

DIABETES IS NOT OUR *destiny*

DIABETES FREE SC 2022 IMPACT REPORT

IT IS HEALTH THAT IS REAL WEALTH AND  
NOT PIECES OF GOLD AND SILVER.

Mahatma Gandhi





Diabetes Free South Carolina (DFSC) is committed to preventing diabetes, mitigating its complications and reducing health disparities across our state. The challenge is enormous: Today, more than half of all adults in South Carolina already have diabetes or prediabetes, including approximately 120,000 who are unaware.<sup>1</sup> Each year, another 26,000 South Carolinians are newly diagnosed. In addition to the personal misfortunes caused by diabetes, the condition brings enormous burdens to our state's health care systems and economy. In 2019, the total economic cost of diabetes in South Carolina was an extraordinary \$5.89 billion — more than \$11,000 every minute of every day.<sup>2</sup> These human and

financial burdens are staggering, and so are inequities related to diabetes in South Carolina. More than 16 percent of Black adults have diabetes compared to 11.3 percent of white adults,<sup>3</sup> and Black South Carolinians are more than twice as likely to die from diabetes as their white neighbors.<sup>4</sup>

Understanding that defeating diabetes will take many years, DFSC is a long-term initiative, supported by the BlueCross BlueShield of South Carolina Foundation, with carefully defined strategic directions and guiding principles that include rigorous checks for program effectiveness.



# STRATEGIC DIRECTIONS

Driven by a commitment to address the statewide burden of diabetes and related health inequities, we continue to focus on our three strategic directions. To achieve our bold vision of winning the fight against diabetes in South Carolina, DFSC is committed to advancing efforts in these strategic directions:

**1. To improve pregnancy outcomes and the health of women with, or at risk for, diabetes.**

Diabetes in pregnancy can increase risk for poor birth outcomes and have negative long-term effects on the health of both mother and child.

Women's health is a key determinant of the health of children, families and communities.

**2. To reduce lifelong risk of diabetes in children.**

There are rapidly growing inequities in the prevalence of Type 2 diabetes among young people. An estimated half of South Carolina children are at a higher lifelong risk for diabetes due to poor cardiorespiratory fitness, with estimates that the COVID-19 pandemic has worsened these outcomes. The rate of Type 2 diabetes has increased rapidly, specifically among Black teenagers, in recent years.

**3. To prevent diabetes and its complications in adults.** Comprehensive actions, ranging from diabetes prevention efforts to increased diabetes screenings to improved access to quality care, are necessary to begin to change the course of diabetes in South Carolina.

Guided by these strategic directions and with a foundational commitment to advancing health and racial equity, DFSC is committed to action under the following four categories that support our strategic directions:

**Addressing nutrition insecurity**

Approximately 9.6 percent of South Carolinians, including 13.8 percent of children, are food insecure. Food insecurity increases the risk of diabetes and increases the likelihood of complications among people with diabetes.

“We know that the inequities we’re facing in our state are not limited to just diabetes and related health outcomes but are prevalent in all of the ways that our environment, systems and opportunities impact our health. That is why it is so critical to approach our work in an innovative and equity-centered way. The roots to this are deep and wide, and they affect the ability for all South Carolinians, especially communities of color, to have an opportunity for a healthy life.”

Noreen O'Donnell  
Program Director, DFSC



# STRATEGIC DIRECTIONS



## **Championing environments that promote good health**

The places where we live affect our opportunity to maintain good health. Environments that increase opportunities for healthy eating and safe physical activity promote good health and address risk factors related to diabetes.

## **Strengthening systems that provide care and support**

High-quality, coordinated care is critical for people living with diabetes. So is receiving meaningful social support and being able to navigate resources needed to meet basic needs.

## **Building understanding of diabetes, related risk factors and standards of care**

Creating strong, relevant messaging about the impact of diabetes in South Carolina is critical to inspire collective action across all of South Carolina.

Planning strategically and working with innovative partners to address these areas will create opportunities for DFSC to build its momentum through specific, targeted successes that collectively move toward the overall goal of winning the fight against diabetes.

In pursuing its three strategic directions, DFSC has the following guiding principles:

- Implement an innovative, multipronged statewide program.
- Align, develop and bring to scale existing programs that have proven local efficacy.
- Reduce health disparities relating to preventing diabetes and its complications.
- Focus on diabetes prevention.
- Focus on early life intervention to prevent or mitigate diabetes and its complications.
- Ensure rigorous data collection.
- Plan for the sustainability of initiative efforts.

# ADDRESSING NUTRITION INSECURITY

## Addressing Nutrition Insecurity

Food insecurity is associated with increased risk for developing diabetes, perhaps by as much as 50 percent. After studies controlled for factors such as income, employment status and lifestyle, evidence suggests adults with food insecurity are two to three times more likely to have diabetes than those with secure access to healthy food. Food insecurity limits a person's ability to practice healthy behaviors and manage diabetes. It also adds to the emotional and financial strain of having diabetes, further impairing access to essential medications and health care. Data show 9.6 percent of South Carolinians, and 13.8 percent of the state's children, experienced food insecurity in 2021.

## FoodShare (ongoing)

To address food insecurity, DFSC has provided five years of support to FoodShare SC, starting in 2020. With this funding, FoodShare SC has expanded South Carolinians' access to fresh fruits and vegetables through an expanding network of hubs across the state. This has increased access to fresh produce, especially for individuals and families who participate in the Supplemental Nutrition Assistance Program (SNAP). Customers who buy a food box with SNAP benefits can receive matching support through South Carolina's Healthy Bucks program.

## 2022 Year-to-Date Impact (January - September)

- 20 total hubs (one new this year)
- 77,153 boxes, a 38 percent increase from 56,051 boxes in the same period of 2021

## Produce Prescription

A healthy diet is the basis for the prevention and management of diabetes and its complications. With more than 1.9 million adults in the state having diabetes or prediabetes, we must increase opportunities for access to healthy food statewide. Formal prescription of healthy food can help achieve this goal.

DFSC currently supports two produce prescription initiatives to increase access to fresh produce for people living with prediabetes or diabetes:

- **VeggieRx – FoodShare SC (ongoing):** expanding to support five partnerships between local clinics and FoodShare hubs across the state
- **Grocery Rx – Lowcountry Street Grocery (new in 2022):** strengthening partnerships with Fetter Health Care Network and beginning a partnership with the Medical University of South Carolina to provide grocery prescriptions and nutrition education to patients



"The most visible part of FoodShare is our Fresh Food Box. Every two weeks, participants can purchase a box of produce, giving them the power and dignity to provide for themselves and their families. FoodShare is more than just a box of food. It's confidence. It's empowerment. It's hope."

Beverly Wilson  
Executive Director  
FoodShare SC

# ADDRESSING NUTRITION INSECURITY



“My continuous glucose monitor (CGM) saved my life. I have learned how to use a new pump and CGM.”

Patient  
MOMs in Control of Diabetes  
in Pregnancy Program

DFSC has also provided support to Spartanburg Regional Healthcare System (SRHS) in partnership with Ruth’s Gleanings, an organization that empowers people in nutritional poverty by increasing access to healthy, fresh food. FoodShare Spartanburg provides produce box incentives to help with recruitment and retention of participants in the Centers for Disease Control and Prevention’s National Diabetes Prevention Program through SRHS.

## Head Start Nutrition Education and Produce Access (new in 2022)

In 2022, DFSC supported GrowFood Carolina to educate families about nutrition and access to local produce. This effort benefited children in the 12 Head Start programs in Charleston County. Every other week for 16 weeks, GrowFood Carolina distributed fresh local food to more than 600 families. As part of this initiative, Lowcountry Food Bank offered families Cooking Matters, an evidence-based participatory cooking and nutrition education program that teaches parents about the produce they receive and healthy ways to prepare it. These programs will be expanded with DFSC support through 2023.

## Food Is Medicine South Carolina (new in 2022)

A committee of the South Carolina Food Policy Council, Food Is Medicine South Carolina’s purpose is to improve coordination among organizations supporting healthy eating initiatives in health care settings across the state.

DFSC provides capacity-building support to the committee and has invested strategically in two current projects:

- Through a partnership with the SNAP-Ed team at the University of South Carolina Arnold School of Public Health, Food Is Medicine South Carolina is conducting a statewide “landscape assessment” to establish a clear baseline of interventions to increase access to healthy foods. This will also define barriers and facilitators for these efforts and will include an evaluation of patient experiences.
- Food Is Medicine South Carolina has formed a representative community of organizations implementing produce prescription programs across the state. As part of this effort, partners will participate in a statewide evaluation process to better understand the effect of the interventions on food security and health outcomes.



# CHAMPIONING ENVIRONMENTS THAT PROMOTE GOOD HEALTH

## School Wellness (ongoing)

We didn't see Type 2 diabetes in people younger than 40 years of age until about 1980. Since then, however, we've seen younger and younger people being affected by this condition.

This change has been driven, in large part, by changes in environments and lifestyle norms. These include a preference for calorie-dense, nutrient-poor foods and limited opportunities for physical activity. Overwhelming evidence shows the earlier the intervention to change these habits, the better. The healthier the environment and lifestyle during childhood and youth, the lower the risk of diabetes in adulthood.

Children spend more time at school than anywhere else away from home. Schools therefore provide a unique

opportunity for partnerships focused on the child's social, psychological, physical and intellectual development. To ensure children across South Carolina can experience healthier school environments, DFSC is supporting two complementary organizations that focus on school-based wellness:

- Alliance for a Healthier Generation
- Medical University of South Carolina (MUSC) Boeing Center for Children's Wellness

### 2021 - 2022 school year data

A total of 153 schools across 16 districts worked toward healthier environments for 96,948 students.

"It has been proven that students who are physically active and maintain healthy life choices perform better in school. This is the reason healthy school meals and the school wellness program are so important to our district. With your help, our wellness program is expanding, providing our students an increased chance to participate, learn and grow. This will be beneficial to the students while they're in school, and developing these good habits early in life will benefit them into adulthood. Thank you, MUSC and Diabetes Free SC, for assisting us in helping our students make healthy choices for the present and the future."

Dan Kolat  
Food Services Accountant at  
Beaufort County School District

# CHAMPIONING ENVIRONMENTS THAT PROMOTE GOOD HEALTH

"Nature is incredibly powerful. Time spent outdoors is linked to happier and healthier lives, whether through improved physical, mental, emotional, cognitive or social outcomes. By working with Diabetes Free SC, Kids in Parks will be able to provide opportunities for people across the state to be active outdoors through our TRACK Trail and TRACK Rx initiatives."

Jason Urroz  
Blue Ridge Parkway  
Foundation

## **Kids in Parks (new in 2022)**

New DFSC funding will enable the statewide expansion of Kids in Parks, an award-winning program of the Blue Ridge Parkway Foundation. Kids in Parks works with park partners to convert existing trails into TRACK Trails. These updated trails include free, self-guided challenges to make hiking more engaging for kids. The funding will allow Kids in Parks to install one new TRACK Trail and two new TRACK Trail mini sites in each South Carolina county. This project will also support the development of a mobile app, enabling kids and their families to engage with the program in any safe place for physical activity. This effort also aims to develop a network of pediatricians who will participate in Track Rx, a physical activity prescription program to help providers encourage their youngest patients to get outside and be active.

## **School Gardening (new in 2022)**

In partnership with the Clemson Extension School and Community Gardening program and in alignment with the DFSC Alliance for a Healthier Generation program, DFSC has provided support for 25 School Gardening for South Carolina educators with turnkey garden kits. These kits are designed to equip educators with materials needed to establish a thriving school garden. The kits are provided

to schools and educators who have completed School Gardening for South Carolina Educators training and who have participated in an on-site workshop. School Gardening for South Carolina is an extension-based program that, for educators, combines horticulture training, ongoing technical support and equipment for schools to start and sustain successful school gardens. The program uses innovative approaches to overcome common gardening obstacles, such as poor soil, seasonality and food safety concerns specific to school gardening.









# STRENGTHENING SYSTEMS THAT PROVIDE CARE AND SUPPORT



“I see my blood sugar stay within good range when I follow the advice and instructions given.”

Patient  
MOMs in Control of Diabetes  
in Pregnancy Program

## Women’s Health Initiative (new in 2022)

The Women’s Health Initiative aims to promote wellness among women with, or at risk for, diabetes and focuses on reducing racial and income disparities that affect access to quality health care. The initiative will achieve its goals by improving diabetes awareness, screening, prevention and education among women in South Carolina. There will be specific emphases on preparation for pregnancy and on postpartum care.

Five programs have been funded under this initiative:

- Diabetes Prevention in Young Women With Obesity and at High Risk for Diabetes — Medical University of South Carolina
- Regional Integrated Life-Cycle Diabetes Program for Women — Clemson Rural Health of Clemson University
- Rural Health Services Women’s Diabetes Program — Rural Health Services Inc.
- Wellness and Empowerment for All Women — Prisma Health Upstate
- Women in Control of Diabetes — Prisma Health Midlands and Carolina Diabetes and Kidney Center

These programs aim to empower women with diabetes to take control of their health, to have healthier pregnancies and healthier children, and to be agents of positive change for their families and communities.



# STRENGTHENING SYSTEMS THAT PROVIDE CARE AND SUPPORT

## Management of Maternal (MOMs) Diabetes Programs (ongoing)

For a developing baby, the first nine months of life in the womb are critically important, laying a foundation for lifelong health. Diabetes places both mother and baby at risk, not only during the pregnancy and at childbirth but throughout life. Accepted standards of care for a pregnant woman with diabetes require a sustained team-based approach.

Two multidisciplinary prenatal programs have been funded by DFSC, each for three years, to provide comprehensive, coordinated, proactive care to pregnant women with diabetes:

- Prisma Health Upstate (Greenville)
- Prisma Health Midlands and Carolina Diabetes and Kidney Center (Columbia and Sumter)

Both programs emphasize innovative and integrated approaches to care, making a healthy pregnancy an achievable, realistic goal. To date, these programs have provided specialized, compassionate care to more than 1,000 women with either pregestational Type 1 or Type 2 diabetes or gestational diabetes. MOMs patients have improved access to new diabetes technologies, including continuous glucose monitoring, which more than half of

the women have used, as well as a unique partnership with FoodShare that enables an average distribution of 80 produce boxes per month to pregnant patients to combat food insecurity.

This comprehensive approach to pregnancy care has led to positive preliminary findings: More than 75 percent of women are delivered with A1Cs less than 6 percent, compared to baseline estimates of 20 – 50 percent reaching this goal. Furthermore, new retinal imaging capabilities at both sites have saved the sight of eight women, while unplanned hospitalizations for poor glycemic control or initiation of insulin treatment have significantly reduced.

Teams at each location include maternal-fetal medicine specialists, endocrinologists, nutritionists, diabetes educators, patient navigators, retinal screening technicians, biostatistical and telemedicine support, and behavioral health/psychology specialists. Team-based care improves communication with patients and among providers, while combining services delivered at each visit eases the travel burden for patients. Each program is supported by clinical staff and administrators from participating clinical departments. Telemedicine services provide outreach to rural and under-resourced communities.

- Of all participants who delivered, 89 percent had an A1C that was less than or equal to 6.5 percent or that had decreased by more than 5 percent from the time of enrollment.
- Excessive gestational weight gain was prevented in 55 percent of women in 2020. That number increased to 66 percent in 2021.
- Use of continuous glucose monitoring in the third trimester has increased from 5 percent of MOMs in 2020 to nearly half of MOMs in 2022.

# STRENGTHENING SYSTEMS THAT PROVIDE CARE AND SUPPORT



“They gave me a choice in what I wanted to do as far as controlling my diabetes.”

Patient  
MOMs in Control of Diabetes  
in Pregnancy Program

## Community Health Workers (CHWs) (ongoing)

Deployment of CHWs has proven effective in reducing health inequities, addressing social determinants of health, containing costs, advancing health equity and improving outcomes across a wide range of conditions, including diabetes. As trusted members of their communities, CHWs provide strong social support, access to health-supporting resources, and assistance with navigation of health care and other service systems that support patients in their quests to maintain good health while living with diabetes.

The Center for Community Health Alignment (CCHA), housed at the University of South Carolina Arnold School of Public Health and home to the Community Health Worker Institute, is supported by DFSC to build the capacity of Federally Qualified Health Centers (FQHCs) across the state to improve efforts in the prevention and management of diabetes by deployment of specially trained CHWs.

Through this project, CCHA has also developed a specific CHW diabetes prevention and management curriculum and has provided coaching and technical assistance to FQHCs supported by the project.

The participating FQHCs are:

- Affinity Health Center (York County).
- Beaufort Jasper Hampton Comprehensive Health Services.

- CareSouth Carolina Inc. (Dillon and Lee counties).
- HopeHealth Inc. (Florence County).
- Tandem Health (Sumter County).

All five sites have participated in collaborative learning opportunities, received ongoing training and technical assistance from the CCHA, and have collected patient-level data for program evaluation. The South Carolina Primary Health Care Association (SCPHCA) and the Center for Rural and Primary Healthcare at the University of South Carolina School of Medicine provide evaluation support for the project, answering, among others, the following questions:

- Does the program reduce the number of patients with uncontrolled diabetes?
- Does the program reduce the number of patients without an HbA1C screening in the past year?
- Does the program improve overall health?
- Does the program improve patient access to and follow-up on appropriate standards of care?

Each site has already integrated training CHWs into their care teams for patients with diabetes and has served 486 patients in the first year.



# STRENGTHENING SYSTEMS THAT PROVIDE CARE AND SUPPORT

## **South Carolina Surgical Quality Collaborative Diabetes Initiative (ongoing)**

The South Carolina Surgical Quality Collaborative Diabetes Initiative aims to optimize the health of people with, or at risk for, diabetes in advance of planned surgery. Currently, there are three participating hospitals in the program:

- McLeod Medical Center — Florence
- Medical University Hospital — Charleston
- Regional Medical Center — Orangeburg

Specialist teams, led by an advanced practice provider, carefully conduct a preadmission evaluation and develop a treatment plan (prehabilitation) that can greatly mitigate surgical complication risks related to diabetes.

Prehabilitation teams include a nurse practitioner or physician assistant, surgeon champion, endocrinologist, and diabetes educator. The teams have access to specialist support, such as cardiology, ophthalmology and psychology, as well as the patient's existing medical team and the patient's social support network. The prehabilitation team evaluates each patient's needs, home and social support systems, and psychological well-being and develops a plan for future management to ensure improvement in health and diabetes care are sustained over time.

Sites have recently begun to recruit patients to this program and to implement the prehabilitation process. Data will be taken from the medical records at participating hospitals and analyzed to evaluate effectiveness.

"The Center for Community Health Alignment is thrilled to partner with the Diabetes Free SC initiative to support the integration of CHW programs in FQHCs across the state. CHWs have a long-standing history of having positive impact when working with the most at-risk populations. This is especially true when CHWs are effectively integrated into multidisciplinary care teams. Successful models have shown improvements in both the health and social outcomes of patients to include patients at risk of or managing diabetes. We are very excited for the work ahead!"

Andrea Heyward  
Director, Community Health Worker  
Institute — Center for Community  
Health Alignment









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# PARTNER SPOTLIGHTS



## Healthy Palmetto

The purpose of Healthy Palmetto is to unify and mobilize healthy eating and active living efforts that create opportunities for all South Carolinians to achieve a healthy weight. Healthy Palmetto envisions a South Carolina where health is a priority and all community members have access to healthy, delicious food and safe, inviting places to be physically active.

DFSC is proud to be part of the Healthy Palmetto Leadership Council and to join partners across the state in this effort. We are especially grateful for the collaborative partnerships that have been developed in supporting trail development and safe places for children to be physically active and in strengthening the intersections between health care and food access.

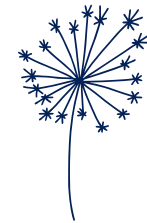
## South Carolina Birth Outcomes Initiative

South Carolina Birth Outcomes Initiative is an effort by the South Carolina Department of Health and Human Services, South Carolina Hospital Association, BlueCross BlueShield of South Carolina, South Carolina Department of Health and Environmental Control, March of Dimes, and more than 100 stakeholders to improve the health outcomes for all mothers and babies.

DFSC is proud to be part of the Birth Outcomes Initiative, and we value working with partners to identify opportunities to advance birth equity.

DESTINY IS NOT A MATTER OF CHANCE; IT IS A  
MATTER OF CHOICE. IT IS NOT A THING TO BE  
WAITED FOR, IT IS A THING TO BE ACHIEVED.

William Jennings Bryan



# CONCLUSION



So, you see, diabetes doesn't have to be our destiny! Yes, an initiative of this magnitude will take many years to achieve meaningful change and sustained health improvements. Even so, with the programs and initiatives we've outlined in this publication, we believe we and our partners are on our way to a diabetes-free South Carolina!

## CITATIONS

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diabetes *free* SC

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215704-11-2022