li>Partnered with the Diabetes and Heart Disease Prevention and Control Program DHDPCCP and Medicaid Managed Care Organizations to increase member awareness of the National Diabetes Prevention Program and Diabetes Self-Management Program.</li> </ul>
Statewide Benefits Office	<ul style="list-style-type: none"> <li>Launched Transform Diabetes Care and communicated its availability to Employer Group Waiver Plan members.</li> </ul>
	<ul style="list-style-type: none"> <li>As a result of the competitive RFP process for the State's health plan Third-Party Administrators in 2022, many program enhancements around disease/care management to support members' overall health and conditions like diabetes will be implemented in FY2023.</li> </ul>
	<ul style="list-style-type: none"> <li>Communicated the availability of various diabetic services available through the health plan.</li> </ul>
	<ul style="list-style-type: none"> <li>Communicated the availability of diabetic services through the vision plan.</li> </ul>
	<ul style="list-style-type: none"> <li>Provided State agencies with benchmark and organizational specific data on key metrics related to their employee population's use of services, health risk, and condition treatment compliance.</li> </ul>
	<ul style="list-style-type: none"> <li>Collaborated with health and prescription plan administrators, the YMCA of Delaware, Livongo®, Transform Diabetes Care, and Solera to provide and promote diabetic prevention and management services to eligible members.</li> </ul>
	<ul style="list-style-type: none"> <li>Participated in the Delaware National Diabetes Prevention Program State Engagement and Pillar Meetings coordinated by the Division of Public Health.</li> </ul>
<ul style="list-style-type: none"> <li>Promoted availability of wellness events at Delaware hospitals.</li> </ul>	

## **Addressing Challenges**

DPH, DMMA, and SBO recognize two major challenges in the ongoing efforts to reduce the incidence of diabetes in Delaware: the ongoing public health impacts of the Coronavirus 2019 (COVID-19) pandemic and Delaware's shifting demographic profile.

The COVID-19 pandemic impacted every aspect of society, and it will be years before its full impact on diabetes in Delaware will be known. Nonetheless, emerging data suggest that the pandemic has erased some of the progress made by the State over the past decade. Prior to the pandemic, prediabetes and diabetes prevalence appeared to be declining among active employee and early retiree GHIP members in New Castle, Kent, and Sussex counties (Figure 10). SBO will continue to monitor prevalence rates among GHIP members to understand how the pandemic impacted prediabetes and diabetes rates among Delaware adults.

**Figure 10. Diabetes and Pre-Diabetes Prevalence Rates by County per 1,000 Active Employees and Early Retirees in the Group Health Insurance Plan (GHIP), State of Delaware, Fiscal Years (FY) 2016-2022**



Note: Includes Active Employee and Early Retiree GHIP Members; Medicare retirees excluded due to incomplete medical and prescription costs and utilization captured through available claims.

Source: Delaware Department of Human Resources, Statewide Benefits Office, 2022

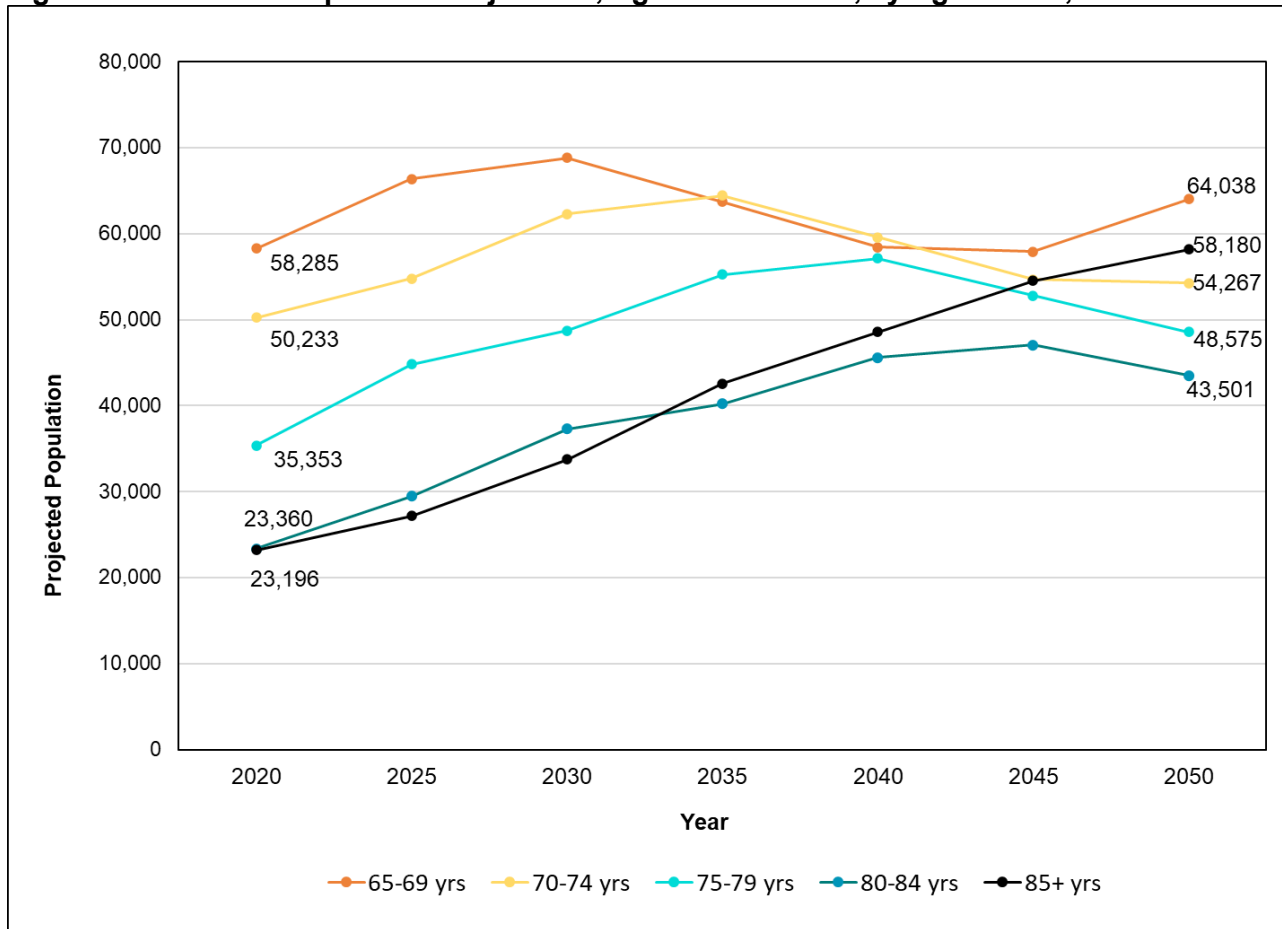
The growing size and changing demographics of Delaware’s population will also have long-term impacts on diabetes trends in the First State. Looking ahead to 2050, projected population growth is dramatic among older Delawareans, a group that is already at elevated risk for diabetes and related complications. As age increases, so does the projected rate of population growth. According to the Delaware Population Consortium, between 2020 and 2050, the number of Delawareans ages 65-69, 70-74, and 75-79 are projected to increase 9.0%, 8.0%, and 37.4% [23]. During the same three decades, the number of Delawareans ages 80-84 is projected to increase 86.2%, and the number of those ages 85+ is projected to rise 150.8% (Figure 11).

As the size of Delaware’s older population expands, a larger proportion of Delawareans will be living with diabetes. The agencies, along with partner stakeholders, are committed to evolving the Delaware Diabetes Plan to continue to reduce diabetes



incidence, increase the proportion of adults who achieve diabetes control, advance diabetes health equity, and standardize clinical care workflows.

**Figure 11. Delaware Population Projections, Ages 65 and older, by Age Cohort, 2020-2050**



Source: Annual Population Projections, Delaware Population Consortium, Version 2022.0, October 2022

## Chapter 8: Recommendations

DPH, DMMA, and SBO make seven recommendations to further reduce the number of new diabetes cases, improve health outcomes for adults living with diabetes, advance diabetes health equity, and improve clinical care while reducing health care costs.

Recommendations are evidence-based and can be implemented using two parallel approaches: (1) widespread implementation to reach all Delawareans and (2) targeted implementation to impact populations at high-risk for diabetes and related complications.

For each recommendation, the agencies provide (a) the intended outcomes of the recommendation and (b) an estimated timeline for implementing the recommendation. DHDPCCP provides (c) an estimate of the amount of annual grant funding received by external sources devoted to achieving each recommendation.

### **Recommendation 1: Continue to educate Delawareans about diabetes risk factors while encouraging healthy lifestyle behaviors.**

- **Intended Outcomes:** Increase the proportion of Delaware adults who follow healthy lifestyle recommendations, including eating a healthy diet and engaging in regular physical activity; increase the proportion of adults who are aware of diabetes risk factors, signs and symptoms; support early identification of adults with prediabetes and diabetes; improve diabetes management; improve clinical outcomes; and reduce health care costs.
- **Anticipated Timeline:** Ongoing (updates to be included in the 2025 biennial report)
- **Estimated Amount of External Grant Funding Used to Achieve the Recommendation:** \$250,000 per year

### **Recommendation 2: Increase referrals to the nationally recognized, evidence-based National Diabetes Prevention Program (National DPP) for Delawareans at high risk for diabetes.**

- **Intended Outcomes:** Increase the number of adults with prediabetes who complete the National DPP; increase the number of adults with prediabetes who achieve 5%-7% weight loss; decrease the proportion of adults with prediabetes who convert to diabetes; and reduce the incidence of diabetes in Delaware.
- **Anticipated Timeline:** Ongoing (updates to be included in the 2025 biennial report)
- **Estimated Amount of External Grant Funding Used to Achieve the Recommendation:** \$100,000 per year

### **Recommendation 3: Increase referrals to Diabetes Self-Management Education and Support (DSMES) for adults with diabetes.**

- **Intended Outcomes:** Increase the number of adults with diabetes who complete DSMES; increase the number of adults with diabetes with an A1C value less than 8%; improve self-management among adults diagnosed with diabetes; and increase the proportion of adults with diabetes who achieve diabetes control.
- **Anticipated Timeline:** Ongoing (updates to be included in the 2025 biennial report)
- **Estimated Amount of External Grant Funding Used to Achieve the Recommendation:** \$100,000 per year

### **Recommendation 4: Increase the proportion of Delaware adults who take medication as prescribed for high blood pressure and/or high cholesterol.**

- **Intended Outcomes:** Decrease the proportion of adults with prediabetes who convert to diabetes; increase the number of adults with diabetes with an A1C value less than 8%; reduce the proportion of adults with diabetes who experience cardiovascular disease, heart attack, and stroke; increase the proportion of adults with diabetes who follow evidence-based Diabetes Care Schedule tasks; and increase the proportion of adults with diabetes who achieve diabetes control.
- **Anticipated Timeline:** Ongoing (updates to be included in the 2025 biennial report)
- **Estimated Amount of External Grant Funding Used to Achieve the Recommendation:** \$100,000 per year

### **Recommendation 5: Increase the proportion of Delawareans with diabetes who follow the evidence based CDC Diabetes Care Schedule.**

- **Intended Outcomes:** Increase the number of adults with diabetes with an A1C value less than 8%; improve self-management practices among adults diagnosed with diabetes; increase the proportion of adults with diabetes who follow evidence-based Diabetes Care Schedule tasks; and increase the proportion of adults with diabetes who achieve diabetes control.
- **Anticipated Timeline:** Ongoing (updates to be included in the 2025 biennial report)
- **Estimated Amount of External Grant Funding Used to Achieve the Recommendation:** \$75,000 per year

**Recommendation 6: Leverage electronic health record capabilities to promote the adoption of organizational guidelines for the clinical care of patients with or at risk for diabetes.**

- **Intended Outcomes:** Increase the number of adults with prediabetes who are referred to the National DPP; increase the number of adults with diabetes who are referred to DSMES; increase the number of adults with high blood pressure who engage in self-blood pressure monitoring; improve identification of and outreach to high-risk populations; and standardize clinical processes to promote excellent clinical diabetes management.
- **Anticipated Timeline:** Ongoing (updates to be included in the 2025 biennial report)
- **Estimated Amount of External Grant Funding Used to Achieve the Recommendation:** \$100,000 per year

**Recommendation 7: Enhance care coordination to improve the clinical care of Delawareans with or at risk for diabetes, share resources, and reduce health care costs.**

- **Intended Outcomes:** Prevent avoidable admissions and readmissions among adults with diabetes; and improve clinical processes and reduce costs.
- **Anticipated Timeline:** Ongoing (updates to be included in the 2025 biennial report)
- **Estimated Amount of External Grant Funding Used to Achieve the Recommendation:** \$150,000 per year

## Conclusion

Taking simple steps can reduce the risk of developing diabetes. Manageable lifestyle changes, such as eating healthy foods, becoming more active, and losing a few extra pounds can lower the risk of developing diabetes, heart disease, and other chronic conditions. As the Harvard T.H. Chan School of Public Health puts it, [24]

**“The key to prevention can be boiled down to five words:  
Stay lean and stay active.”**

For adults diagnosed with diabetes, self-management is critical for achieving diabetes control, preventing disease progression, and avoiding complications. Managing the Diabetes ABCS (Table 14) lowers the chances of having a heart attack, stroke, or other diabetes complications [25]. In 2017-2018, just 26% of U.S. adults with diabetes met all four of the Diabetes ABCS care goals [25]:

**Table 14. Diabetes ABCS, Centers for Disease Control and Prevention, 2022**

Diabetes ABCS	
<b>A</b> for the A1C test	The A1C goal for people with diabetes is less than 8%.
<b>B</b> for blood pressure	The blood pressure goal for most people with diabetes is below 140/90 millimeters of mercury (mmHG).
<b>C</b> for cholesterol	The Centers for Disease Control and Prevention recommends a non-high-density lipoprotein (HDL) of less than 130 milligrams per deciliter (mg/dL).
<b>S</b> for stop smoking	Tobacco use is especially risky for people with diabetes because nicotine further increases blood sugar levels.

Source: Centers for Disease Control and Prevention, 2022

The Delaware Diabetes Plan is a roadmap for coordinating diabetes resources and activities to reduce the incidence of diabetes in Delaware, increase the proportion of adults with diabetes who achieve diabetes control, advance diabetes health equity, and improve clinical care while reducing health care costs. The agencies make seven recommendations in the continued, coordinated pursuit of a healthier population, excellent clinical care for adults living with diabetes, and reduced health care costs. With state agencies strategically coordinating available resources, the State of Delaware will help individuals with diabetes and pre-diabetes achieve measurable and sustainable progress in the fight against this chronic health condition.

## References

- [1] S. Colberg, R. Sigal, J. Yardley, M. Riddell, D. Dunstan, P. Dempsey, E. Horton, K. Castorino and D. Tate, "Physical Activity/Exercise and Diabetes: A Position Statement of the American Diabetes Association," *Diabetes Care*, vol. 39, no. 11, pp. 2065-2079, 2016.
- [2] Delaware Department of Health and Social Services, Division of Public Health, "Delaware Behavioral Risk Factor Survey (BRFS)," 2021.
- [3] American Diabetes Association , "Economic Costs of Diabetes in the U.S. in 2017," *Diabetes Care*, vol. 41, no. 5, pp. 917-928, 2018.
- [4] Delaware Population Consortium, "Annual Population Projections, Version 2022.0," Office of State Planning Coordination, 2022.
- [5] Centers for Disease Control and Prevention , "What Is Type 1 Diabetes?," 11 March 2022. [Online]. Available: <https://www.cdc.gov/diabetes/basics/what-is-type-1-diabetes.html>. [Accessed 21 February 2023].
- [6] Centers for Disease Control and Prevention, "Gestational Diabetes," 31 December 2022. [Online]. Available: <https://www.cdc.gov/diabetes/basics/gestational.html>. [Accessed 21 February 2023].
- [7] Delaware Department of Health and Social Services, Division of Public Health, "Calculated Variables in the 2019 Data File of the Behavioral Risk Factor Surveillance System," 2020.
- [8] Centers for Disease Control and Prevention, "Diabetes Risk Factors," 5 April 2022. [Online]. Available: <https://www.cdc.gov/diabetes/basics/risk-factors.html>. [Accessed 21 February 2023].
- [9] American Heart Association, "Diabetes Risk Factors," 5 May 2021. [Online]. Available: <https://www.heart.org/en/health-topics/diabetes/understand-your-risk-for-diabetes>. [Accessed 21 February 2023].
- [10] S. Kirkman, V. Briscoe, N. Clark, H. Florez, L. Haas, J. Halter, E. Huang, M. Korytkowski, M. Munshi, P. Odegard, R. Pratley and C. Swift, "Diabetes in Older Adults," *Diabetes Care*, vol. 35, no. 12, pp. 2650-2664, 2012.
- [11] Delaware Health Statistics Center, "Delaware Vital Statistics Annual Report, Mortality 2020," Delaware Department of Health and Social Services, Division of Public Health, 2023.
- [12] Cleveland Clinic, "Diabesity: How Obesity is Related to Diabetes," 8 November 2021. [Online]. Available: <https://health.clevelandclinic.org/diabesity-the-connection-between-obesity-and-diabetes/>. [Accessed 27 February 2023].
- [13] Diabetes Prevention Program Research Group, "10-year follow-up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study," *Lancet*, vol. 374, no. 9702, pp. 1677-1686, 2009.
- [14] American Diabetes Association, "Understanding A1C," 2023. [Online]. Available: <https://diabetes.org/diabetes/a1c>. [Accessed 5 April 2023].
- [15] Centers for Disease Control and Prevention, "Your Diabetes Care Schedule," 19 April 2023. [Online]. Available: <https://www.cdc.gov/diabetes/managing/care-schedule.html>. [Accessed 22 May 2023].

- [16] Centers for Disease Control and Prevention, "Monitoring Your Blood Sugar," 30 December 2022. [Online]. Available: <https://www.cdc.gov/diabetes/managing/managing-blood-sugar/bloodglucosemonitoring.html#:~:text=Regular%20blood%20sugar%20monitoring%20is,medicine%2C%20or%20being%20physically%20active..> [Accessed 8 March 2023].
- [17] M. Funnell, T. Brown, B. Childs, L. Haas, G. Hosey, B. Jensen, M. Maryniuk, M. Peyrot, J. Piette, D. Reader, L. Siminerio, K. Weinger and M. Weiss, "National standards for diabetes self-management education," *Diabetes Care*, vol. 33, no. Suppl 1, pp. S89-S96, 2010.
- [18] Centers for Disease Control and Prevention, "On Your Way to Preventing Type 2 Diabetes," 6 April 2022. [Online]. Available: <https://www.cdc.gov/diabetes/pdfs/prevent/On-your-way-to-preventing-type-2-diabetes.pdf>. [Accessed 22 May 2023].
- [19] Office of Disease Prevention and Health Promotion, "Healthy People 2030: Diabetes," U.S. Department of Health and Human Services, n.d.. [Online]. Available: <https://health.gov/healthypeople/objectives-and-data/browse-objectives/diabetes>. [Accessed 23 May 2021].
- [20] Delaware Cancer Consortium, "Healthy Delaware: Delaware Self-Management Programs," [Online]. Available: <https://www.healthyselaware.org/Individuals/Self-Management-Programs>. [Accessed 21 March 2021 ].
- [21] American Medical Association , "Practice Transformation: About Practice Transformation," [Online]. Available: <https://www.ama-assn.org/practice-management/sustainability/practice-transformation>. [Accessed 20 March 2021].
- [22] P. O'Connor, N. Bodkin, J. Fradkin, R. Glasgow, S. Greenfield, E. Gregg, E. Kerr, L. Pawlson, J. Selby, J. Sutherland, M. Taylor and C. Wysham, "Diabetes performance measure: Current status and future directions," *Diabetes Care*, vol. 34, no. 7, pp. 1651-1659, 2011.
- [23] Delaware Population Consortium, "Annual Population Projections, Version 2021.0," October 2021. [Online].
- [24] Harvard T.H. Chan School of Public Health, "Simple Steps to Preventing Diabetes," 2023. [Online]. Available: <https://www.hsph.harvard.edu/nutritionsource/disease-prevention/diabetes-prevention/preventing-diabetes-full-story/>. [Accessed 4 March 2023].
- [25] Centers for Disease Control and Prevention, "Only 1 in 4 Adults with Diagnosed Diabetes Achieve Combined Diabetes Care Goals," 2022 December 2022. [Online]. Available: <https://www.cdc.gov/diabetes/research/reports/diabetes-abcs.html>. [Accessed 7 March 2023].
- [26] National Committee for Quality Assurance , "HEDIS Measures and Technical Resources," 2023. [Online]. Available: <https://www.ncqa.org/hedis/measures/>. [Accessed 8 March 2023].

[WWW.DHSS.DELAWARE.GOV/DHSS/DPH/DPC/DIABETES.HTML](http://WWW.DHSS.DELAWARE.GOV/DHSS/DPH/DPC/DIABETES.HTML)



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