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# 2013 Diabetes Self-Management Report

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Diabetes is a serious and costly disease that affects both genders and crosses cultural, sociodemographic, and geographical boundaries. Self-care among diabetics is crucial to successful glycemic control<sup>1,2</sup>, which is essential in the reduction of diabetes-related complications, including eye<sup>3,4</sup> and kidney diseases<sup>5,6</sup>, lower extremity amputations<sup>7</sup>, and cardiovascular disease<sup>8,9</sup>.

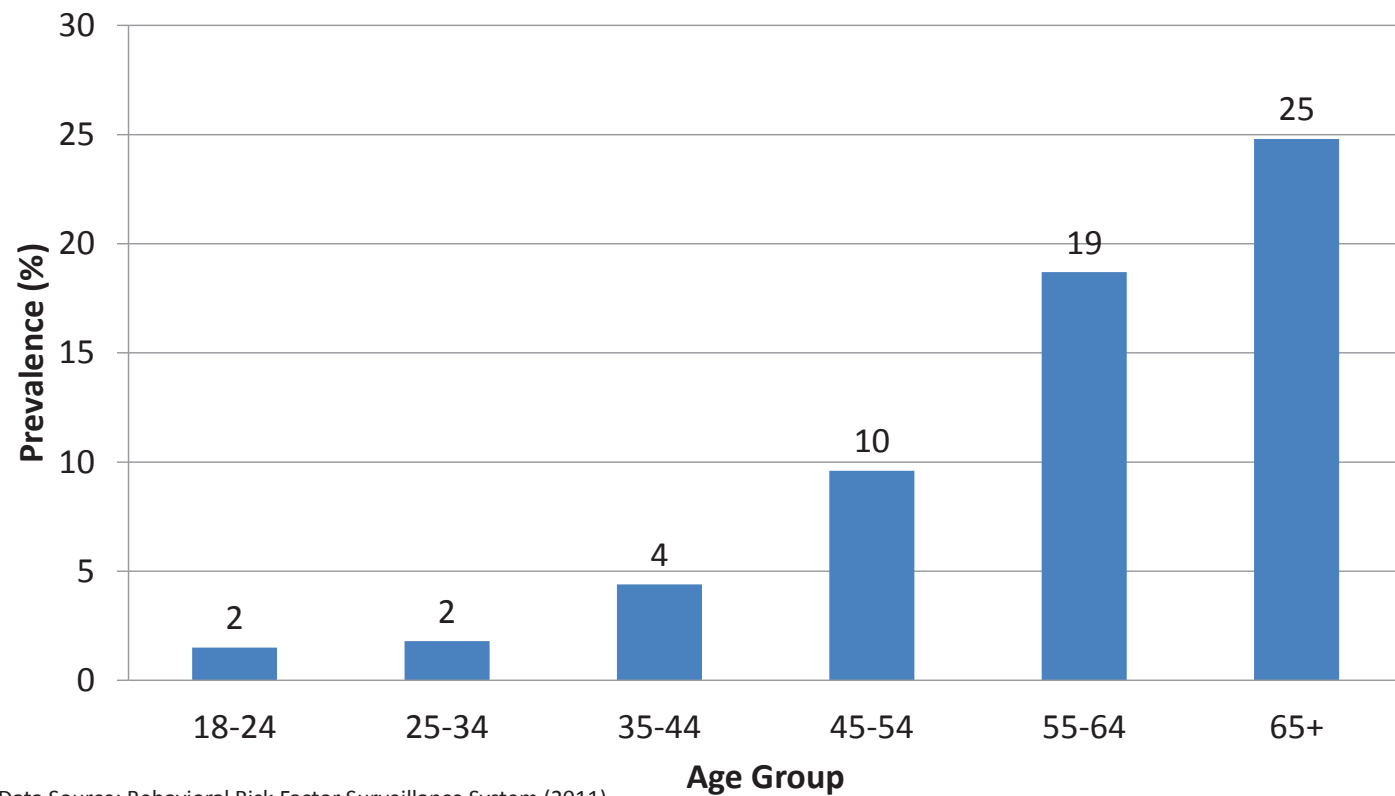






*In 2012, 25% of Georgia adults aged 65 years and older, approximately 274,000 persons, had diagnosed diabetes (Figure 1).<sup>11</sup>*

**Figure 1. Prevalence of Diabetes among Adults 18 years and older by Age Group, Georgia, 2011**





# Overview: Diabetes

Diabetes affects approximately 25.8 million people or 8.3% of the population in the United States.<sup>10</sup> In 2012, approximately 9.9%, or 734,800, Georgia adults were ever diagnosed with diabetes.<sup>11</sup>

Diabetes disproportionately affects the elderly or aging populations. In 2012, 25% of Georgia adults aged 65 years and older, approximately 274,000 persons, had diagnosed diabetes (Figure 1).<sup>11</sup> Nationally, an estimated 79% of adults diagnosed with diabetes in the preceding year were less than 65 years of age.<sup>12</sup> As a result, many older adult diabetics may have long-standing diabetes.

## The Costs of Diabetes

Nationally, as compared to patients without diabetes, hospital stays for patients diagnosed with diabetes were longer, more costly, and more likely to originate in the emergency room.<sup>13</sup>

For 2012, the total costs of diabetes in Georgia were estimated to be \$7.6 billion.<sup>14</sup> This includes \$5.5 billion of direct medical costs and \$2.2 billion in indirect costs of lost productivity due to diabetes.<sup>14</sup>





# Mortality and Morbidity

## Mortality

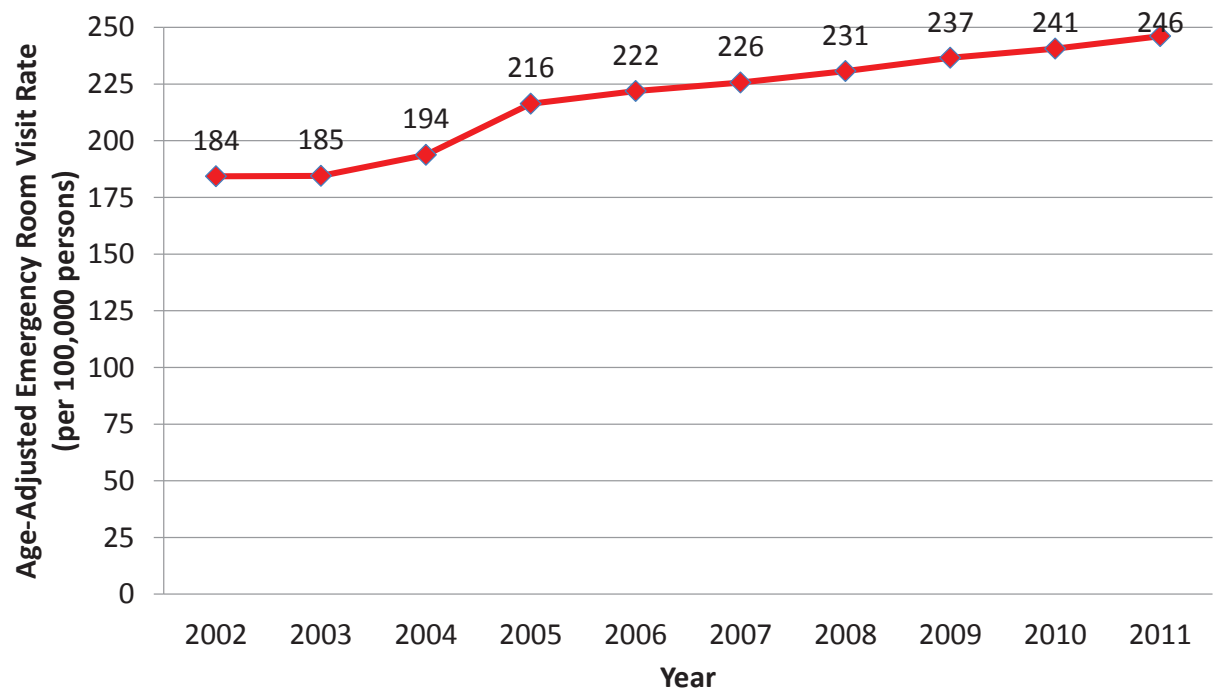
In 2010, diabetes was the 7th-leading cause of death in Georgia.<sup>15</sup> Nearly 2,000 Georgians' deaths were attributable to diabetes, resulting in an age-adjusted death rate of 23.4 per 100,000 population.<sup>15</sup>

## Morbidity

Diabetes is the leading cause of kidney failure, non-traumatic lower extremity amputations (LEAs), and new cases of blindness among adults aged 20-74 years in the United States.<sup>10</sup> The burden of diabetes impacts working-age adults, while diabetes in older adults is linked to higher mortality, reduced functional status, and increased risk of institutionalization.<sup>10</sup>

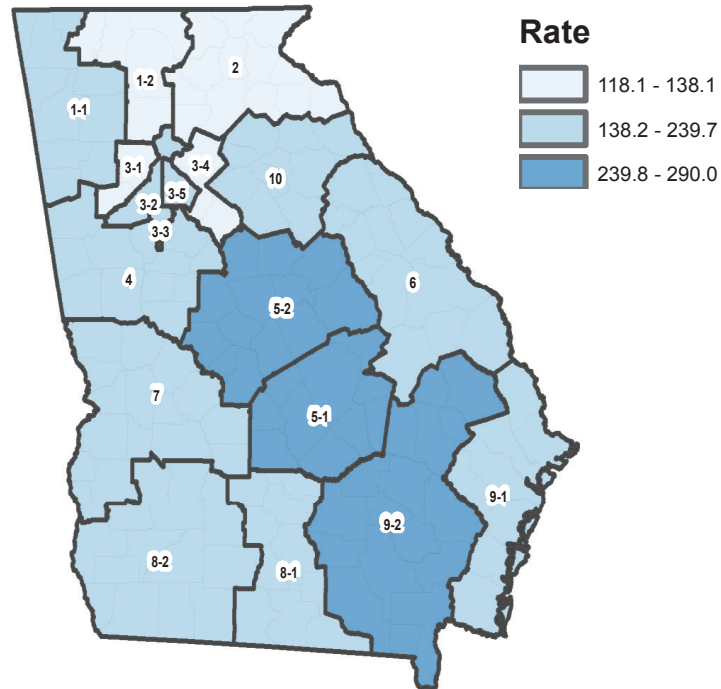
The burden of diabetes on the Georgia healthcare system continues to increase. Between 2002 and 2011, Georgia experienced a significant increase in the age-adjusted diabetes emergency room visit rate from 184.3 to 246.1 per 100,000 persons (Figure 2).<sup>16</sup>

Figure 2. Age-Adjusted Diabetes Emergency Room Visit Rate by Year, Georgia, 2002-2011



The Southern region of the United States, including Georgia, had the highest hospitalization rates for patients with diabetes.<sup>13</sup> Within Georgia, Public Health Districts 5-1 South Central (Dublin), 5-2 North Central (Macon), and 9-2 Southeast (Waycross) had the highest age-adjusted diabetes hospitalization rates at 290.0, 259.8, and 261.1 per 100,000 persons, respectively (Map 1).<sup>16</sup>

Map 1. Age-Adjusted Diabetes Hospitalization Rate per 100,000 persons by Georgia Public Health District, 2011

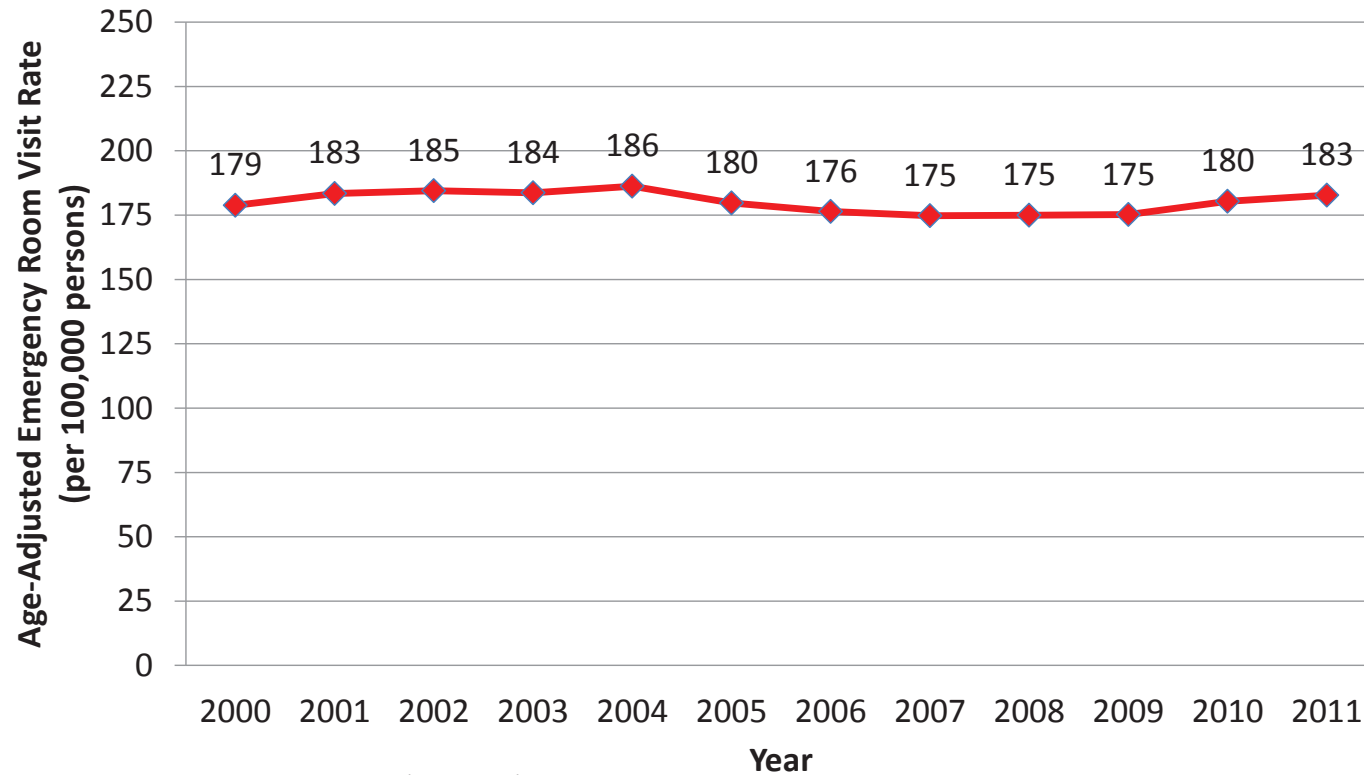


Data Source: Georgia Hospital Association (2011)



Between 2000 and 2011, the overall age-adjusted diabetes hospitalization rate in Georgia increased slightly from 178.8 to 182.8 hospitalizations per 100,000 persons (Figure 3).<sup>16</sup> In 2012, there was no significant difference by Public Health District in the prevalence of diagnosed diabetes among Georgia adults.<sup>11</sup>

**Figure 3. Age-Adjusted Diabetes Hospitalization Rate by Year, Georgia, 2000-2011**









# Diabetes-Related Complications among Older Adults

Nationally, older adults with diabetes have the highest rates of major lower-extremity amputation, visual impairment, end-stage renal (kidney) disease and heart conditions such as myocardial infarction (MI) of any age-group.<sup>17</sup> Normal aging and diabetes, and conditions such as functional and cognitive impairments that impair function are associated with a higher risk of falls and fractures. A potential cause of functional impairment in diabetes may include interaction between coexisting medical conditions, peripheral neuropathy, vision and hearing difficulty, and gait (walking) and balance problems.<sup>17</sup>

Moreover, peripheral neuropathy, present in 50–70% of older patients with diabetes, increases the risk of postural instability, balance problems, and muscle atrophy, limiting physical activity and increasing the risk of falls.<sup>17</sup> Older adults are at high risk for the development of type 2 diabetes due to the combined effects of increasing insulin resistance and other impaired functions associated with aging.<sup>17</sup>

# Diabetes Self-Management Education

As noted in the 2013 Standards of Medical Care in Diabetes, targeted and routine screening, treatment and follow-up for diabetes and prediabetes are essential factors for management or control of diabetes.<sup>18</sup>

The National Standards for DSME are designed to define quality diabetes self-management education and to assist diabetes educators in a variety of settings to provide evidence-based education to all populations.<sup>19</sup>

The overall objectives of DSME are to support medication management, routine glucose level monitoring and control, informed decision-making, self-care behaviors, problem-solving, and active collaboration with the health care team. These objectives are established to increase the routine use of preventive care services (i.e. annual comprehensive foot and annual dilated eye examinations), improve health status including clinical outcomes (including glucose control) as well as quality of life by preventing severe diabetes-related complications and disabilities.

*Diabetes self-management education (DSME) is a critical element of diabetes care and is vital to prevent or delay diabetes-related complications.*

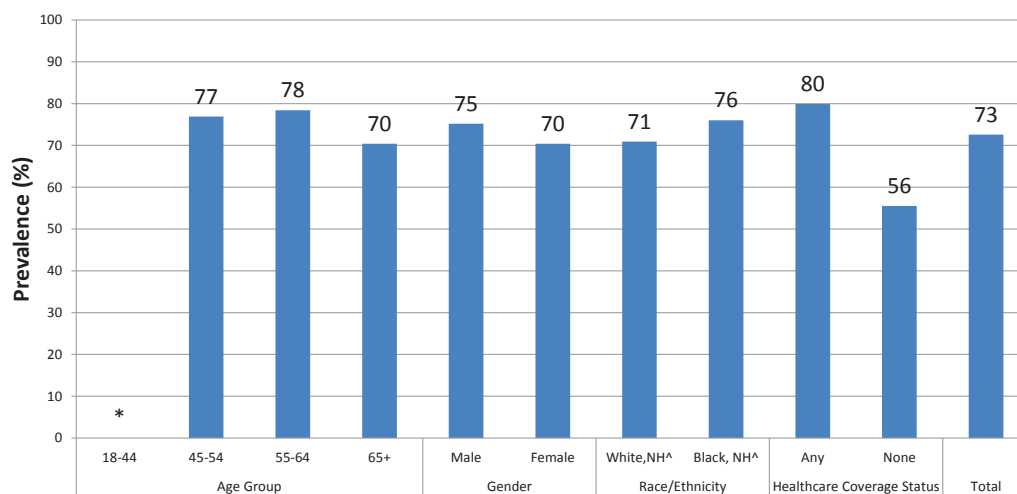


### *Annual Foot Examination*

An annual foot examination by a health professional is one example of a preventive care service. In 2012, 73% of adult Georgia diabetics received an annual foot examination by a health professional (Figure 4). Compared to adult diabetics with no healthcare coverage (56%), adult diabetics with any healthcare coverage (80%) had a significantly greater prevalence of having an annual foot examination by a health professional (Figure 4). There were no significant differences by age group, gender, or race/ethnicity.



Figure 4. Prevalence of Annual Foot Examination among Adult Diabetics by Demographic and Healthcare Coverage Status, Georgia, 2012



\*Sample Size too small to produce reliable estimates

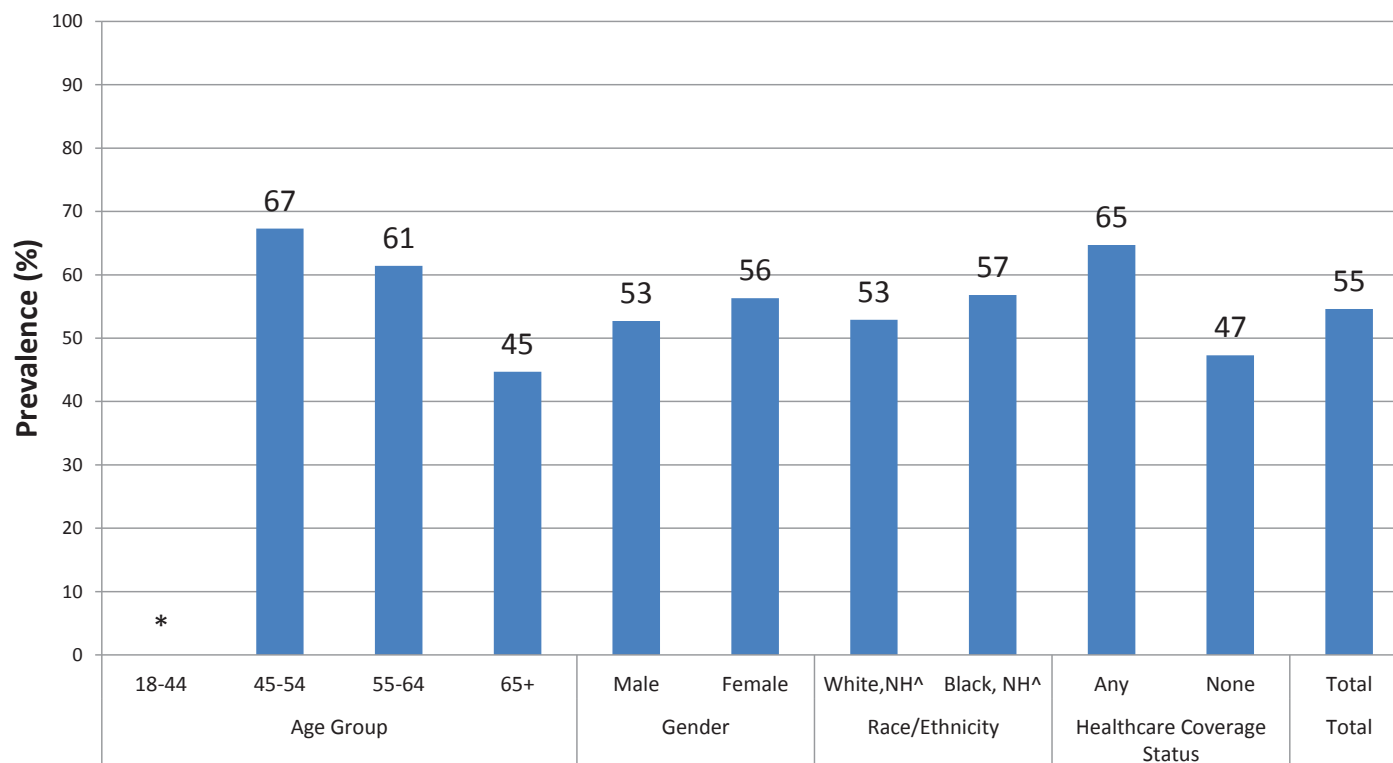
^Non-Hispanic

Data Source: Behavioral Risk Factor Surveillance System (2012)

## Formal Diabetes Education

Taking a class to manage diabetes is a critical component of DSME. In 2012, 55% of adult Georgia diabetics had ever taken a class to manage diabetes (Figure 5). Diabetics 65 years and older (45%) had a significantly lower prevalence of having taken a course to manage diabetes as compared to diabetics 45-54 years (67%) and 55-64 (61%) years of age (Figure 5). No other significant differences were observed in having received formal diabetes education by gender, race/ethnicity, or healthcare coverage status (Figure 5).

Figure 5. Prevalence of Formal Diabetes Education among Adult Diabetics by Demographic and Healthcare Coverage Status, Georgia, 2012



\*Sample Size too small to produce reliable estimates

^Non-Hispanic

Data Source: Behavioral Risk Factor Surveillance System (2012)



**Diabetes Self-Management Education Programs (DSME) can result in cost-savings and improved health outcomes.<sup>20-22</sup> It is recommended that persons with diagnosed diabetes receive DSME according to national standards and diabetes self-management support at the time their diabetes is diagnosed and as needed thereafter.**

**Providing effective diabetes education in conjunction with effective medical management has been shown to improve glycemic (glucose) control and reduce hospital admissions and other adverse diabetes-related outcomes.<sup>22</sup>**



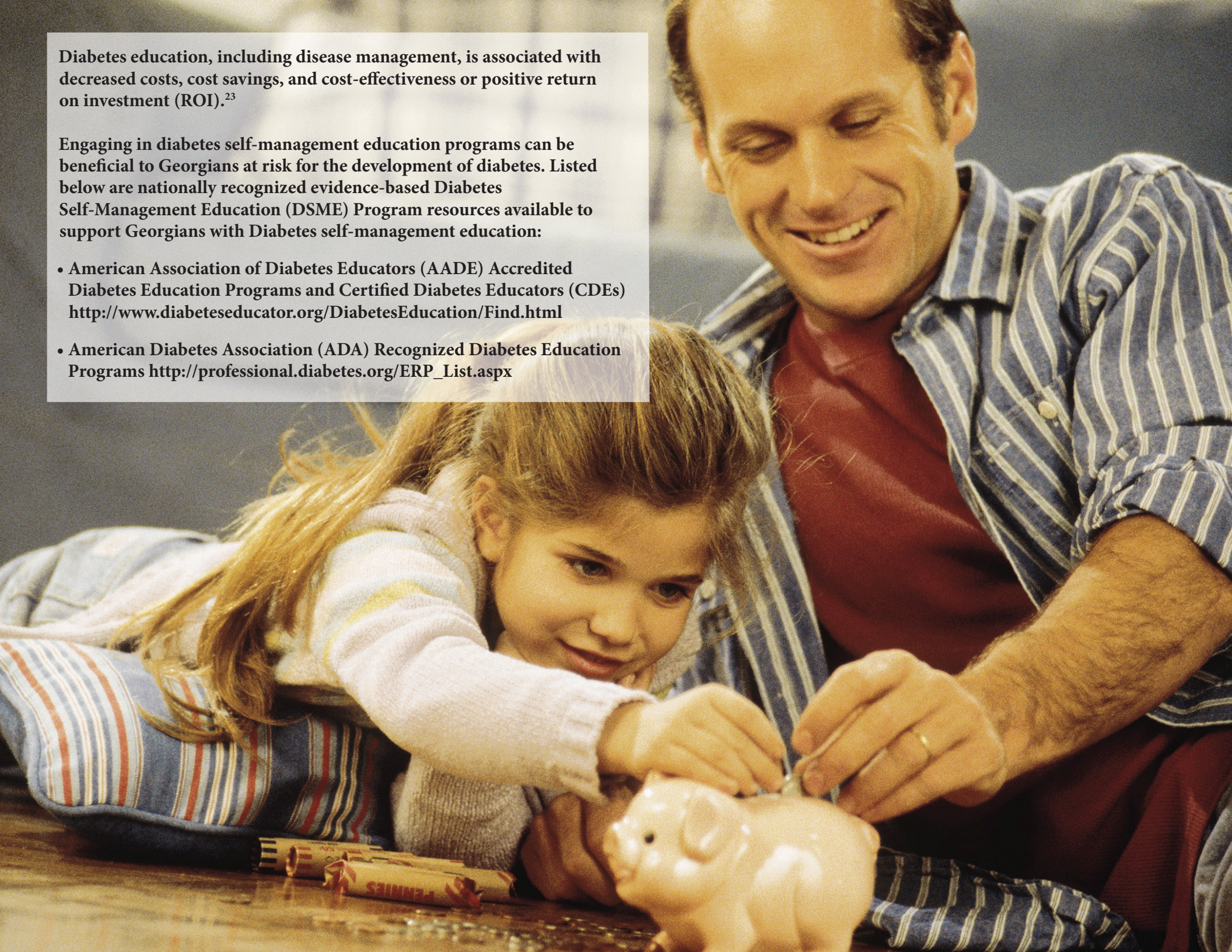
***Diabetes Self-Management Education (DSME) Programs  
are Proven and Powerful***



Diabetes education, including disease management, is associated with decreased costs, cost savings, and cost-effectiveness or positive return on investment (ROI).<sup>23</sup>

Engaging in diabetes self-management education programs can be beneficial to Georgians at risk for the development of diabetes. Listed below are nationally recognized evidence-based Diabetes Self-Management Education (DSME) Program resources available to support Georgians with Diabetes self-management education:

- American Association of Diabetes Educators (AADE) Accredited Diabetes Education Programs and Certified Diabetes Educators (CDEs) <http://www.diabeteseducator.org/DiabetesEducation/Find.html>
- American Diabetes Association (ADA) Recognized Diabetes Education Programs [http://professional.diabetes.org/ERP\\_List.aspx](http://professional.diabetes.org/ERP_List.aspx)





# Definitions

**Diabetes self-management education** is the ongoing process of facilitating the knowledge, skills, and ability necessary for prediabetes (also known as borderline diabetes) and diabetes self-care. The overall objectives of DSME are to support informed decision making, self-care behaviors, problem-solving, and active collaboration with the health care team and to improve clinical outcomes, health status, and quality of life.

**Diabetes self-management support** consists of activities that assist the person diagnosed with prediabetes or diabetes in implementing and sustaining the behaviors needed to manage his or her condition on an ongoing basis beyond or outside of formal self-management training. The type of support provided can be behavioral, educational, psychosocial, or clinical.

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