

Providing Access to Healthy Solutions

An Analysis of New Jersey's Opportunities to Enhance Prevention and Management of Type 2 Diabetes

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PREPARED BY THE CENTER FOR HEALTH LAW AND POLICY INNOVATION OF HARVARD LAW SCHOOL

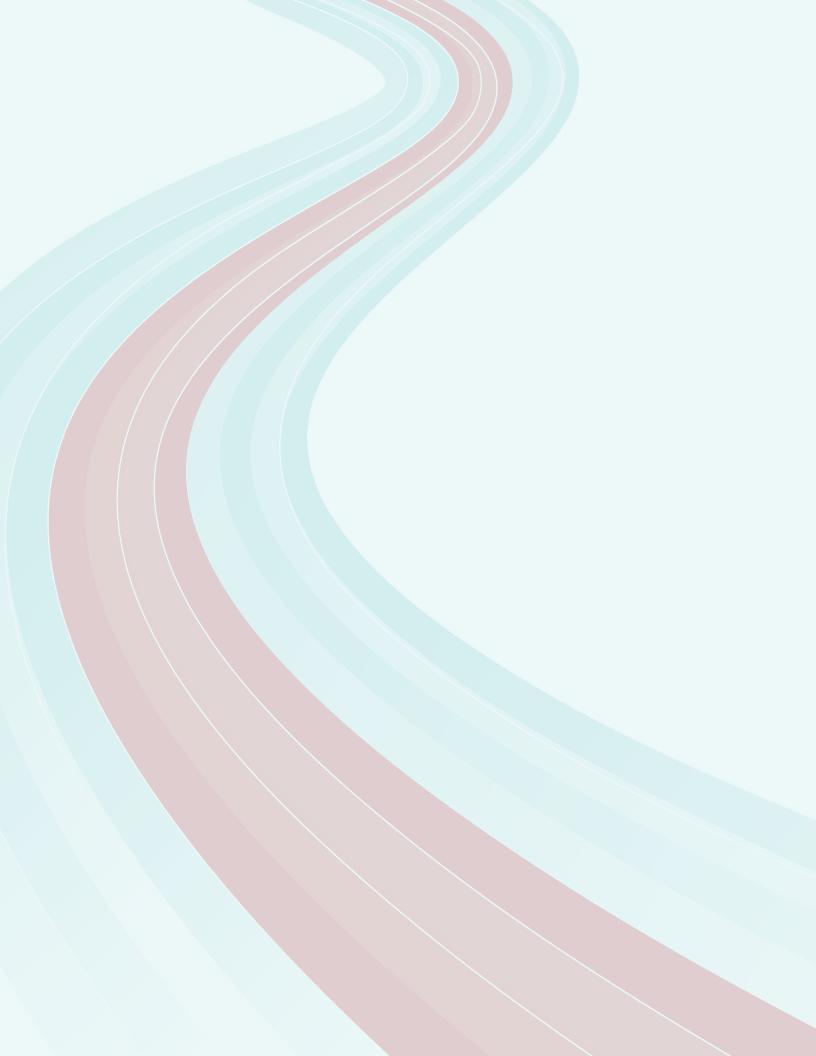


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# About The Center for Health Law and Policy Innovation

The Center for Health Law and Policy Innovation of Harvard Law School (CHLPI) works to promote legal, regulatory, and policy reforms to improve the health of underserved populations, with a focus on the needs of low-income people living with chronic illnesses and disabilities. CHLPI works with consumers, advocates, community-based organizations, health and social services professionals, food providers and producers, government officials, and others to expand access to high-quality health care and nutritious, affordable food; to reduce health disparities; to develop community advocacy capacity; and to promote more equitable, and effective healthcare and food systems. CHLPI is a clinical teaching program of Harvard Law School and mentors students to become skilled, innovative, and thoughtful practitioners

CENTER FOR HEALTH LAW CENTER FOR HEALTH LAW CENTER FOR HEALTH LAW Harvard Law School as well as leaders in health, public health, and food law and policy. CHLPI includes the Health Law and Policy Clinic (HLPC) and the Food Law and Policy Clinic (FLPC).

The HLPC was established in 1989. Its work includes federal and state health law and policy reform efforts to improve health care access and health outcomes for low-income people, with a focus on the needs of people living with chronic illnesses and disabilities.

The FLPC is the oldest food law clinical program in the United States, and was established in 2010 to address growing concern about the health, environmental, and economic consequences of the laws and policies that structure the U.S. food system. The FLPC aims to increase access to healthy foods, prevent diet-related diseases, and assist small and sustainable farmers in breaking into new commercial markets.

FOOD LAW & POLICY CLINIC Center For Health Law & Policy Innovation Harvard Law School

# **History of the Report**

This report is a product of CHLPI's Providing Access to Healthy Solutions (PATHS) project. PATHS is funded through Together on Diabetes<sup>™</sup>, the flagship philanthropic program of the Bristol-Myers Squibb Foundation. Together on Diabetes<sup>™</sup> was launched in November 2010 with the goal to improve the health outcomes of people living with type 2 diabetes in the United States by strengthening patient self-management education, community-based supportive services and broad-based community mobilization. Consistent with the Bristol-Myers Squibb Foundation's mission to promote health equity and improve health outcomes, this initiative targets adult populations disproportionately affected by type 2 diabetes.<sup>1</sup> Together on Diabetes<sup>™</sup> partners include non-profits, universities, foundations, and associations, many of which provide direct services to people living with type 2 diabetes.<sup>2</sup>

PATHS brings a broad policy focus to the Together on Diabetes<sup>™</sup> Initiative. The project works to strengthen federal, state, and local efforts to improve type 2 diabetes treatment and prevention through the development and implementation of strategic law and policy reform initiatives that can bolster these efforts.

This report was funded by the Bristol-Myers Squibb Foundation, with no editorial control over the report's content. All analysis and recommendations are based on the PATHS team's own research and discussions with state-based stakeholders.

# **Overview of the PATHS Initiative**

The first phase of CHLPI's PATHS initiative began in the summer of 2012, with two state-level policy initiatives, in New Jersey and North Carolina. These two states were selected because of their diversity from one another and the opportunity to create federal-level recommendations based on the findings from



these states. These states were also selected because other Together on Diabetes<sup>™</sup> grantees were already working in both New Jersey and North Carolina, and these organizations would be able to utilize our policy guidance. In future years, the PATHS team will conduct a federal-level policy analysis based on the state-level findings and identify common state best practices.

In order to gain a deep understanding of how the various policies in New Jersey and North Carolina impact the prevention and treatment of type 2 diabetes, the PATHS teams conducted online research and interviewed Together on Diabetes<sup>™</sup> grantees and other stakeholders in the states. The goal of this work was to create comprehensive reports that provide (1) an overview of the impact of type 2 diabetes in each state as well as profiles of each state's demographics, economy, political structure, and existing state programs to address diabetes; (2) a discussion of the policies in New Jersey and North Carolina that impact type 2 diabetes; and (3) an analysis of how the states can improve their diabetesrelated policies to reduce the prevalence and consequences of type 2 diabetes. This report on New Jersey is the product of this research and writing process.

# How to Use This Report

The purpose of this report is to provide diabetes advocates in New Jersey with a resource to promote positive policy change within New Jersey. It is also intended to serve as a planning document for local and state government in their efforts to address the impact of type 2 diabetes in their communities.

Advocates and policymakers may strive to form comprehensive type 2 diabetes prevention and control plans. Such advocates and policymakers can use this report to identify many of the policy issues that affect type 2 diabetes, as well as to consider the report's recommendations as possible priorities within the overall plan.

Other advocates and policymakers may be focused on a particular policy arena, such as school nutrition or Medicaid case management reform. Such advocates and policymakers can use the table of contents to identify the sections of the report most relevant to their goals.

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# ACRONYMS

**AADE** – American Association of Diabetes Educators

ACA - Affordable Care Act

ADA - American Diabetes Association

**AHRQ** – Agency for Healthcare Research and Quality

ACO - Accountable Care Organization

**APN** - Advance Practice Nurse

**BC-ADMs** – Board-Certified Advanced Diabetes Management

BMI - Body Mass Index

**BRPC** – Bicycle and Pedestrian Resource Center

**C.A.T.C.H.** – Coordinated Approach to Child Health

**CCCS** - Core Curriculum Content Standards

CCU - Care Coordination Unit

**CDC** – Centers for Disease Control and Prevention

**CDE** – Certified Diabetes Educator

**CDPC** – Chronic Disease Prevention and Control Unit

**CHLPI** – Center for Health Law and Policy Innovation

**CHSA** – Comprehensive Health Screening Assessment

CHW - Community Health Worker

**CMS** – Centers for Medicaid and Medicare Services

**CNA** - Comprehensive Needs Assessment

**CPC** - Comprehensive Primary Care initiative

CVV - Cash Value Vouchers

DCF - Department of Children and Families

DFD - Division of Family Development

DFHS - Division of Family Health Services

**DFN** - Division of Food and Nutrition

DHS - Department of Human Services

**DMAHS** – Division of Medical Assistance and Health Services

**DOE** - Department of Education

**DOH** – Department of Health

**DOT** - Department of Transportation

**DPP** - Diabetes Prevention Program

**DSME** – Diabetes Self-Management Education

**DSMT** - Diabetes Self-Management Training

D-SNP - Dual-Special Needs Plans

EBT – Electronic Benefits Transfer

EHR - Electronic Health Records

**F/RP** – Free and Reduced Price

**FNS** - Food and Nutrition Service

FPL - Federal Poverty Level

FQHC - Federally Qualified Health Center

HIO - Health Information Organizations

HITECH Act – Health Information Technology for Economic and Clinical Health Act

HMO - Health Maintenance Organization

HPSA - Health Professional Shortage Area

**HRSA** – Health Resources and Services Administration

LEA - Local Education Authority

MCO - Managed Care Organization

MNT - Medical Nutrition Therapy

MTM - Medication Therapy Management

NCQA – National Committee for Quality Assurance

NHSC – National Health Services Corps Loan Repayment

NJAIM - New Jersey Ambassadors in Motion

NJDA - New Jersey Department of Agriculture

NJFAI - New Jersey Food Access Initiative

**NJ-HITECH** – New Jersey Health Information Technology Extension Center

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NJPHK – New Jersey Partnership for Healthy Kids

NP - Nurse Practitioner

NSBP – National School Breakfast Program

NSLP - National School Lunch Program

**OMB** – Office of Management and Budget

**ONF** - Office of Nutrition and Fitness

**PATHS** – Providing Access to Healthy Solutions

**PCMH** – Patient-Centered Medical Home

PCP - Primary Care Provider

PCM - Personal Care Model

**QAPI** – Quality Assessment Performance Improvement Program

RD - Registered Dietitian

**RWJF** – Robert Wood Johnson Foundation

**SAFETEA Act** – Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users

**SCHIP** – State Children's Health Insurance Program **S-FMNP** – Senior Farmers Market Nutrition Program

SFSP - Summer Food Service Program

**SNAP** - Supplemental Nutrition Assistance Program

**SNAP-Ed** – Nutrition Education and Obesity Prevention Grant Program

SRTS - Safe Routes to School

SSDI - Social Security Disability Insurance

**SSO** – Seamless Summer Option

**STCs** - Special Terms and Conditions

**TANF** – Temporary Assistance for Needy Families

**USDA** – United States Department of Agriculture

**USPSTF** - United States Preventive Services Task Force

**WIC** – Special Supplemental Nutrition Program for Women, Infants and Children

WIC FMNP - Farmers Market Nutrition Program

# **EXECUTIVE SUMMARY**

As you read this report addressing the challenges of type 2 diabetes in New Jersey, remember two numbers and one family.

**700,000**: the approximate number of New Jerseyans living with diabetes.

**3**: New Jersey's rank in the nation for obesity among low-income children ages two to five, 16.6% of whom are obese.

These numbers reveal the extent of the type 2 diabetes and obesity epidemics in New Jersey, and are inextricably tied to one another. Overweight and obese children are more likely to grow into overweight and inactive teens. Among New Jersey high school students, over one third report watching television for three or more hours and using a computer for nonschool purposes or playing video games for three or more hours on an average school day. Moreover, despite its moniker as the Garden State, only 28% of New Jersey high school students eat vegetables or exercise for the recommended sixty minutes per day each week, while nearly one in five (19%) drink a can, bottle, or glass of soda at least once per day. These unhealthy trends often continue into adulthood. As of 2011, 61.5% of New Jersey adults-5,451,722.85 people-were overweight or obese. Almost 50% of those overweight or obese adults (2,718,443 people) had prediabetes-and about 25% of Americans with pre-diabetes are expected to develop diabetes within three to five years of diagnosis.

The Riveras: As documented in the film A Generation at Risk, the Riveras demonstrate the struggle of so many New Jersey families to stay healthy in difficult circumstances. Their story, which unfolds over the course of three generations and five decades, begins with Alicia Rivera's mother-in-law-a diabetic whose lower legs required amputation after ulcers formed and refused to heal. Alicia and her husband also have type 2 diabetes, and between the stresses of everyday domestic life; caring for three children-the youngest of whom has Down Syndrome; the difficulty of finding affordable, healthy foods within travelable distance; and the time, energy, and resources it takes to exercise, both Alicia and

her husband, despite their best attempts, remain overweight and struggle to manage their diabetes. As for their children, "[y]ou try to protect them," says Alicia. "You tell them I don't want you to become me." Yet, just two years ago, the Riveras learned that their 17-year-old daughter Becky also has type 2 diabetes.

For families like the Riveras with limited resources, type 2 diabetes is difficult to manage effectively, and mismanaged diabetes can lead to particularly debilitating physical effects: damaged blood vessels, heart attacks, strokes, blindness, liver disease, certain kinds of cancer, kidney failure, bone fractures, and amputations.

Diabetes affects more people and costs the state more money as each year passes. In 2010, there were 9.1 new cases per 1,000 people (age adjusted), up from 4.6 per 1,000 in 1996. By 2025, the number of people affected by diabetes in New Jersey is projected to double, and its cost to the state is projected to reach \$14.5 billion, including lost productivity. **New Jersey cannot afford to let these trends continue.** 

A range of societal conditions have brought New Jersey to this point. Conditions leading to a more overweight population include: food insecurity, high food prices in an already high cost-of-living state, lack of safe places to exercise, and lack of nutrition education. Conditions leading to poor disease management include: inadequate insurance coverage of diabetes prevention and management programs, inability to pay for expensive diabetes supplies and equipment, and insufficient coordination of care in a fragmented healthcare delivery system, among others. Just as these challenges range from environmental to medical to economic, their solutions lie in several distinct policy areas as well. Fighting type 2 diabetes will require an integrated approach that addresses the societal conditions that created this epidemic while also supporting medical and lifestyle interventions that can improve the health outcomes of those who already suffer from the disease.

> ES. 1





This report begins with an overview of the medical profile of type 2 diabetes, and follows with an extensive profile of the state of New Jersey, including information on the state's demographics, economy, and political structure. Next, the report reviews the state of type 2 diabetes in New Jersey, including incidence, prevalence, morbidity and mortality, and the direct and indirect costs of the disease. This section of the report concludes with background on the state's food and healthcare delivery systems.

The core of the report, Moving New Jersey Forward, is a targeted analysis of how to improve state policies that affect diabetes prevention and management. These include recommendations for nutrition and physical activity policies the state can adopt to prevent obesity and type 2 diabetes, as well as recommendations to improve the healthcare delivery system for people living with type 2 diabetes. This executive summary provides a review of the report's major findings and recommendations.

#### Recommendations

#### STATE GOVERNMENT INFRASTRUCTURE MAINTENANCE

The coordinated efforts of the New Jersey Departments of Health (DOH), Children and Families (DCF), and Human Services (DHS) will be critical to a successful type 2 diabetes

system of care. DOH, in addition to managing a broad range of public health functions, houses the state's Chronic Disease Prevention and Control Unit (CDPC). DHS administers Medicaid/FamilyCare and the Supplemental Nutrition Assistance Program (SNAP)—which affect type 2 diabetics' access to care, diabetes supplies, and healthy food—while DCF focuses on protecting young children from obesity and type 2 diabetes through regulations governing child care centers. On August 7, 2013, Governor Chris Christie signed An Act Concerning Diabetes and Supplementing Title 26 of the *Revised Statutes.* The law requires that DOH, in collaboration with DCF and DHS, create a "Diabetes Action Plan" for the Governor and legislature describing: (1) the financial impact of type 2 diabetes in the state; (2) the benefits of existing state programs to prevent or control the disease; and (3) the level of coordination among the three departments. DOH, and especially the CDPC within DOH, will likely take on the bulk of the responsibility for the action plan. DOH, however, has faced a steady decline in staffing levels since 2006—a reduction of approximately 30% over six years. DCF and DHS will also need sufficient personnel to collaborate with DOH, enforce new child care center regulations, and manage Medicaid, a program whose costs are in danger of skyrocketing if type 2 diabetes continues to increase in prevalence. (See Table 1)

TABLE 1. Challenge	Recommendations
DOH, DCF, and DHS need additional resources to engage in the organized, collaborative efforts necessary to implement the Diabetes Action Plan.	DOH and the New Jersey legislature should maintain investment in the ShapingNJ Partnership (which develops strong public-private relationships across state government, local government, and non- profit organizations to enhance primary prevention) and the Office of Nutrition and Fitness (which functions as the central coordinating body to work on obesity prevention).
	CDPC should maintain, integrate, and staff the coalitions it currently hosts.
	The legislature should allocate state resources to ensure that DOH, DCF, and DHS can perform their new and ongoing responsibilities.
	DOH and other state agencies should leverage the philanthropy and projects of private foundations, and involve these groups on the front lines of obesity prevention.



#### ACCESS TO HEALTHY FOOD

A healthy food system is important for improving type 2 diabetes outcomes, as it not only helps prevent the incidence of type 2 diabetes and other chronic diseases, but also mitigates the consequences of type 2 diabetes once individuals are diagnosed with the disease. For many low-income individuals and families in New Jersey, access to healthy food is not guaranteed, due to the inability to afford healthy food (economic access); lack of geographic access to retail food establishments that sell healthy foods; and/or school nutrition challenges impacting the ability of a student to access healthy food at school.

#### **Economic Access to Healthy Food**

The federal government's food assistance programs—such as SNAP and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)—provide food for many New Jersey residents struggling to put food on the table due to economic constraints. The federal government provides

the funding for these programs, but leaves the administration to the states. Notably, New Jersey has expanded its rules in order to allow individuals or households whose gross monthly income is less than 185% of the federal poverty level (FPL) to receive SNAP benefits, an eligibility threshold above the federal eligibility threshold of 130% FPL. Despite the existence of these federal assistance programs, New Jersey's expanded SNAP eligibility, and New Jersey's emergency food infrastructure, 13.5% of the state's population was food insecure in 2010. In that same year, only 60% of all New Jersey SNAP-eligible individuals participated in the program; similarly, in 2009, only 60% of individuals eligible for WIC participated in the program. Moreover, while the amount of monthly benefits for both SNAP and WIC have generally been increasing over the past five years, in 2011 the amount of monthly SNAP benefits fell by \$5 for individuals and by \$10 for households, and WIC benefits also decreased slightly in 2012. (See Table 2)

TABLE 2. Challenge	Recommendations
Too many New Jerseyans cannot afford to purchase healthy food.	Conduct a study to identify what barriers prevent low-income New Jersey residents from participating in SNAP, and implement policies that ensure eligible residents are aware of their SNAP eligibility.
	Expand SNAP eligibility criteria to include individuals and households at 200% FPL.
SNAP and WIC have low participation rates amongst eligible New Jerseyans.	Expand SNAP offices' hours of operation to meet the needs of working families.
	Encourage DHS and the Division of Family Development to work with local welfare offices to improve the online services provided to SNAP beneficiaries.
	Conduct a study to identify what barriers prevent eligible New Jersey women from enrolling in WIC.
Enrollees in SNAP and WIC have trouble accessing the fruits and vegetables that are crucial for the healthy diets that prevent and mitigate type 2 diabetes.	Implement and increase SNAP incentive programs to encourage SNAP participants to purchase more fruits and vegetables.
	Provide state funding to New Jersey WIC's fruit and vegetable programs in order to increase the number of participants by increasing the value of fruit and vegetable vouchers.
	Increase access to authorized vendors by, for example, encouraging local benefit offices to host farmers markets on voucher distribution days.
	Implement policies that facilitate the acceptance of SNAP benefits at farmers markets.
	Increase funding to food banks to ensure their accessibility to New Jersey residents, and support other efforts to reduce accessibility barriers to food banks.



#### **Geographic Access to Healthy Food**

Increasing access to healthy foods involves more than just providing financial assistance to those who cannot afford it; access to healthy food also means guaranteeing that all New Jersey residents have access to healthy food retailers either in their community or easily accessible by public transportation. Communities that lack access to healthy food retailers that provide "affordable fruits, vegetables, whole grains, low-fat milk, and other foods that make up the full range of a healthy diet" are classified as "food deserts." According to the United States Department of Agriculture, in 2011, 340,000 New Jersey residents live in 134 federally-recognized "food deserts" across the state. However, the Reinvestment Fund, a non-profit organization based in Philadelphia, suggests that in actuality as many as 924,000 residents-10% of New Jersey's population-lack access to affordable, healthy food, even if they do not live in a federally-recognized "food desert."

This geographic access problem exists, at least in part, because the state has 25% fewer supermarkets per capita than the national average and needs 269 new supermarkets in order to meet that average. In an effort to bring healthy food to New Jersey's food deserts, the New Jersey legislature passed the New Jersey Fresh Mobiles Pilot Program Act in 2011, which authorized the New Jersey Department of Agriculture (NJDA) to develop and assist in the creation of a mobile farmers market program throughout the state. This legislation marks an innovative approach to the geographic access problem but by itself will be not be a sufficient solution. (See Table 3)

#### Access to Healthy Food at School

Given New Jersey's obesity rates among low-income children, influencing the way children access food and learn about wellness and healthy living is an increasingly important aspect of preventing and treating chronic diseases like type 2 diabetes. Most children eat lunch at school, many eat breakfast, and perhaps just as many children eat snacks at some point during the day. Children's ability to access healthy food at school grows in importance as the economic picture for children and families across New Jersey worsens; in 2010, nearly one third of the state's children lived in low-income households.

Federal school meal programs-the National School Lunch Program (NSLP) and the National School Breakfast Program (NSBP)-allow low-income children to receive either free or reduced-price meals (F/RP meals) at school. Under federal law, schools that participate in the NSLP are required to establish a school wellness policy. Additionally, in 2003, New Jersey enacted a law requiring the establishment of school breakfast programs in public schools where 20% or more of the students enrolled in the school are eligible for F/RP meals. Despite an increase in the number of New Jersey students participating in the NSBP during the 2011-2012 school year, New Jersey ranked forty-sixth in NSBP participation levels amongst the states in 2011. The low student participation rate can be partly attributed to low rates of school participation in the NSBP across the state.

At school, children also have access to "competitive foods"-those sold outside of the NSLP and NSBP. States have the ability to

TABLE 3.	
Challenge	Recommendations
340,000 New Jerseyans live in federally-recognized food deserts and struggle to access healthy foods.	<ul> <li>Provide funding or other support to programs like the New Jersey Food Access Initiative that increase the number of permanent retail food establishments offering healthy food in New Jersey.</li> <li>Offer grants or tax incentives to corner stores that stock healthy foods to improve consumer access to those healthy foods.</li> <li>Provide state funding to develop and expand farmers markets and improve access to them by encouraging their development in new areas and by providing public transportation.</li> </ul>

Complete additional pilot mobile vending programs.



create higher standards for school meals and competitive foods than the federal standards and can set nutrition standards for food sold in vending machines. Beyond the NSLP and NSBP and outside of the school year, the federal government offers two summer feeding programs that provide free, nutritious meals and snacks to help children in low-income areas access proper nutrition throughout the summer months. **(See Table 4)** 

# FOOD AND PHYSICAL ACTIVITY INFRASTRUCTURE

How local and state governments decide to use their land—for example, to encourage the production of healthy food and to encourage increased physical activity—are important issues to address when discussing the prevention and treatment of chronic diseases.

The federal government provides support to agricultural production in a number of ways, especially in the form of financial assistance. The Specialty Crop Block Grant program, which finances production of fruits, vegetables, and nuts, is funded by the federal government and administered by state governments. While New Jersey does not have any tax breaks or incentives for specialty crop producers, the state does have a law that reduces the amount of property taxes landowners pay on farmland. The state has also implemented two programs to preserve farmland, through which New Jersey preserved 2,183 farms, and a total of 204,452 acres. Moreover, the New Jersey legislature passed a law in 2011 to encourage and facilitate the development of urban farming within New Jersey's municipalities. While the state has made strides to preserve and increase agricultural production, and although there has been an increase in the number of farms in vegetable production in New Jersey, the number of acres of vegetable production fell between 2002 and 2007 by about 5,000 acres.

With regards to physical activity, governments and communities are increasingly working to ensure that all residents have the opportunity to live healthy lives *where they are*. Complete Streets is a national movement to convert existing neighborhood infrastructure into pedestrian and bike-friendly roadways.

TABLE 4. Challenge	Recommendations
Children in New Jersey schools are not receiving adequate access to healthy food.	Increase participation of eligible children in school lunch programs by utilizing the direct certification process.
	Encourage individual New Jersey schools to take advantage of the new community eligibility option created by the Healthy, Hunger-Free Kids Act of 2010 to offer universal free meals in high-poverty schools.
	Encourage New Jersey local governments to provide students with an adequate time to eat lunch.
	Restore state allocation of funding toward the school breakfast program to increase participation, provide universal free breakfast, and improve the quality of school breakfast.
	Keep the stricter standards established in New Jersey law when applying the federal competitive food standards.
	Limit what can be sold in school vending machines.
	Require the NJDA to conduct a study identifying what barriers exist that cause low participation in summer nutrition programs.
	Streamline the application processes for school lunch, breakfast, summer feeding, and after-school programs.
Children in New Jersey schools are not receiving adequate wellness guidance and screening.	The NJDA and Department of Education (DOE) should publish all of the school districts' wellness polices on their websites.
	Pass legislation requiring public schools to conduct body mass index screening.







New Jersey established a Complete Streets policy in 2009 that requires curb extensions, bike lanes, crosswalks, pedestrian scale lighting, and other bicycle and pedestrian accommodations in every new infrastructure project. Safe Routes to School (SRTS) is another nationwide initiative that seeks to increase physical activity by encouraging children to walk or bike to school. The New Jersey Department of Transportation (DOT) has actively promoted and worked to expand the SRTS program throughout the state. **(See Table 5)** 

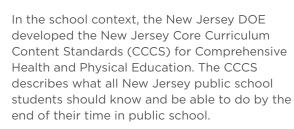
#### NUTRITION AND PHYSICAL EDUCATION

Increasing the number of opportunities for individuals to receive education about

nutrition, health, and physical activity will help in the prevention and management of type 2 diabetes and other chronic diseases.

The Nutrition Education and Obesity Prevention Grant Program, also called SNAP-Ed, provides funding to states to create nutritional education programs and activities that increase healthy eating habits and promote a physically active lifestyle for SNAP participants. New Jersey's SNAP-Ed Program is run through a partnership with Rutgers University Extension Service. For WIC participants, New Jersey offers nutrition education opportunities through individual counseling, group classes, interactive displays, and health fairs.

TABLE 5. Challenge	Recommendations
New Jersey has not fully developed its capacity to produce healthy food.	Provide state funding to supplement support received through the federal Specialty Crop Block Grant program, initiate a state-level specialty crop block grant program, or provide state funding to encourage the development of the agricultural sector in the state.
	Educate New Jersey specialty crop farmers about various sources of financial support such as the federal Specialty Crop Block Grant program, and help farmers navigate the grant application process.
	Ensure tax laws do not disadvantage small specialty crop producers.
	Increase farm to institution market opportunities for farmers by passing new legislation requiring state purchasing preference for in-state products or a resolution showing support for local food procurement.
	Provide supplemental financial support to help aggregators and food hubs start and develop.
	Continue to reduce the barriers to entry for urban agriculture through access to low-interest loans.
	Provide funding for the development of urban agriculture operations.
New Jersey communities need additional support to create and preserve healthy communities and a	Require the New Jersey DOT to conduct a study to discern to what extent the New Jersey Complete Streets policy is being implemented, identify any barriers to implementation, and work to reduce these barriers. Meanwhile, New Jersey should conduct a study to fully understand the link between Complete Streets and obesity prevention, identify strengths, and identify areas for improvement.
built environment that encourages walking, biking, and other active forms of transportation and exercise.	Allocate state funding, once the original federal funding is spent, to support New Jersey DOT's SRTS Program.
	Provide state funding for physical activity infrastructure improvements like joint use, Complete Streets, SRTS, and local efforts in municipalities seeking to increase healthy living by improving their environments. In addition to or instead of providing funding, DOT and/or NJDA could provide technical assistance to municipalities seeking to improve their built environments.



Consumer education, through cooking classes, food labeling, and community physical activity courses, are helpful in empowering residents to make healthy choices. Some progress has been made in these areas. For example, in 1999, the New Jersey legislature created the New Jersey Council on Physical Fitness and Sports to support programs related to recreation and physical activity. The Patient Protection and Affordable Care Act of 2010 (ACA) now requires restaurants across the country with more than twenty locations to provide consumers with nutritional information for the foods listed on menus and display boards. New Jersey has the option to expand menu labeling requirements to apply to smaller-chain restaurants or non-chain restaurants within the state. (See Table 6)

#### ACCESS TO INSURANCE

The availability and affordability of health insurance is an essential part of a successful type 2 diabetes system of care. In the absence of coverage for these services, people at risk for and living with type 2 diabetes are more likely to forgo the care they need, increasing their risk of developing serious complications. From 2010 to 2011, 16% of New Jerseyans lacked insurance. New Jerseyans with lower incomes were far more likely to be uninsured; 46% of adults with income below 100% FPL lacked insurance, and 44% of adults with income under 139% FPL also went without.

The ACA allows states to expand Medicaid eligibility to most adults with income at or below 138% FPL and provides subsidies for people to buy insurance in new Health Insurance Marketplaces. New Jersey has agreed to expand Medicaid eligibility under this new option, potentially adding an estimated 104,000 new Medicaid enrollees, on top of the 610,000 New Jerseyans expected to benefit from private insurance subsidies. Even so, many eligible New Jerseyans do not know about or understand these new opportunities. **(See Table 7)** 

Recommendations
Increase SNAP-Ed funding by increasing SNAP participation, thereby increasing federal funding provided to the state.
Ensure all local agencies providing WIC education have internet access.
Pass a law extending the reach of menu labeling requirements to more retail food establishments.
Continue to provide grants to municipalities through the New Jersey Council on Physical Fitness and Sports, and provide funding for physical activity initiatives in various communities.
Recommendations
Increase allocation of state resources for both media outreach and community enrollment activities to help consumers learn about and access new insurance options.
Provide small grants to community groups helping with enrollment.
Re-purpose the Centers for Medicare and Medicaid Services (CMS) funds for Marketplace planning for outreach work.
Leverage existing state resources to educate people about new





#### MEDICARE, MEDICAID, AND PRIVATE INSURANCE COVERAGE FOR KEY HEALTHCARE SERVICES

Diabetes management is complex and nearly always requires major lifestyle changes, including adherence to medication and blood glucose testing regimens. Unfortunately, cost-sharing and quantity limitations can make accessing diabetes education and supplies a challenge for patients. While Medicare, New Jersey Medicaid, and private health plans in New Jersey's individual and small group insurance markets cover diabetes supplies and medication, each insurance program falls short when it comes to coverage for prevention and management services.

One major example of a coverage failure is the Diabetes Prevention Program (DPP). Although it is associated with a 58% reduction in the risk of pre-diabetes advancing to type 2 diabetes, neither Medicare nor New Jersey Medicaid covers the DPP.

In addition, neither Medicare nor New Jersey Medicaid provides adequate coverage for diabetes management services. Medicare only covers a very limited number of Diabetes Self-Management Education (DSME) and Medical Nutrition Therapy (MNT) visits and requires patients with diabetes to cover roughly 20% of the costs for these services, which can be a major barrier. New Jersey Medicaid, in turn, does not require its contracted managed care organizations (MCOs) to cover DSME or MNT at all. Neither Medicare or New Jersey Medicaid covers DSME or MNT for people diagnosed with pre-diabetes. In addition, while both Medicare and Medicaid cover diabetes supplies such as glucose testing strips and monitors, Medicaid MCOs frequently change the covered brand of these supplies, introducing substantial confusion for beneficiaries.

New Jersey's Diabetes Cost Control Act requires that insurance plans regulated by the state cover a variety of diabetes-related medications, equipment, supplies, and education. While private insurance providers cover DSME, they may still limit access (i.e., by covering a small number of training sessions), and they are not required to provide MNT services. Further, private insurance plans, like Medicaid MCOs, change test strip and monitor brands frequently, risking confusion and problems with management adherence.

A final challenge for diabetes management is that New Jersey's Medicaid program has allowed contracted MCOs to rely on telephonic case management programs that, based on research in other states and in Medicare, are unlikely to yield either better health outcomes or lower costs. Thus, while New Jersey Medicaid beneficiaries living with type 2 diabetes have access to case management services, the design is less likely to improve diabetes outcomes than more high-touch case management programs. More intensive case management is also more likely to reduce costs through avoiding unnecessary hospitalizations. **(See Table 8)** 



TABLE 8. Challenge	Recommendations
Medicare and Medicaid patients have limited access to lifestyle intervention programs and	Advocate for Senator Al Franken's Medicare Diabetes Prevention Act of 2013.
	Advocate with CMS to (1) provide DSME and MNT coverage for people with pre-diabetes and (2) cover an increased number of allowed hours for DSME.
diabetes education.	Require Medicaid MCOs to cover DSME and MNT, both for people with diabetes and pre-diabetes.
	Nominate DSME to be considered a United States Preventive Services Task Force preventative service eligible for the A or B rating that would make it available to consumers free of cost-sharing.
	Collaborate with non-profit organizations and foundations to enhance self-management support.
Changes in test strips, glucose	Limit brand changes in test strips and glucose monitors and ensure adequate access to strips and monitors in Medicaid MCOs.
monitors, and insulin brands can be confusing and expensive.	Use influence or regulatory authority to limit private insurance plans test strip and monitor changes to once per year.
New Jersey's	Conduct an analysis of the existing case management system.
Medicaid case management system is not designed either to optimize health outcomes for beneficiaries with type 2 diabetes or to minimize costs.	For complex patients, shift the focus to in-person visits; increase case manager contact with providers; and enhance information-sharing systems.

#### HEALTHCARE DELIVERY SYSTEM: PROVIDER AVAILABILITY & COORDINATED CARE MODELS

#### **Provider Availability**

Prevention and management of type 2 diabetes require the delivery of appropriate treatment and supportive services. Unfortunately, New Jersey faces shortages of both primary care physicians and advanced practice nurses (APNs), which present significant challenges to the state's ability to ensure access to key services. New Jersey has taken some steps to increase access to primary care physicians, the most important of which is the Primary Care Loan Redemption Program, which allows monetary redemptions in exchange for a minimum of two years of full-time work in medically-underserved areas in New Jersey. Similarly, the state is working to address the nurse shortage challenge by passing the Nursing Faculty Loan Redemption Program Act, and the Robert Wood Johnson Foundation has launched the New Jersey Nursing Initiative to support scholarships for individuals pursuing masters and doctoral degrees. Despite these efforts, New Jersey will continue to face shortages due to uneven distribution of primary care physicians, low Medicaid reimbursement rates, lack of nursing faculty in nursing schools, and restrictions on APN practice. (See Table 9)



TABLE 9. Challenge	Recommendations
Inadequate primary care physician workforce.	Enhance the role of primary care within state medical schools and encourage medical schools to invest in robust family medicine departments.
	Maintain and enhance incentives to practice in underserved areas through loan repayment for physicians who practice in these areas.
	Increase primary care reimbursement in Medicaid so it closes the gap with Medicare.
APNs do not have the full practice authority to practice and prescribe and are not fully utilized in the healthcare system.	Eliminate the joint protocol requirement for APNs to prescribe medicines or devices.
	Require insurance plans, both within and outside the Medicaid program, to include APNs in their primary care provider panels.
New Jersey faces a severe nursing shortage.	Continue to invest in the Nurse Faculty Loan Redemption Program and collaborate closely with the Robert Wood Johnson Foundation's New Jersey Nursing Initiative to encourage nurses to pursue teaching careers.

#### Coordinated Care Models: Patient-Centered Medical Homes, Medicaid Health Home Program, Comprehensive Primary Care Initiative, Accountable Care Organizations

Coordination of care refers to a care delivery approach designed to help patients access appropriate healthcare services to stay healthier. The fragmentation of health care is a major barrier to providing coordinated, quality care for chronic conditions like diabetes. A significant reason for fragmentation is the fee-for-service payment model, in which the provider is paid for each service he or she provides. Both the federal government, through the CMS, and the state of New Jersey have a number of programs and projects designed to help move the healthcare system away from high-volume, fragmented, and expensive care. These programs are geared towards coordinated care that yields better outcomes, guality, and patient experience of care, and lower costs.

One exciting approach to enhancing care coordination is the promotion of health information technology (HIT). New Jersey is using its 2011 Operational HIT Plan to guide adoption of HIT in the state, while the New Jersey Health Information Technology Extension Center (NJ-HITEC) and the New Jersey Primary Care Association offer provider training and education. These efforts are (1) helping to reduce the confusion associated with newly implemented healthcare information systems, (2) helping physicians adopt electronic health records (EHRs), and (3) developing and connecting Health Information Organizations (HIOs) across the state. Adoption is still slow, unfortunately; in New Jersey, only 53.8% of office-based physicians use an EHR system, compared with 71.8% nationally.

Patient-centered medical homes (PCMHs) are characterized by providing comprehensive, patient-centered, and coordinated care, as well as accessible services and enhanced quality and safety. In New Jersey, fourteen out of the state's twenty federally-qualified health centers are working towards PCMH certification, and five have already achieved this status.

In addition to PCMHs, there are several other programs, provided for by the ACA, that will increase and improve coordination of care: an optional Medicaid Health Home program targeting patients living with chronic illness, a CMS-operated Comprehensive Primary Care initiative (CPC), and an accountable care organization (ACO) program within Medicare.

In addition to these federal opportunities, in 2011 New Jersey passed An Act Establishing a Medicaid Accountable Care Organization Demonstration Project. The law creates an



opportunity for ACOs to be accountable for reducing costs across the whole Medicaid population in a given geographic area, incentivizing a focus on the most expensive patients, whose costs can be brought down the most through better case management and care coordination. However, the law does not require MCOs to agree to share savings with Medicaid ACOs, and at the time of this writing only UnitedHealthCare has agreed to do so. **(See Table 10)** 

#### Coordinated Care Models: Community Health Workers and Pharmacists

In addition to primary care physicians and APNs, other healthcare professionals such as community health workers (CHWs) and pharmacists can contribute enormously to the care of people living with, or at risk for, type 2 diabetes. CHWs have the capacity to join and make a difference in type 2 diabetes prevention and management. In a meta-analysis of

TABLE 10. Challenge	Recommendations
PCMH certification requires adoption of EHRs, which in turn requires both financing and staff training and technical assistance.	Expand the reach of HIT capacity, help practices adopt EHRs, develop the HIOs further, and ensure adequate connectivity across HIOs.
	Expand the efforts and focus of NJ-HITEC and New Jersey Primary Care Association to include more community health centers.
PCMH certification requires financing to pay for the care coordination and case management functions. Fee-for-service payments are not designed to cover this type of service.	Pay PCMHs a per-member-per-month case management fee to support services for Medicaid beneficiaries.
New Jersey will miss a major opportunity to enhance care coordination for its one of its most vulnerable—and expensive— populations if the state fails to develop a Medicaid Health Home program that includes diabetes and overweight as eligible conditions.	Design a Medicaid Health Home program to include diabetes and overweight as eligible conditions. The program should eventually extend to the entire state, even if it begins on a targeted regional basis. Provider eligibility to serve as a Health Home should be determined based on stakeholder consultation. The payment methodology should be a bundled payment design, wherein participating MCOs only retain a nominal portion of the payment.
New Jersey's healthcare system is particularly fragmented and geared toward expensive specialty care.	Monitor the successes and challenges of the CPC initiative through the CMS Innovation Center and consider implementing all or part of CPC for Medicaid in New Jersey should the initiative save money for Medicare while improving the quality of care.
	Monitor the outcomes of the Medicare ACO model known as the Medicare Shared Savings Program and determine which elements, if any, may be beneficial for the state to embrace independently.
Without MCO participation in the gainsharing model, Medicaid ACOs may not receive sufficient reimbursement to finance the case management services needed to keep beneficiaries healthy.	Encourage MCOs to participate in the Medicaid ACO programs and to share savings with ACOs.



ES. 11



eighteen studies, involvement of CHWs was associated with greater improvements in diabetes knowledge, positive lifestyle changes, increased self-management behaviors, and decreased use of the emergency department.

In a similar manner, the integration of pharmacists into primary care teams can be an asset for people living with diabetes. Pharmacists are readily accessible and have high rates of patient interaction. For diabetes care specifically, pharmacists can help identify high-risk patients, educate patients about proper self-management, address adherence to medications, refer patients to other needed health services, and monitor a patient's condition for complications. Pharmacists can also be certified as diabetes care educators and provide additional specialized education, including formal courses on diabetes self-management. New Jersey has recently made important progress in expanding the role of pharmacists by adopting regulations for collaborative practice agreements between physicians and pharmacists. **(See Table 11)** 

TABLE 11. Challenge	Recommendations
Inadequate use of CHWs and pharmacists as members of case teams for patients with type 2 diabetes.	Form a policy-making body for CHW issues and build a CHW professional organization.
	Develop a statewide standardized curriculum jointly with CHWs and other healthcare profession groups and develop a formal CHW credentialing system.
	Ensure appropriate training and education for both CHW employers and supervisors.
	Require reimbursement for CHWs through alternative payment models such as bundled payments.
	Reimburse pharmacists for medication therapy management in the Medicaid program and develop a pilot program within the New Jersey Division of Medical Assistance and Health Services to reimburse pharmacists for Patient Self-Management Program for Diabetes services within Medicaid.

#### Conclusion

No single person, organization, or agency can implement all of these recommendations. However, by working together, government, non-profit organizations, and motivated New Jerseyans from every walk of life can truly move New Jersey forward.

# INTRODUCTION

The United States is facing a major threat to its physical health and fiscal well-being, and New Jersey is no exception. Type 2 diabetes has inflicted illness, disability, premature mortality, and costly medical bills upon thousands of New Jerseyans, and shows no sign of abating any time soon.

Type 2 diabetes implicates the full sweep of society. Imagine, for a moment, a young child growing up in a low-income family in New Jersey. She spends most of her time at school will she have the chance to run around and be active during the day? She probably depends on free or reduced-price lunch from the school—will this lunch satisfy her nutrition needs?

When this New Jersey youngster heads home after school, her parents might encourage her to play outside or ride a bicycle. Or, they may encourage her to stay inside if they are concerned that she could be hit by a car on a street with no bike lanes, or where she might be endangered by violence.

Now consider the child's parents. They are trying to provide for themselves and for their daughter, and like many New Jerseyans, they need nutrition assistance to do so. How much of a burden will the state place on them in the application process for the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps)? Will they persist and receive their benefits? Can the child's mother use her SNAP benefits to pay for fresh fruits and vegetables at the local farmers market? Is there a retail food establishment near the family's home that sells fresh fruits and vegetables?

This child, like many low-income New Jersey children, may grow up in an environment with little opportunity to exercise in a safe place and eat healthy food. The state can work to improve these environmental factors for all New Jerseyans, enhancing access to safe exercise opportunities and healthy food. Doing so can reduce the chance that this child will develop type 2 diabetes later in life.

Given the rise of type 2 diabetes in New Jersey, it is increasingly likely that this New Jersey child's mother or father has a diabetes diagnosis. Just as the child needs access to healthy food and opportunities for physical activity to prevent the disease, her parents need these resources to help them manage the condition. Further, type 2 diabetes requires the parent to manage a complex medical treatment plan, including the timing of medications and food, problem-solving when blood glucose is above or below target, and trying to improve diet and exercise. The parent must manage medical appointments, trips to the pharmacy, calls to the insurance company to verify coverage, and calls to the provider to discuss medicine needs and scheduling. The parent must remember to carry his or her glucose meter, testing strips and glucose tabs on all occasions, and if necessary must carry insulin as well. If these parents are to remain healthy, they will need both a community where they can access healthy food and places to exercise, and healthcare services to support them in managing these complex elements of the condition.

In order to access healthcare services, the family will need health insurance to pay for them. If the family is newly eligible for New Jersey Medicaid or subsidies to buy private insurance due to the Affordable Care Act coverage expansion, will they know about this and learn how to apply? Will their insurance provide coverage for adequate supply of glucose testing strips, self-management education, medical nutrition therapy, and an appropriate case management system? Where will the family go to receive this necessary care? Is there a local primary care physician that accepts the family's insurance plan? Will the family have transportation to these appointments?

Management of type 2 diabetes is crucial to preventing costly and dangerous complications of the disease. New Jersey has an opportunity to significantly expand access to key services that support disease management, by maximizing health insurance enrollment, ensuring that state health insurance plans—public and private adequately cover these services, and by promoting a strong healthcare workforce, especially in primary care.

New Jersey also has an opportunity to deliver health care to people living with diabetes more



efficiently and effectively through system-wide innovations. New Jersey's healthcare system, staffed by highly trained and committed professionals, is divided into myriad silos and rewards practitioners for volume rather than quality of care. New approaches, including patient-centered medical homes and accountable care organizations, are chances for the state to enhance care coordination and improve efficiency as well.

#### A Focus on Health Inequities

Understanding that many New Jersey families face significant challenges in preventing type 2 diabetes or managing its effects, this report aims to identify policy changes the state can make to reduce the incidence of type 2 diabetes and to improve care provided to those with the disease. Our central focus is on the populations most affected by the disease: New Jerseyans with low income, especially in communities of color. This means that the report focuses on programs designed for low-income individuals and families, such as nutrition assistance programs and public health insurance programs like Medicaid and Medicare. The report also focuses on community-wide issues, such as land use, which impact people at all socioeconomic levels but are most likely to improve conditions for people living in low-income neighborhoods where, for example, the community is less likely to have access to bike lanes and full grocery stores.

#### **Report Roadmap**

The report begins with an introduction to type 2 diabetes, in order to ground the subsequent discussion in the realities of the disease. This includes the risk factors, the disease consequences and complications, the latest research on disease management and prevention, and the key services necessary to manage the disease.

The report continues with a profile of the state of New Jersey, including information on the state's demographics, economy, and political structure. This provides the context for analyzing the state's capacity to address type 2 diabetes. Because rates of type 2 diabetes can only be curbed with changes to the food and physical activity environment, the profile includes background on economic and geographic access to healthy food, food

infrastructure and the built environment, and education on nutrition and physical activity.

The profile then describes current health insurance programs in the state, including their coverage of the key healthcare services identified in the type 2 diabetes background section. The profile also describes healthcare provider shortage issues and gives an overview of the New Jersey healthcare delivery system.

Next, the report reviews the state of type 2 diabetes in New Jersey, including incidence, prevalence, morbidity and mortality, and the direct and indirect costs of the disease.

The core of the report, Moving New Jersey Forward, is a targeted analysis of how to improve state policies that affect type 2 diabetes prevention and management. Prevention is always the first-best answer to public health challenges, so we begin with analysis of the nutrition and physical activity policies the state can adopt to prevent obesity and type 2 diabetes.

In spite of the state's best efforts, some children will still develop type 2 diabetes, and many adults have already developed it. For those at risk for the disease and those already affected, the healthcare system must ensure appropriate access to key services. In this section of the report we identify recommendations to increase rates of insurance and to improve the quality of coverage. Then, because health care is delivered within a system, we analyze how to ensure an adequate primary care workforce, develop and prioritize new primary care models, and launch new payment methodologies to incentivize quality care and permit sustainable funding for providers and services that may not be easily reimbursed under the current fee-for-service model.

#### **Final Introductory Thoughts**

Readers may observe that some topics in the report relate to a range of chronic illnesses. This is because diabetes is a chronic disease, and like all chronic diseases, it implicates issues of access to health insurance and healthcare services, proper disease management, and the ability of the healthcare delivery system to coordinate care in a complex environment. Further, as noted by the federal Centers for Disease Control and



Prevention, nutrition and physical activity are crucial components of preventing heart disease, stroke, and even cancer, in addition to diabetes. Addressing these issues in concert is necessary if New Jersey is to make progress on type 2 diabetes, and if the state is able to make positive changes, they will have beneficial effects across the chronic illness spectrum.

Further, the policies recommended in this report are designed to work together to improve the environment in which New Jerseyans live, work, and play. While a single recommendation may not dramatically affect long-term outcomes, by creating conditions for New Jersey families to eat healthier foods, engage in more activity, and access the healthcare services needed to prevent and manage disease, there is hope that these recommendations can drive a broad shift in disease incidence and severity.

Finally, some policy changes—access to health insurance, for example—can affect short-term health outcomes while others may not yield

improvements for years to come. In order to affect longer-term trends in type 2 diabetes, New Jersey must take the long view and commit to both immediate and longer-term investments, including those geared toward the built environment. The state, as discussed in detail below, has one of the highest rates of obesity among low-income two- to five-year-old children. If present trends continue, this cohort will grow up at great risk for type 2 diabetes and other chronic illnesses. New Jersey must invest in longer-term changes to protect this cohort and future generations.

New Jersey's state and local governments, healthcare professionals, philanthropies, advocates, and consumers are engaged in many exciting efforts to improve healthcare access and delivery and to make New Jersey neighborhoods healthier places to live. By acting in concert across all sectors of society, residents of the Garden State can turn the tide of diabetes and promote a healthier future.



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# BACKGROUND ON TYPE 2 DIABETES

Type 2 diabetes is a growing threat to the health and wellbeing of many Americans, including New Jerseyans. In order to inform local, state, and national action, this section provides background on type 2 diabetes, including its risk factors and common co-morbidities, as well as its effects on the body. This section also identifies the healthcare services that play the largest role in diabetes prevention and treatment.

# **BASICS OF TYPE 2 DIABETES**

When we eat food, our bodies break down all the carbohydrates (starches, fruit, vegetables, milk, and sweets all contain carbohydrates) into glucose.<sup>4</sup> Glucose is the basic fuel for the body, used by our cells to perform all activities of life.<sup>5</sup> When the body breaks down starches and sugars into glucose, this glucose enters the bloodstream, and the body uses the hormone insulin to bring the glucose into cells for use as energy.<sup>6</sup> If the insulin is not available to do this job, two main problems arise: first, cells do not get the energy they need to work; and second, too much glucose left in the blood is dangerous for the circulatory system and can do a lot of damage over time.<sup>7</sup>

Some people's bodies stop producing insulin entirely.<sup>8</sup> This is called type 1 diabetes.<sup>9</sup> People with type 1 diabetes need to inject insulin to make up for the fact that their body does not produce it naturally.<sup>10</sup> Type 1 diabetes used to be called juvenile diabetes because it is usually first diagnosed in children or young adults.<sup>11</sup>

By contrast, type 2 diabetes occurs when the body ignores the insulin it does produce.<sup>12</sup> This is called insulin resistance.<sup>13</sup> The result is that the body is not bringing glucose into the cells, leaving it in the blood stream instead.<sup>14</sup>

Sometimes, a woman who does not have any type of diabetes can develop insulin resistance during her pregnancy.<sup>15</sup> This is called gestational diabetes.<sup>16</sup> Typically, a woman with gestational diabetes will not remain diabetic after giving birth, but having had gestational diabetes is a risk factor for developing type 2 diabetes later in life.<sup>17</sup> Medical professionals use a test called the A1C to measure the average amount of glucose in a person's blood over time.<sup>18</sup> The test measures the percentage of hemoglobin (the protein in the blood that carries oxygen) that is coated in glucose.<sup>19</sup> When a person's A1C test is over 6.5%, they are considered to have diabetes.<sup>20</sup> If the test shows an A1C between 5.7% and 6.4%, the person is considered to be pre-diabetic, meaning that the person is at risk for developing diabetes.<sup>21</sup> About 25% of Americans with pre-diabetes are expected to develop diabetes within three to five years of diagnosis.<sup>22</sup>

# COMPLICATIONS FROM TYPE 2 DIABETES

Over time, sustained high glucose levels cause damage to blood vessels, resulting in serious health complications including increased risk of major cardiovascular incidents such as heart attacks and strokes.<sup>23</sup> The microvascular damage associated with type 2 diabetes also makes it the leading cause of new cases of blindness, kidney failure, and lower-limb amputations not related to trauma.<sup>24</sup> Common co-morbidities with diabetes include hearing impairment; obstructive sleep apnea; fatty liver disease; periodontal disease; bones fractures; cancers of the liver, pancreas, endometrium, colon/rectum, breast, and bladder; and cognitive impairments like dementia.<sup>25</sup>

# RISK FACTORS OF TYPE 2 DIABETES

Scientists are not sure about the exact mechanism that causes the body to ignore or stop making enough insulin. However, there are some known risk factors for the disease:

- Being overweight: High levels of fatty tissue are associated with cells becoming resistant to insulin.<sup>26</sup>
- Fat distribution: If the body stores fat in the abdomen, the risk is greater than if the fat is stored in the hips or thighs.<sup>27</sup>

- Physical inactivity: Being active helps the body become more sensitive to insulin and also helps with weight control and using glucose as energy.<sup>28</sup>
- Age: Individuals over age forty-five are at higher risk, although this may be largely due to older people being less physically active. However, type 2 diabetes is becoming more common among children and adolescents.<sup>29</sup>
- Family history.30
- Gestational diabetes.<sup>31</sup>
- Giving birth to a baby over nine pounds.<sup>32</sup>

# HOW PEOPLE CONTROL AND TREAT TYPE 2 DIABETES

The goal of diabetes control is to keep levels of glucose in the blood as close as possible to normal levels.<sup>33</sup>

Medical professionals use the A1C test to assess how well a person's type 2 diabetes is being managed.<sup>34</sup> It is common for patients to aim to keep their A1C level below 7% to control complications.<sup>35</sup> A person with uncontrolled diabetes likely has an A1C level well over 8%.<sup>36</sup>

By keeping blood glucose levels as close as possible to normal levels, there will be much less damage to the circulatory system, thus reducing the risks of complications.<sup>37</sup> In fact, according to the United Kingdom Prospective Diabetes Study, over a ten year period, each 1% reduction in A1C level was associated with significantly better health outcomes.<sup>38</sup> Specifically, the risk of death went down 21%, the risk of heart attack went down 14%, and the risk of microvascular complications went down by 37%.<sup>39</sup>

In order to control diabetes, patients first need to monitor their levels of blood glucose.<sup>40</sup> The specific monitoring frequency varies across people.<sup>41</sup> The American Diabetes Association Standards of Care suggest that people who depend on insulin should be testing five to eight times per day, although greater frequency may be appropriate for some patients, while those who only use oral medicines may test less often.<sup>42</sup>

Testing has several benefits. Patients learn how their medications, diet, exercise, and life factors such as stress affect blood glucose levels.<sup>43</sup> Testing helps patients keep track of how well their diabetes is controlled, and if their treatment plan needs adjustments.44 In addition, if blood glucose levels are too high or low, testing can alert a person to a potentially dangerous situation.<sup>45</sup> Testing is done by pricking one's finger to obtain a drop of blood, then placing the drop of blood on a strip of testing paper inserted into a portable electronic device called a glucose meter that "reads" the glucose levels.<sup>46</sup> This element of diabetes management requires patients to have a glucose meter and a sufficient supply of test strips that work with their specific glucose meter.<sup>47</sup> It also requires patients to understand how to properly perform the test and interpret the results.48

Patients living with type 2 diabetes usually need some form of medicine to help control their diabetes. For many people with type 2 diabetes, doctors prescribe a drug called metformin.<sup>49</sup> This medication decreases the amount of glucose you absorb from your food and the amount of glucose made by your liver.<sup>50</sup> For some people, however, metformin is not enough. Many patients with type 2 diabetes will eventually need to add insulin to their treatment plan, typically when medication therapies have not been sufficient.<sup>51</sup>

In addition to medications and appropriate blood glucose monitoring, people with type 2 diabetes can improve their disease management through changes in diet and physical activity.<sup>52</sup> It is important to pay attention to how one's diet directly affects blood glucose: foods that do not cause blood glucose to go up very fast are better because stability in blood glucose is important in diabetes management.<sup>53</sup> Generally, eating a similar proportion of fats, carbohydrates, and protein at similar times each day is also helpful in maintaining stability in blood glucose levels.<sup>54</sup>

# KEY HEALTHCARE SERVICES FOR TYPE 2 DIABETES PREVENTION AND MANAGEMENT

As described above, there are a few things patients need to do in order to manage diabetes and/or prevent pre-diabetes from advancing to diabetes:

 Adjust diet to aid in weight loss and/or to help maintain healthy blood glucose levels;

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- Increase physical activity to increase the body's sensitivity to insulin and to aid in weight loss;
- Take prescribed medications; and,
- Monitor blood glucose levels.

In order to accomplish these steps, patients need the knowledge to understand them and why they are important; the skills to implement them; motivation to achieve consistent behavior change; and, often, help to cope with the stress involved in managing the disease. Of course, patients also need access to the necessary supplies and medicines, such as a glucose meter and test strips.

The following section of the report discusses a number of different healthcare services that can help people gain knowledge, skills, and motivation to prevent and/or manage diabetes, including: diabetes self-management education, lifestyle interventions, medical nutrition therapy, case management/care coordination, and other services needed for diabetes management.

# Diabetes Self-Management Education

Diabetes self-management education (DSME) is defined as the "ongoing process of facilitating the knowledge, skill, and ability necessary for diabetes self-care."<sup>55</sup>

Behavior change is the key outcome from DSME.<sup>56</sup> The American Association of Diabetes Educators (AADE) has identified seven behaviors essential to diabetes selfmanagement.<sup>57</sup> These include:

- Healthy Eating;
- Physical Activity;
- Taking Medications;
- Monitoring;
- Diabetes Self-Care Related Problem-Solving;
- Reducing Risk of Acute and Chronic Complications; and,
- Healthy Coping Psychosocial Aspects of Living with Diabetes.

DSME requires a substantial investment of time, due to the complexity of skills needed for managing diabetes.<sup>59</sup> Patients participate in demonstration, observation, role playing and problem solving scenarios to acquire skills in DSME.<sup>60</sup> For example, learning to deliver insulin requires patients to: learn the skills of using the injection tool (pen or syringe); gain knowledge about how insulin works; understand safety related to injections and injection timing; and develop problem-solving expertise in the case of skipped meals, changes in exercise, sick days, and emergencies.<sup>61</sup> DSME is designed to be delivered in small incremental steps with repeated reinforcement.<sup>62</sup> Patients typically attend weekly sessions for several weeks to practice and receive support for behavior change.<sup>63</sup>

DSME is important for people with pre-diabetes as well as those with diabetes, because the behaviors needed to manage diabetes are nearly identical to those that help people with pre-diabetes delay or prevent the onset of diabetes.<sup>64</sup>

#### STANDARDS FOR DSME

The AADE and the American Diabetes Association (ADA) convened a task force in 2006 to develop and periodically revise standards for DSME.<sup>65</sup> The National Standards for DSME and Diabetes Self-Management Support describe elements of successful programs as well as reviewing the most recent research into DSME best practices.<sup>66</sup>

A few themes emerge from the National Standards. First, DSME is often delivered in a classroom-style setting because group education is effective.<sup>67</sup> At the same time, programs that are culturally- and ageappropriate show greater improvements, and individualized assessments and goal-setting are also critical to success.<sup>68</sup> That is, while the program can be delivered to a group, it cannot be a "one-size-fits-all" approach. In addition, DSME providers need to address the whole patient, including reducing the risk of diabetic emergencies, other physical co-morbidities, the emotional toll the disease can take, and psychosocial factors such as depression, cognitive status, health and numeric literacy.<sup>69</sup>

Several kinds of healthcare professionals can provide DSME. Research into the effectiveness of different models supports using registered nurses, registered dietitians, and pharmacists as the main DSME instructors.<sup>70</sup> Specialized education and training for this task is



important; the general education these professionals receive in order to be licensed is not sufficient by itself.<sup>71</sup> Providers can obtain certification as diabetes educators by the National Certification Board for Diabetes Educators or become board certified in advanced diabetes management through the AADE.<sup>72</sup> Diabetes care, education, and support are best delivered by a multidisciplinary team, which can include many provider types, such as case managers, community health workers, and peer counselors.<sup>73</sup>

#### THE EFFECTIVENESS OF DSME AND DIABETES SELF-MANAGEMENT SUPPORT

Many studies have examined the effects of DSME on health outcomes, especially on average A1C levels.

For example, in 2002, Susan Norris and colleagues identified 463 studies on DSME, and conducted a meta-analysis on thirty-one of these.<sup>74</sup> On average, these thirty-one studies showed a reduction in GHb (a measure very similar to A1C) of 0.76% for patients receiving DSME compared with members of a control group, immediately following the intervention.75 One to three months following the intervention, the average decrease dropped to 0.26% compared with members of the control groups, and after four or more months, the group that received DSME had GHb levels 0.26% lower than members of the control groups.<sup>76</sup> While this reduction in A1C does not disappear entirely, the effect clearly weakens over time in the absence of any ongoing support.

The Norris meta-analysis also revealed that more time between the DSME instructor and the patients yielded better outcomes; GHb reductions of 1% were associated with each additional 23.6 hours of contact between instructor and patient.<sup>77</sup>

In 2012, Helen Altman Klein and colleagues conducted another meta-analysis.<sup>78</sup> They examined fifty-two DSME studies, and found that patients receiving DSME had A1C levels that were lower than the control groups' by a statistically significant amount.<sup>79</sup> This supports Norris's findings that DSME does help bring A1C levels down. Klein also found that 7.23% of the patients who began the studies with A1C levels above 6.5% and who received DSME lowered their A1C to 6.4% or below.<sup>80</sup> This is a statistically significant result, showing that DSME increases the chance of a patient being able to reduce their A1C to a safer level.<sup>81</sup>

It is generally recognized, based on these exemplar studies and others, that DSME helps patients reduce their A1C levels, including to the clinically-significant level of 6.4% or below, but that improvements in metabolic and behavior outcomes from DSME fade after about six months following the intervention.<sup>82</sup>

Consequently, there is great interest in the opportunities posed by ongoing diabetes self-management support. The National Standards for DSME and Diabetes Self-Management Support strongly recommend that patients receive ongoing support, and explain that this support can include reminders about follow-up appointments and tests, medication management, education, behavioral goal-setting, psychosocial support, and connection to community resources.<sup>83</sup> Community resources can reinforce diabetes care messaging for healthy eating, being active and taking medications to support lifelong management of diabetes.<sup>84</sup> Primary care providers can help with ongoing support, as can community health workers, trained peers and community-based programs, and support groups.<sup>85</sup>

A 2012 study by Tricia Tang, Martha Funnell, and Mary Oh examined the behavioral and health outcomes from a two-year selfmanagement support intervention provided to fifty-two African-American adults with type 2 diabetes.<sup>86</sup> Following the two year program, the study showed statistically significant improvements for following a healthy diet, spacing carbohydrates evenly across the day, using insulin as recommended, and achieving diabetes-specific quality of life.87 The authors then conducted a follow-up after one year.<sup>88</sup> Crucially, they found that patients sustained these positive behavior changes, and also showed better glycemic control and cholesterol levels.89

As Tang and her colleagues recognize, more research is needed to examine the effects of ongoing self-management support and to identify elements of such programs that are the most effective.<sup>90</sup> Nevertheless, the study is very suggestive; it is likely that by providing ongoing support, patients had more opportunity to practice skills, review knowledge, and enhance their problem-solving tactics.



### Lifestyle Interventions

DSME can and should support behavior change, but education alone is not sufficient. PATHS partners cited the role of community messages to reinforce positive behavior change such as, "No sugary drinks," "Take your medication," and "Bring blood glucose logs to your doctor appointments."<sup>91</sup>

In addition, services aimed at broader lifestyle change are important tools to help prevent and manage the disease.

Lifestyle changes that help with weight loss, such as eating a healthier diet and increasing physical activity, can help the body to become more sensitive to insulin again. As noted above, the precise mechanisms for these effects are still not understood. The effects of doing so, however, have been well-documented, showing benefits to both pre-diabetics and those already diagnosed with diabetes.

The Diabetes Prevention Program (DPP), a major multi-center clinical research study that ran from 1996 to 2002, proved that delivering lifestyle interventions to those at high risk for developing type 2 diabetes reduced the incidence of the disease by 58%.<sup>92</sup> In fact, lifestyle interventions that included diet modification and exercise were more effective in reducing incidence of the disease than pharmacological treatment with the medication metformin.<sup>93</sup>

Another important study is the Look AHEAD study, which ran from 2001 through 2012. This study investigated the effect of weight loss on cardiovascular morbidity and mortality in more than 5,000 overweight people with type 2 diabetes.94 The program was implemented by a multidisciplinary team including medical professionals and lay health coaches.95 It encouraged dramatic changes in diet that initially emphasized meal replacements to achieve overall calorie reduction, encouraged participants to keep food journals, and then had participants gradually increase consumption of fruits and vegetables.<sup>96</sup> The program also included encouragement of unsupervised engagement in physical activity; attendance at group educational classes with weigh-ins; and optional follow-up programs that capitalized on relationships formed between patient attendees to effect lasting change.97

After four years, researchers found that weight loss achieved in the program resulted in better levels of glycemic control, blood pressure, high density lipid cholesterols and triglycerides.<sup>98</sup> In addition, fewer recipients of the lifestyle intervention needed to take medications to control their cardiovascular risk factors compared to the study's control group.<sup>99</sup>

The Look AHEAD program was modeled on the intervention delivered in the earlier DPP, but adjusted to reflect findings from more recent weight loss studies. For example, because higher rates of physical activity lead to improved weight loss maintenance, Look AHEAD aimed for a higher total of minutes per week spent engaging in physical activity than DPP.<sup>100</sup> Because group weight loss counseling is superior to individual counseling in achieving sustained weight loss, regardless of patient preference, Look AHEAD also invited study participants to more group-based education classes and check-ins.<sup>101</sup> The emphasis on food journaling and use of meal replacements throughout the first year of the program reflected the demonstrated importance of calorie control on weight loss.<sup>102</sup> Finally, because cultural competency of the program team is associated with patient success,<sup>103</sup> the lifestyle coaches were often chosen from the same ethnic group as their particular study participants.<sup>104</sup>

These results suggest that the success of lifestyle intervention programs lies in their ability to support patients in achieving weight loss and high rates of physical activity, which in turn requires that patients fully participate in the program.<sup>105</sup> Accordingly, it may be reasonable to conclude that programs with greater emphasis on supporting patients in full participation will meet with greater success.

The evidence from the DPP and the Look AHEAD study suggests that lifestyle change programs can help prevent type 2 diabetes and reduce the risk of complications among those already diagnosed with the disease.

#### **Medical Nutrition Therapy**

Medical nutrition therapy (MNT) is individualized dietary instruction and counseling designed to help patients with diet-related conditions.<sup>106</sup> MNT can be provided as part of a successful lifestyle intervention or as a stand-alone benefit. MNT involves an in-depth assessment

of the individual's unique needs. MNT can play a role in primary prevention to prevent the disease in individuals with obesity and prediabetes, secondary prevention to prevent complications and control diabetes, and tertiary prevention to prevent morbidity and mortality related to diabetes complications.<sup>107</sup>

The primary goals of MNT are to promote healthy food choices and physical activity; encourage moderate weight loss, safe blood sugar, lipid and lipoprotein, and blood pressure levels; and to slow the rate of complications.<sup>108</sup> Because MNT services are given one-on-one with a dietitian, MNT can address individual needs and take into account personal and cultural preferences, dietary restrictions, and willingness to make difficult lifestyle changes.<sup>109</sup> Several clinical trials have provided convincing evidence that MNT implemented by registered dietitians is effective to improve key metabolic levels and behavior.<sup>110</sup>

Many clinical trials documenting the efficacy of MNT have referred to a set of practice guidelines developed by researchers at the International Diabetes Center in Minneapolis.<sup>111</sup> These guidelines require an initial visit of at least one to one-and-a-half hours, two individual follow-up visits within two and four weeks respectively of thirty to forty-five minutes each, and ongoing follow-up visits once every six to twelve months.<sup>112</sup> Each visit is followed by communication with that individual's other team members.<sup>113</sup>

The ADA has recognized that MNT is important to prevent and manage diabetes and to slow the rate of development of diabetes complications.<sup>114</sup> The ADA recommends that individuals with all stages of diabetes, including pre-diabetes, should receive "individualized MNT as needed to achieve treatment goals."<sup>115</sup>

Due to the complexity of diabetes nutrition issues and the frequent presence of additional complications such as hypertension, the ADA recommends that the MNT provider be a registered dietitian familiar with diabetes MNT.<sup>116</sup> As discussed in more detail below, a registered dietitian is a food and nutrition expert with a bachelor's degree from an accredited university who has completed a six to twelve month accredited practice program and passed a national examination, as well as completing continuing professional education requirements.<sup>117</sup>

# Case Management/ Care Coordination

Case management, care coordination, care management, and disease management are all terms that refer to care delivery approaches designed to help patients access appropriate healthcare services to stay healthier.<sup>118</sup> The Case Management Society of America explains that "case management is a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual's and family's comprehensive health needs through communication and available resources to promote quality, cost-effective outcomes."<sup>119</sup>

There are several models of care coordination. In some cases, primary care offices restructure their medical practices to improve care delivery. The "medical home" is an example of this idea; practices work to develop patient-centered care that is coordinated across providers and settings, usually using health information technology to ensure all providers have patient information.<sup>120</sup> Other models employ an embedded care manager, where an insurer pays for a manager-usually a nurse-to be present in the practice to communicate with the patient and clinical staff, often conducting patient assessments, planning care, monitoring patient outcomes, coordinating care transitions, and connecting patients to community resources.<sup>121</sup> There are also transition models, focused specifically on ensuring successful transitions between care settings, and especially from institutional to community settings.<sup>122</sup> Finally, there are external care manager models, where health teams located outside the medical practice (as opposed to an embedded care manager located within the practice) work with patients and clinicians to help coordinate care.123 This model also includes telephonebased interventions.124

# Other Services Needed For Type 2 Diabetes Management

Other key components of successful type 2 diabetes care include: mental health care; monitoring of risk factors for cardiovascular disease in addition to blood glucose; screenings for nephropathy, retinopathy, and neuropathy; and an annual comprehensive foot examination.<sup>125</sup>

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# NEW JERSEY STATE PROFILE

If New Jersey can ensure delivery of key services and provide a healthy environment for its residents, the state will stand a good chance of reducing the impact of type 2 diabetes. This state profile describes New Jersey's current capacity to achieve these goals.

The profile begins with a general overview of the state's demographics, economy, and government structures, and continues with an overview of the state's type 2 diabetes incidence, prevalence, and distribution in the population.

Because nutrition and physical activity are inextricably linked to type 2 diabetes prevalence and health outcomes, the profile next provides an overview of how New Jerseyans currently access food and opportunities for physical activity.

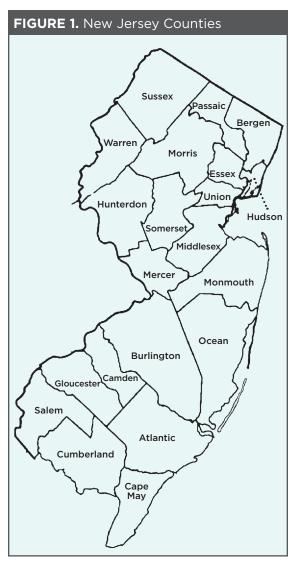
Next, the state profile describes New Jersey's health insurance programs, including the services relevant to type 2 diabetes covered under public and private insurance programs, as well as the state's healthcare system infrastructure, including issues of provider availability, health information technology, and payment methodology.

# DEMOGRAPHIC

New Jersey had an estimated population of 8,864,590 in 2012.<sup>126</sup> This makes it the eleventh most populous state in the nation and the most densely populated,<sup>127</sup> with 1,205.4 people per square mile<sup>128</sup>—the United States as a whole has a population density of 87.4 people per square mile.<sup>129</sup> (See Figure 1)

The state has no counties or sub-counties that qualify as "rural" under the federal definition of having fewer than 2,500 residents.<sup>130</sup> However, a substantial portion (approximately two thirds) of the state is open space, and farming is a key industry.<sup>131</sup> The New Jersey State Office of Rural Health, in partnership with the New Jersey Primary Care Association, developed a definition of "rural" areas that better fits the state's circumstances<sup>132</sup> Under this definition, a county counts as rural if there are fewer than 750 residents per square mile.<sup>133</sup> Ten counties meet this definition: Atlantic, Burlington, Cape May, Cumberland, Gloucester, Ocean, Salem, Sussex, and Warren.<sup>134</sup> Overall, about 6% of New Jerseyans live in rural areas.<sup>135</sup>

The dense urban areas of the state and the more rural areas face very different challenges in addressing health challenges. In particular, as explained above, the fact that no counties qualify as "rural" under federal definitions leads to reduced funding for certain programs





dependent on this classification, notably a loan repayment program for primary care physicians.<sup>136</sup>

New Jersey is somewhat more racially diverse than the nation as a whole, with 58.9% of the population identifying as non-Hispanic whites compared with 63.4% nationally.<sup>137</sup> New Jersey's population is 14.6% black, (compared with 13.1% nationally), 8.7% Asian (compared with 15.0% nationally), and 18.1% Hispanic (compared with 16.7% nationally).<sup>138</sup> From 2007-2011, 20.6% of the state's population was foreign-born, compared with 12.8% nationally.<sup>139</sup>

It is important to appreciate the demographics of the state because it affects community outreach strategies regarding both health insurance and general health information. For example, health insurance information will need to be translated into many languages in order to reach all eligible families. In addition, for type 2 diabetes in particular, cultural competency is crucial in health communications because the health messages are so linked to lifestyle issues such as food that have cultural implications.

# ECONOMY

Between 2007 and 2011, New Jerseyans were more likely to be in the workforce than people in other states. Of people over age sixteen, 66.8% were in the labor force,<sup>140</sup> compared with 64.8% nationally.<sup>141</sup> The unemployment rate, at 5.8% from 2007-2011,<sup>142</sup> was slightly higher than the national rate of 5.6%.<sup>143</sup> During this period, 9.4% of New Jerseyans lived below the federal poverty level,<sup>144</sup> compared with 14.3% nationally.<sup>145</sup> Note that in 2013, the federal poverty level for a single person was \$11,490 per year; for a family of four, the level was \$23,550.<sup>146</sup> **(See Table 1)** 

In considering poverty measures, it is critical to take into account the cost of living. New Jersey has a very high cost of living; according to a recent study by Legal Services of New Jersey, it is usually ranked first, second, or third among the states in cost of living.<sup>147</sup> The study identifies a Real Cost of Living income level for seventy different family compositions found in the state, and calculates cost for housing, health care, food, childcare, transportation, taxes, and clothing.<sup>148</sup> It does not include any "extras," such as saving for emergencies or

college, recreation, or buying a car.<sup>149</sup> Using this measure, typical four-person families require \$64,000 - \$74,000 per year to meet basic needs.<sup>150</sup>

Unfortunately, many New Jerseyans fall below this basic level. Among families with two adults and two school-age children, 20% have income below the Real Cost of Living, while 74% of families with one adult and two school-age children fall below the threshold.<sup>151</sup> Of single working adults without dependent children, 28% have income below this basicneeds level.<sup>152</sup> An estimated one million New Jersey workers – a full quarter of the population – earn less than this level.<sup>153</sup>

There is substantial variation across New Jersey counties. Differences in housing and childcare costs are the main sources of different costs of living.<sup>154</sup> In general, southern counties have lower costs of living than the northern counties.<sup>155</sup> Bergen County is the most expensive, while Atlantic County is the least expensive.<sup>156</sup> In Hudson County, 60.7% of families with two working adults and two school-age children are below the threshold.<sup>157</sup> In Cape May, Passaic, Middlesex, Camden, and Cumberland counties, 100% of families with one working adult and two children live below the threshold.<sup>158</sup>

As discussed in detail below, type 2 diabetes is concentrated among low-income communities and communities of color. The difficulty many New Jersey families experience in making ends meet necessarily impacts their ability to care for their health, whether by investing in more nutritious foods, having time available for exercise, or simply being able to afford required diabetes equipment and supplies. In assessing the ability of the state to address this public health problem, the financial capacity of state residents is a significant element. The reality is that the state will need to do more to support health than might be the case if more families already had sufficient resources.

# STATE LEGISLATURE

The New Jersey Legislature has two Houses, a Senate with forty members and an Assembly with eighty members<sup>159</sup> Elections are held in oddnumbered years.<sup>160</sup> Generally, Assembly members are up for re-election every two years while Senators are re-elected every four years.<sup>161</sup> In the



(11



<b>TABLE 1.</b> New Jersey Gross Domestic Product – Private Industries (millions of current dollars)	
Private Industries - Total	452,301
Agriculture	758
Mining	68
Utilities	10,216
Construction	15,678
Manufacturing	38,199
Durable Goods	13,462
Non-Durable Goods (includes food, beverage, and tobacco product manufacturing)	24,737
Wholesale Trade	39,863
Retail Trade	30,919
Transportation and Warehousing	16,445
Information	22,464
Finance and Insurance	40,850
Real Estate and Rental and Leasing	85,103
Professional, Scientific, and Technical Services	47,738
Management of Companies and Enterprises	15,829
Administrative and Waste Management Services	16,685
Educational Services	5,396
Health Care and Social Services	39,162
Arts, Entertainment, and Recreation	4,205
Accommodation and Food Services	12,259
Other Services, Except Government	10,462
Source: Gross Domestic Product by State, Industry Detail, New Jersey, N.J. DEP'T OF LABOR & Wo dol.state.nj.us/labor/lpa/industry/gsp/gsp_index.html (last visited Nov. 29, 2013).	ккғоксе Dev., http://lwd.

first term of a new decade, however, Senators also serve two years before re-election, because the state re-apportions legislative districts following each decade's census and tries to have an election as soon as possible following the re-apportionment.<sup>162</sup> In 2013, the state Senate included twenty-three Democrats and sixteen Republicans, and the Assembly included forty-eight Democrats and thirty-two Republicans.<sup>163</sup>

The legislative committees most important for addressing type 2 diabetes include:<sup>164</sup>

• The Senate Budget and Appropriations Committee;

- The Senate Health, Human Services, and Senior Citizens Committee;
- The Assembly Appropriations Committee;
- The Assembly Budget Committee;
- The Assembly Health and Senior Services Committee; and,
- The Assembly Human Services Committee.

The budget committees control funding for state programs, including those aimed at preventing and mitigating type 2 diabetes, while the subject-matter committees are the first to see proposals for new initiatives and law



changes. New Jersey citizens can work to form long-term relationships with the legislators (and their staff) who serve on these committees. Such relationships can create opportunities to be heard on important issues and also to become expert resources for legislators who are interested in chronic illness mitigation.

New Jersey's Legislature meets year-round, in two-year legislative sessions that begin the second Tuesday in January of each evennumbered year.<sup>165</sup> If legislation introduced during the session is not acted upon before the end of the second year of the session, it expires and needs to be introduced again in the next session.<sup>166</sup>

# STATE BUDGET

New Jersey's fiscal year runs from July 1 to June 30. New Jersey's budget process begins in the fall, when state agencies prepare planning documents in partnership with the state Office of Management and Budget (OMB).<sup>167</sup> From November through mid-January. OMB and state agencies review the planning documents and make preliminary agreements about spending in the coming fiscal year.<sup>168</sup> During January and February, the Director of OMB reviews the budget recommendations with the Treasurer, Governor's staff, and the Governor.<sup>169</sup> The Governor makes final decisions for his proposed budget in February and submits a Budget Message to the Legislature on or before the fourth Tuesday in February.<sup>170</sup>

The Legislature then reviews the budget through the appropriations committees in both the Assembly and Senate; these committees can and do make changes to the budget through this process.<sup>171</sup> Citizens can attend and speak at public budget hearings held in these committees during March of each year.<sup>172</sup>

After the appropriations committees complete new versions of the budget, transforming them into bills called Appropriations Acts, each version must move through the standard legislative process.<sup>173</sup> This means that each house must vote on the committees' versions of the budget and then send their Appropriations Acts to a conference committee to iron out differences between them.<sup>174</sup> Then, both houses must vote to pass a final, identical Appropriations Act.<sup>175</sup> When this is done, the budget is sent to the Governor.<sup>176</sup> The Governor can sign the Appropriations Act, veto it, return it to the Legislature for specific changes (conditional veto), or perform a "line-item veto," which allows the Governor to eliminate specific appropriations.<sup>177</sup> The Governor also must certify the expected level of revenue, in order to ensure that spending does not exceed this level.<sup>178</sup> This certification is necessary because, like most states, New Jersey has a constitutional requirement to balance the budget every year; spending cannot exceed expected revenue.<sup>179</sup> The state must pass a budget by July 1 each year.<sup>180</sup>

Throughout the year, both the Director of OMB and the Legislature can authorize new funding outside of the Appropriations Act.<sup>181</sup>

For fiscal year 2014, New Jersey passed a budget of \$32.9 billion, an increase of \$1.27 billion over the 2013 budget.<sup>182</sup> Priorities included resources to rebuild following Super Storm Sandy, restoring funds to the state pension fund, and an increase in education spending.<sup>183</sup> The fiscal year 2014 budget included \$370,890,000 for the Department of Health (DOH), up from \$365,369,000 in fiscal year 2013.<sup>184</sup>

The state pension fund is a major funding priority for both the Legislature and the Governor, and some legislators noted that this obligation precluded funding for other items, including both services and tax cuts.<sup>185</sup> The budget included \$1.676 billion for the pension fund,<sup>186</sup> and this is likely to increase substantially over time to an estimated \$6 billion in fiscal year 2018.<sup>187</sup> This increase is due to a commitment the state made three years ago to fully fund the pensions for state workers and school employees.<sup>188</sup> The commitment is being phased in over seven years, a process that will be completed in 2018.<sup>189</sup> While legislators would like to cut property taxes, which are the highest in the country, the consensus is that this may not be possible, at least until the pension payments are fully phased in.<sup>190</sup> This reality is important to consider with respect to the timing of requests for more funding for health-related priorities. Nevertheless, it is crucial to promote awareness of the state's ongoing and increasing health needs in order to ensure adequate funding levels in future years.

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# EXECUTIVE BRANCH DEPARTMENTS

In 2010, New Jersey elected Republican Governor Chris Christie, making him the first Republican elected to statewide office in twelve years.<sup>191</sup> As in most states, the governor is the head of the executive branch, and all administrative agencies ultimately report to the governor.

A number of state agencies influence policies that affect type 2 diabetes prevention and control. These include: DOH, the Department of Human Services (DHS), the Department of Children and Families (DCF), the Department of Agriculture (NJDA), the Department of Education (DOE), and the Department of Transportation (DOT). Here, we give a general overview of the role of each of these departments, focusing in particular on DOH due to its focus on the public health elements of chronic disease control.

# **Department Of Health**

DOH is New Jersey's public health department. It has broad jurisdiction, including divisions to provide emergency preparedness services, vital statistics, epidemiology, occupational health services, communicable disease services, and family health services.<sup>192</sup>

Within DOH, the Division of Family Health Services (DFHS) is most closely tied to type 2 diabetes prevention work. DFHS runs the New Jersey Supplemental Nutrition Program for Women, Infants, and Children (WIC).<sup>193</sup> DFHS also houses the state's Chronic Disease Prevention and Control Unit (CDPC).<sup>194</sup>

CDPC works on a range of chronic diseases, including diabetes, heart disease, cancer, asthma, and stroke.<sup>195</sup> The unit also includes projects to prevent obesity and tobacco use, two factors strongly associated with several chronic illnesses.<sup>196</sup>

The organization of CDPC is currently in flux due to an effort to enhance integration across the different projects, which have tended to break down along disease-specific lines.<sup>197</sup> The drive for greater integration was motivated in part by a change in United States Centers for Disease Control and Prevention (CDC) funding.<sup>198</sup> In the past, the CDC funded each chronic disease program separately, but for 2013, the CDC combined funding for diabetes; heart disease and stroke prevention; nutrition, physical activity and obesity; and school health.<sup>199</sup> The 2013 CDC funding opportunity for state public health agencies to prevent these chronic illnesses had two parts.<sup>200</sup> One part was non-competitive, and state public health departments were guaranteed to receive some funding if they submitted a "technically correct" application.<sup>201</sup> The other component was competitive, and the CDC intended to award this enhanced funding to twenty-five states.<sup>202</sup> When funding awards were released at the beginning of July 2013, CDC announced it had decided to award the enhanced funding to thirty-two states,<sup>203</sup> but with the same total funding to allocate.<sup>204</sup> While New Jersey received this enhanced funding, the amount was smaller than expected.<sup>205</sup> CDPC will have to share this grant money, which is less than the total of their previous individual grants combined.<sup>206</sup>

In light of the new funding process, CDPC is working to combine disease-focused groups into broader teams. For example, the office now includes a Community-Based Prevention Services Team and a Clinical and Community Linkage Team.<sup>207</sup>

The Community-Based Prevention Services Team includes two main elements: tobacco prevention and the Office of Nutrition and Fitness (ONF).<sup>208</sup> ONF was the first state-level office of its kind nationwide, and has a mission of obesity prevention through promoting improved nutrition and increased physical activity.<sup>209</sup> ONF was created in response to the state's 2006 Obesity Prevention Action Plan, which recommended that the state create a central coordinating body to prevent obesity.<sup>210</sup> The flagship initiative of ONF is the creation of a public-private partnership called ShapingNJ.<sup>211</sup> Launched in 2008 with funding from the CDC, ShapingNJ is a partnership of some 230 state and local agencies, nonprofits, and advocacy groups to promote the ONF mission of obesity prevention.<sup>212</sup> The partnership focuses on five target settings, including communities, schools, day care centers, healthcare centers, and workplaces.<sup>213</sup>

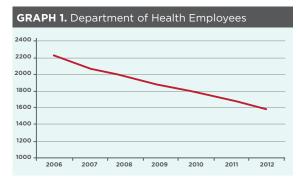
ONF has worked to coordinate nutrition and physical activity programs across the state, create a strategy for obesity prevention that focuses relevant stakeholders on the same goals, and provide municipalities with both



financial support and technical expertise.<sup>214</sup> ONF has also tried to link local communities with federal grant opportunities by providing municipalities with information about time-sensitive and ongoing public and private grants that are available to support fitness and obesity prevention programs.<sup>215</sup>

#### STAFFING AND RESOURCES

DOH has experienced a steady decline in staff since 2006. While in 2006 DOH employed 2,216 staff, by 2012 the number of employees had dropped to 1,584.<sup>216</sup> (See Graph 1)



This decrease is due to a number of factors. First, former Governor John Corzine implemented a hiring freeze during his tenure from 2006-2010.<sup>217</sup> Second, many employees who reached the retirement age of fifty-five have chosen to retire because of concerns about the stability of the pension system; retiring sooner is seen as a way to lock in current benefits in case the system changes to be less generous later.<sup>218</sup> In addition, Governor Christie's administration has instituted lay-offs, although these have been less significant than the retirements in bringing down staff levels.<sup>219</sup>

# Department Of Human Services

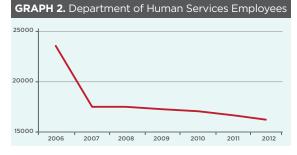
DHS includes a number of separate divisions, including Divisions on Aging Services, Developmental Disabilities, Disability Services, and Family Development, among others.<sup>220</sup>

With respect to type 2 diabetes, the Divisions of Family Development (DFD) and Medical Assistance and Health Services (DMAHS) have the largest roles to play.

DFD administers the state's welfare program.<sup>221</sup> In addition to cash assistance, this also includes New Jersey's implementation of the federal Supplemental Nutrition Assistance Program (SNAP, formerly known as food stamps).<sup>222</sup> As discussed below in more detail, SNAP is a crucial program for reducing food insecurity, a condition that, in turn, is closely tied to obesity and type 2 diabetes.

DMAHS administers the state Medicaid program as well as New Jersey FamilyCare.<sup>223</sup> These programs (discussed further below) are major sources of health insurance for New Jerseyans with low incomes and those living with disabilities. The eligibility and coverage rules for these programs significantly affect access to healthcare services for people living with type 2 diabetes in the state. DMAHS also controls the contracts between the state and the managed care organizations that run the Medicaid and FamilyCare programs.<sup>224</sup>

Like DOH, DHS has experienced significant staff reductions over time. From 23,897 employees in 2006, the department shrank to 16,482 in 2012.<sup>225</sup> (See Graph 2)



# Department Of Children And Families

DCF was created in 2006 as the first Department-level agency to address the full range of issues affecting vulnerable children and families.<sup>226</sup> This includes child protective services; services for children and adolescents with emotional and behavioral, as well as intellectual and developmental, challenges; services relating to foster care and adoption; child abuse and neglect prevention services; and licensing for child care centers.<sup>227</sup>

It is through its work with child care centers that DCF has the greatest capacity to affect type 2 diabetes. Many young children spend a large part of their days in child care, where they eat meals and have opportunities for physical activity. Given that New Jersey children ages two to five with low incomes have one of the highest obesity rates for this group in the country, child care center



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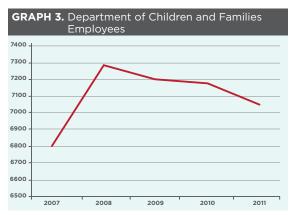


standards emphasizing appropriate nutrition and physical activity are very important.<sup>228</sup>

In 2012, DCF worked with ShapingNJ to reform licensing requirements for childcare centers. The new regulations, which went into effect in September 2013, set standards regarding physical activity and nutrition in these settings.<sup>229</sup>

Specifically, the rule requires that child care centers provide an outdoor space for children to play; provide at least thirty minutes per day of structured and unstructured play time; limit the amount of time children are allowed to be inactive; limit screen time to educational purposes only and reduce screen time for children under age two; limit sugar-sweetened drinks, limit foods with high levels of solid fat, trans fat, added sugar, and sodium; and serve a variety of fruits, vegetables, and whole grains.<sup>230</sup> These standards will significantly improve the environment for thousands of children.<sup>231</sup>

At the same time, enforcement is required to ensure implementation of these improved rules. This may be difficult with a steady decline in staff levels following the initial increase when DCF was created. While the department staffed up from zero employees in 2006 to 7,285 in 2008, the staffing levels immediately began shrinking thereafter, down to 6,707 by 2012.<sup>232</sup> (See Graph 3)



# **Department Of Agriculture**

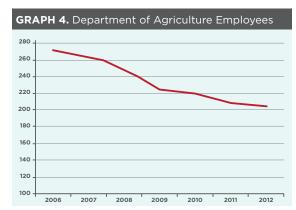
NJDA has divisions of Agriculture and Natural Resources; Animal Health; Marketing and Development; Plant Development; and Food and Nutrition.<sup>233</sup>

The Division of Food and Nutrition (DFN) administers the state's school nutrition programs, including the National School Lunch Program, the School Breakfast Program, the Special Milk Program, and the Afterschool Snack Program.<sup>234</sup> It also administers the Summer Food Service Program, the Child and Adult Day Care Food Program, the Family Day Care Program, the Commodity Food Distribution Program, and the Emergency Food Assistance Program.<sup>235</sup> The school food, summer feeding, and emergency food programs are discussed in more detail below.

For type 2 diabetes, the most important role for DFN is setting standards for school meals. Representing a significant amount of the calories consumed by school-age children and teenagers, especially those with lower incomes, these school meals are important both in affecting children's food intake while in school and in forming lifelong eating habits. DFN developed a Model School Nutrition Policy that sets the framework for school boards across the state to decide what foods to provide to students.<sup>236</sup>

NJDA also plays a major role in developing the state food system, including by providing grants to farmers producing particular crops (e.g., vegetables and fruits).<sup>237</sup> In turn, this system directly impacts access to healthy foods that can prevent type 2 diabetes.

Unfortunately, NJDA has faced staff cuts as well, going from 271 employees in 2006 to 208 in 2012.<sup>238</sup> (See Graph 4)



# **Department Of Education**

DOE collaborates with NJDA on policies for school meals, especially in the context of increasing participation in school breakfast.

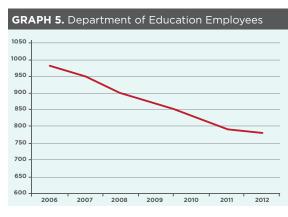
In addition, DOE works to develop curriculum standards. While this effort is focused on academics, it also encompasses health education and physical activity education.



In 2008, DOE was awarded a joint CDC grant, called a "cooperative agreement for Coordinated School Health," with DOH.239 DOE's work focused on professional development for health and physical education teachers, as well as food service providers. The grant permitted DOE to run workshops on physical activity, nutrition, and tobacco prevention. While it was not explicitly designed for obesity prevention, the topics for training were geared toward this through the physical activity and nutrition elements.<sup>240</sup> The grant also allowed DOE to work with local school districts to develop school wellness policies using a "wellness team" approach, and use a School Health Index to make action plans targeting each school's strengths and weaknesses.<sup>241</sup>

Unfortunately, the CDC cooperative agreement ended in 2013. DOE intends to continue to partner with DOH, as well as DOT's Safe Routes to School program (see below) and the Horizon Foundation's Healthy U project (see below).<sup>242</sup> However, resource constraints will likely limit the scope of this work.<sup>243</sup>

As with every other department identified in this report, DOE has experienced drops in staff levels over the past six years. While DOE had 982 employees in 2006, it had only 778 employees in 2012.<sup>244</sup> (See Graph 5)

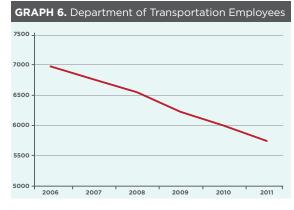


# **Department Of Transportation**

DOT plays a major role in land use decisions in the state, as well as in the development of active transport and mass transit systems. As detailed in this report, DOT has committed to a very strong Complete Streets policy that brings pedestrian and bicycle transportation to the fore in land use planning efforts.<sup>245</sup> DOT also runs a Safe Routes to School program that provides grants to schools and municipalities to improve bicycling and walking conditions, as well as other technical assistance to help schools encourage students to use active transport in getting to school.<sup>246</sup>

Type 2 diabetes is, in large part, a product of a built environment that encourages a sedentary lifestyle, so DOT efforts to shift toward an environment encouraging activity have the potential to make a real difference in rates of the disease.

Although DOT is generally considered a wellresourced department, it too has faced staff reductions. With its staff reduced from 6,970 employees in 2006 to 5,528 in 2012,<sup>247</sup> DOT has not been spared the steady decline in state workforce investment. **(See Graph 6)** 



# HOME RULE AND MUNICIPAL GOVERNMENT

New Jersey has a long tradition of "home rule." Home rule is the delegation of governing authority by the state legislature to the municipalities.<sup>248</sup> This tradition is ingrained in the New Jersey system, with the State Supreme Court even asserting that "Home rule is basic in our government."<sup>249</sup> The significance of home rule for diabetes prevention is that both school districts and municipalities have a great deal of control over policies affecting health and wellness. This includes school wellness policies, zoning, and the built environment more generally.

New Jersey has 565 independent municipalities, each with significant authority to operate their own schools, police, transportation, waste disposal, and other public services.<sup>250</sup> There are also 590 operating school districts with significant autonomy regarding curriculum and operations.<sup>251</sup> The basis for this authority is grounded in state law, as well as long tradition.<sup>252</sup>





An area of law where home rule often comes into play is zoning regulation. Though zoning is an inherent power of the state, such power can be delegated to the municipality through legislation.<sup>253</sup> The state legislature has consistently expanded municipal power to regulate zoning with the Home Rule Act of 1917,<sup>254</sup> the Zoning Enabling Act,<sup>255</sup> and the Constitution of 1947.<sup>256</sup>

New Jersey courts have interpreted these laws liberally, meaning that they can be applied broadly, and courts often rule in favor of municipal authority to exercise zoning power.<sup>257</sup> Local governments can also control the construction, erection, alteration and repair of buildings and structures of any kind within the municipality.<sup>258</sup> This is important for diabetes policy because it means local governments control where housing, recreation facilities, and grocery stores may be built, as well as the placement of parks and construction of sidewalks and bike lanes. Municipalities in New Jersey have a great deal of power in certain areas. However, home rule is limited by what is delegated to the municipalities by the legislature, and can be easily preempted by state action. Unfortunately, the rhetoric of home rule and the divisions between municipalities can mean that, as one community partner put it, "you don't think of the state as the place to get things done."<sup>259</sup> By contrast, there is a lot of opportunity to make healthy changes at the local level, and many community members are engaged in this effort, often with excellent results.

Municipalities face many competing demands and increased concern about high property taxes. This can make it hard to focus on healthy changes, especially those, like building better streets and places for physical activity, which require governmental expenditures.

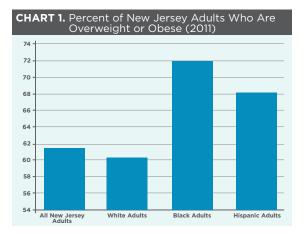


# BACKGROUND ON HEALTH AND TYPE 2 DIABETES IN NEW JERSEY

# **GENERAL HEALTH INFORMATION**

In 2010, life expectancy at birth in New Jersey was 80.3 years, compared with 78.9 nationally.<sup>260</sup> Life expectancy for white New Jerseyans was 80.3 years, while black New Jerseyans' life expectancy was lower, at 75.5 years.<sup>261</sup> Hispanics and Asians had higher life expectancy, at 84.7 and 89.4, respectively.<sup>262</sup>

According to the 2011 Behavioral Risk Factor Surveillance Survey (BRFSS), 53.4% of New Jersey adults reported participating in at least 150 minutes per week of moderate to vigorous physical activity, compared with 51.4% nationally.<sup>263</sup> Sixty-one and a half percent of New Jersey adults were overweight or obese, compared with 63.3% nationally.<sup>264</sup> Again, there are significant racial and ethnic disparities. Among white New Jerseyans, 60.3% are overweight or obese, while 72.1% of blacks and 68.4% of Hispanics are overweight or obese.<sup>265</sup> While progress must be pursued, it is encouraging that New Jersey adults are slightly more likely to exercise and slightly less likely to be overweight or obese compared with residents of other states. (See Chart 1)



Among New Jersey high school students, only 28% reported being physically active for at least sixty minutes each day per week, while a third watch television for three or more hours and 37% use a computer for non-school purposes or play video games for three or more hours on an average school day.<sup>266</sup> On the nutrition side, the situation is similarly precarious. Only 28% of New Jersey high school students eat vegetables and only 31% eat fruit two or more times per day, while nearly one in five (19%) drink a can, bottle, or glass of soda at least once per day.<sup>267</sup>

Among children age ten to seventeen, 24.7% are overweight or obese in New Jersey<sup>268</sup> and 31.3% nationally.<sup>269</sup> In this age group, 10% are obese,<sup>270</sup> placing the state in a better place than many others—New Jersey has the second-lowest rate of obesity in this age group.<sup>271</sup> Among New Jersey high school students, 11% are obese, indicating a small increase in the risk of obesity as children move from early to mid-adolescence.<sup>272</sup>

New Jersey fares far worse when it comes to obesity rates among low-income children ages two to five; 16.6% are obese, placing New Jersey among the top three in the nation for this measure.<sup>273</sup> (See Chart 2)

The fact that obesity is currently more prevalent among very young low-income children than among adolescents should be a source of immense concern to the state of New Jersey. If trends around physical activity and nutrition remain similar to those for today's teens, it is likely that the next generation of youth and adults will face unprecedented levels of overweight and obesity. This puts these children at tremendous risk of type 2 diabetes as well



as a range of other chronic diseases. This will, in turn, be enormously expensive to the state, in the form of lower tax revenue from less productivity, as well as in direct medical expenses in Medicaid and for state employee health insurance.

# DIABETES INCIDENCE AND PREVALENCE

In 2010, the age-adjusted rate of diabetes in New Jersey was  $8.3\%^{274}$  (age-adjusted rates estimate what the rate would be if the age distribution were the same as in a "standard" population, and are useful for comparisons across states). The crude rate was  $9.0\%^{.275}$ The prevalence of the disease has increased steadily since the mid-1990s.<sup>276</sup> Note that these data reflect all cases of diabetes, including both type 1 and type 2. However, type 1 diabetes only accounts for 5% of the total cases of diabetes.<sup>277</sup> (See Graph 7)

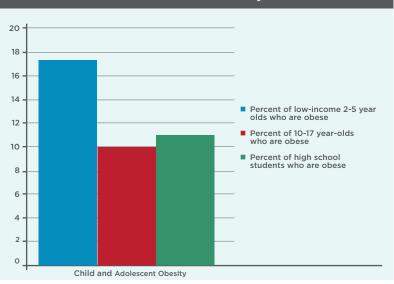
For comparison, the estimated prevalence of diabetes nationally in 2010 was 6.4% of the civilian, non-institutionalized population (age-adjusted).<sup>278</sup>

Similarly, the rate of new diabetes cases is going up steadily. In 2010, there were 9.1 new cases per 1,000 people (age adjusted), up from 4.6 per 1,000 in 1996.<sup>279</sup> The estimated national incidence was 8.1 per 1,000 people (age-adjusted).<sup>280</sup> Again, while these data include both types of diabetes, the dramatic increase is primarily attributable to the increase in type 2 cases, which make up the vast majority of diabetes cases. **(See Graph 8)** 

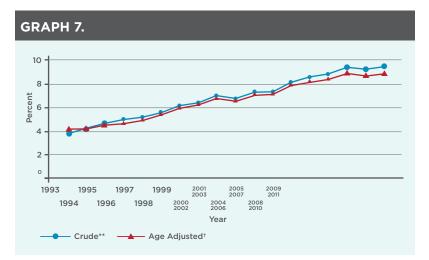
Diabetes is not evenly distributed across the New Jersey population; there are significant variations by race/ethnicity, socioeconomic status, and geography. According to the BRFSS, 8.1% of whites, 14.5% percent of blacks, and 9.5% of Hispanics in New Jersey have been diagnosed with type 2 diabetes.<sup>281</sup> It is striking that the state average for blacks is almost twice as high as that for whites. **(See Chart 3)** 

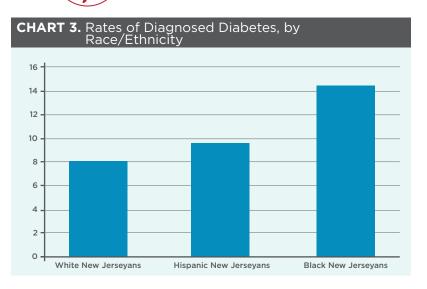
Similarly concerning is the disparity in prevalence of type 2 diabetes across socioeconomic groups. According to the BRFSS, 15.1% of New Jerseyans making less than \$15,000 had type 2 diabetes, compared with 12.4% of those making between \$15,000 and \$29,999, 12.4% of those making between \$25,000 and \$34,999, 12.0% of those making

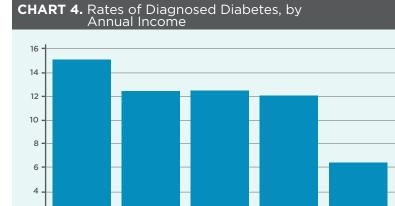
#### CHART 2. Child and Adolescent Obesity



#### **GRAPH 8.** 10 1-1-1 6 Rate 4 2 2011 1995 1997 1999 2001 2003 2005 2007 2009 1996 1998 2000 2002 2004 2006 2008 2010 Year Crude\*' - Age Adjusted







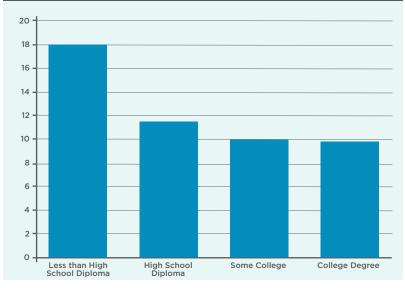


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between \$35,000 and \$49,999, and only 6.4% of those making more than \$50,000.<sup>282</sup> (See Chart 4)

The pattern recurs when looking at diabetes rates by education level. According to the BRFSS, 18% of people with less than a high school diploma have type 2 diabetes, compared with 11.3% of those with a high school diploma or General Education Development (GED) credential, 9.9% of those with some postsecondary education, and only 5.8% of college graduates.<sup>283</sup> (See Chart 5)

A county-by-county analysis of New Jersey diabetes rates in 2009 shows stark geographic differences within the state.<sup>284</sup> In the northern region, Bergen, Hunterdon, Morris, and Somerset counties all have rates of diagnosed diabetes of less than 6.9%.<sup>285</sup> In southern New Jersey, many counties have rates of above 8.5%. Cumberland County had the highest rate, at 10.2% of adults.<sup>286</sup> In general, New Jersey counties with lower per capita income also have higher rates of diabetes. Given that many of the counties in the south are less affluent, this may help explain the regional divide in diabetes prevalence.<sup>287</sup>

The racial, economic, and educational disparities in diabetes prevalence strongly suggest that solutions to this epidemic should be targeted to reach these disproportionately affected populations. Therefore, throughout this report we focus on using public policy and public resources to ensure access to nutritious food, safe places to play, and high-quality health care for all.

# DIABETES MORBIDITY AND MORTALITY

As explained above, diabetes complications can be very serious, limiting people's ability to perform regular activities and causing significant mortality.

New Jersey experiences 21.0 deaths per 100,000 people attributed to diabetes, comparable to the national rate of 20.9 deaths per 100,000.<sup>288</sup>

Forty-one percent of New Jersey adults living with diabetes reported poor or fair general health<sup>289</sup> and 30.4% reported having at least one day of poor health in the past thirty days during which they could not do their usual activities.<sup>290</sup> This represents an enormous toll on the state economy as people are not able





to work, or not able to work as productively.

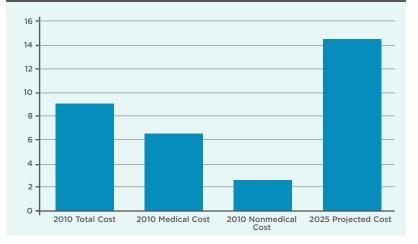
It is common for diabetes to co-occur with other health problems. For example, in 2009, 62.5% of adult New Jerseyans with diabetes also experienced hypertension (high blood pressure) and 34.5% had experienced at least one day of poor mental health in the past thirty days.<sup>291</sup>

# **DIABETES COSTS**

The American Diabetes Association estimated the annual costs of diabetes in the United States at \$245 billion in 2012.<sup>292</sup> Of that \$245 billion, \$176 billion were direct medical and healthcare costs, while an additional \$69 billion were indirect costs including disability, work productivity loss, or premature mortality.<sup>293</sup> The increasing rate of diabetes incidence has led to a projected national cost of \$512 billion by 2021.<sup>294</sup>

The total annual diabetes cost for New Jersey in 2010 is projected to have been \$9.3 billion dollars, of which \$6.6 billion dollars were for medical costs and \$2.7 billion for nonmedical costs.<sup>295</sup> Diabetes could cost the state \$14.5 billion dollars by 2025.<sup>296</sup> (See Chart 6) New Jersey's 2014 state budget is approximately \$33 billion. While the state does not pay the entire enormous cost of diabetes directly out of the state budget, the comparison does illustrate the scale of the diabetes challenge facing the state. If the state did directly pay all these costs, it would consume nearly a third of the annual budget. This strongly suggests that New Jersey should prioritize diabetes prevention and management in order to reduce these unaffordable future costs. This report will identify a number of policy reforms and investments that the state can pursue to avert this human and financial disaster.

#### CHART 6. The Cost of Diabetes in New Jersey, in Billions





# BACKGROUND ON NEW JERSEY'S FOOD SYSTEM AND BUILT ENVIRONMENT

Because the prevention and treatment of type 2 diabetes, as with many other chronic diseases, is closely tied with what and how much one eats, and with how much physical activity one gets, an analysis of type 2 diabetes in New Jersey would be incomplete without an understanding of how the food system and built environment impact the prevalence and treatment of the disease.

As discussed above, low-income individuals are disproportionately affected by chronic diseases, such as type 2 diabetes. A lack of adequate income contributes to a host of negative outcomes, many of which can be summed up as an inability to access necessary services and resources. Generally speaking, low-income individuals are unable to afford healthy food; they are uninsured and face barriers to accessing necessary health care; and, they live in places that lack the infrastructure needed to live a healthy life, such as nearby grocery stores that sell healthy food, reliable and inexpensive public transportation to bring neighborhood residents to food retailers, or sidewalks and parks to facilitate physical activity.

Between 2007 and 2011, 9.4% of individuals in New Jersey lived below the poverty level (compared to 14.3% of individuals in the United States).<sup>297</sup> However, the cost of living in New Jersey is high, which means that an individual could be struggling to make ends meet even if he or she does not fall below the federally established poverty level. Further, the continuing high rates of unemployment mean that more people find themselves falling below the poverty level or coming very close to it. Although New Jersey's unemployment rate fell from 9.6% to 8.5% between November 2012 to August 2013,<sup>298</sup> New Jersey's unemployment rate in is still higher than the national average of 7.7%.<sup>299</sup>

However, individuals do not have to be unemployed or live below the poverty line to need assistance in meeting their basic needs; rates of food insecurity are also a relevant statistic in this regard. Being "food insecure" means that a household does not have "access at all times to enough food for an active, healthy life" for all its members.<sup>300</sup> In 2010, 13.5% of New Jersey's population was food insecure, totaling 1,190,130 individuals.<sup>301</sup> New Jersey's rate of food insecurity was just slightly below the national rate of 14.5%.<sup>302</sup>

Food insecurity has a direct impact on an individual's ability to prevent and manage chronic diseases, such as type 2 diabetes. A 2010 article in the New England Journal of Medicine identified a direct correlation between food insecurity and chronic diseases, such as type 2 diabetes.<sup>303</sup> According to the article, "adults with the most severe levels of food insecurity have more than twice the risk of diabetes of adults who have ready access to healthful foods. Among adults who already have diabetes, food insecurity is associated with poorer glycemic control."<sup>304</sup> Doctors often recommend that individuals with type 2 diabetes shift to a healthier diet: however. it is often very difficult for low-income individuals to shift away from a high-calorie, low cost diet to a lower-calorie, nutrient dense-but more expensive—diet of fruits, vegetables, and other whole food products. "The inability to afford such foods is one likely mechanism between food insecurity and an increased incidence of diabetes and poor glycemic control."<sup>305</sup> Food insecure individuals report facing the decision





to use the little money they have to purchase either food or medication.<sup>306</sup>

Because of this inability to access services and goods necessary to lead a healthy life, and the impact food insecurity has on a person's ability to prevent or treat type 2 diabetes, the following sections focus on providing an overview of the various issues that impact low-income individuals and families' ability to access those goods and services.

# ACCESS TO HEALTHY FOOD

Access to healthy food plays a major role in shaping the health of New Jersey residents. This section focuses on three consumer access issues: economic access, geographic access, and access at schools. Economic access addresses the ability (or inability) of an individual or a family to afford healthy food. Geographic access issues involve the physical locations consumers are able to access food, and include the number of retail food establishments in an area, location of those vendors within New Jersey, and types of food these vendors sell. Finally, access at schools focuses on the numerous ways children access food in a school setting-for example, school meals, competitive foods, and vending machines—and whether children have access to healthy foods in those places.

# Economic Access to Healthy Food

The federal government funds a number of food assistance programs intended to help individuals and families reduce their risk of food insecurity and alleviate food access issues due to economic constraints. While the federal government provides the funding for these programs, the states are responsible for regulating and administering them. The following section focuses on the largest federal food assistance programs, which are the Supplemental Nutrition Assistance Program (SNAP, formerly known as food stamps) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and discusses how these programs can be improved to increase access for New Jerseyans.

Many individuals and families struggling to provide food for themselves and their families rely on emergency food support through food banks, soup kitchens, and food pantries. This emergency food aid infrastructure is a critical resource for many New Jerseyans. This section also discusses the food bank system in New Jersey and how it helps increase access to food for state residents.

#### SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM

SNAP is the largest federal food assistance program. It provides funds to more than fortyfive million low-income people, or about 15% of the United States population, to purchase food.<sup>307</sup> New Jersey's SNAP program serves about 1% of New Jersey's population.<sup>308</sup> The federal government and state governments are responsible for different parts of this program. The federal government is responsible for making major program decisions (such as basic eligibility requirements; although in some cases states can alter these requirements), providing funds for the benefits, and sharing in certain funding and administrative duties.<sup>309</sup> State governments are responsible for administering the program and providing some funding for administrative costs.<sup>310</sup>

The federal government bases eligibility for SNAP on a household's income. In order to qualify for SNAP, the federal government requires a household to have a gross monthly income of less than 130% of the federal poverty level (FPL), net monthly income less than 100% FPL, and assets totaling less than \$2.000.<sup>311</sup> The federal government also decides what categories of individuals are automatically excluded from the program; this includes people on strike, undocumented immigrants, certain legal immigrants, and certain convicted felons.<sup>312</sup> Under federal rules, convicted drug felons are ineligible for federal SNAP benefits, but states have the discretion to opt out of this federal categorical exemption and decide their own eligibility rules for these individuals.<sup>313</sup> In terms of the application process, the federal government sets national standards for application filing and processing that the state SNAP programs must meet.<sup>314</sup> Lastly, the federal government decides what food items may be purchased using SNAP benefits.<sup>315</sup> SNAP benefits may be spent on basic food items (such as bread, fruits, and vegetables), as well as on seeds and plants that will grow food for home consumption.<sup>316</sup> SNAP benefits may not be used for purchasing alcohol, tobacco products, hot prepared food, food to be eaten in the



store, non-food items, and vitamins and supplements.<sup>317</sup>

#### New Jersey SNAP Participation Rates

Participation in New Jersey's SNAP program has steadily increased over the last five years (around an 83% increase between 2007 and 2012).<sup>318</sup> In September 2012, 835,166 individuals in 415,147 households participated in New Jersey SNAP.<sup>319</sup> To compare, nationally, in September 2012, 47,710,283 individuals in 22,973,657 households participated in SNAP.<sup>320</sup> The national average of SNAP participation in fiscal year 2012 was 46,609,000 individuals.<sup>321</sup> In fiscal year 2010, only 60% of eligible New Jersey residents participated in the SNAP program.<sup>322</sup> That same year, 72% of eligible residents across the United States participated in SNAP.<sup>323</sup>

Monmouth, Middlesex, and Ocean counties saw particularly large increases in the number of residents receiving New Jersey SNAP benefits in fiscal year 2012, with caseloads increasing by between 15 to 20%.<sup>324</sup> The number of people participating in New Jersey SNAP increased about 10% in 2012 alone; in 2011, the average monthly participation in New Jersey's SNAP program was 759,136 individuals.<sup>325</sup> In fiscal year 2012, there were 826,134 individuals participating in New Jersey's SNAP program.<sup>326</sup> Part of this increase in 2012 was due to the impact of Superstorm Sandy on many New Jersey residents; from October 2012 to November 2012, New Jersey saw a 2.9% increase in SNAP participation.<sup>327</sup> Even though the number of participants has grown in the last five years, there are still many individuals in New Jersey who are eligible but not participating. In 2010 (the year for which the most recent United States Department of Agriculture (USDA) data is available), only 60% of all SNAP-eligible individuals in New Jersey participated in the program.<sup>328</sup>

#### Eligibility for New Jersey SNAP

Under federal rules, an individual or household must have a gross monthly income of less than 130% FPL (\$2,422 for a family of four in fiscal year 2012) to be eligible for SNAP benefits.<sup>329</sup> However, New Jersey expanded its rules in order to allow individuals or households whose gross monthly income is less than 185% FPL to receive SNAP benefits.<sup>330</sup> The federal government also requires individuals to have assets totaling less than \$2,000 in order to be eligible.<sup>331</sup> New Jersey has eliminated the asset test, however, which allows more individuals to qualify for SNAP benefits.<sup>332</sup>

#### New Jersey's Funding for SNAP

The federal government provides all of the funding for SNAP benefits to the states, which then are responsible for distributing the benefits to participating residents in the state. The federal government spent around \$74.6 billion nationally on SNAP in fiscal year 2012 (up from \$71.8 billion in fiscal year 2011).<sup>333</sup> In that same fiscal year, New Jersey received \$1.3 billion in SNAP funds from the federal government (up from \$1.2 billion in fiscal year 2011).<sup>334</sup>

#### New Jersey's SNAP Benefits

The average monthly SNAP benefit per person in New Jersey in fiscal year 2012 was \$133.26.335 The average monthly SNAP benefit per household in New Jersey was \$271.07 in fiscal year 2012.336 Since 2008, the average monthly benefit per person and per household had been increasing; in fiscal year 2011, however, the average monthly benefit per person fell by about \$5, while average monthly benefit per household fell by about \$10.337 Average monthly SNAP benefits will continue to fall in the near future because the American Reinvestment and Recovery Act of 2009, which increased SNAP benefits to provide additional support for individuals and families impacted by the recession, is ending.338

#### Accessing New Jersey's SNAP Benefits

New Jersey distributes its SNAP benefits through the Families First Program.<sup>339</sup> SNAP benefits are accessed exclusively through use of electronic benefits transfer (EBT) cards, called the Families First card.<sup>340</sup> In New Jersey, the Families First card is also used by individuals to access other state benefits, such as Temporary Assistance for Needy Families (TANF) benefits and child support bonus payments to eligible households.<sup>341</sup>

New Jersey's SNAP program is operated through its twenty-one county welfare agencies (also called Boards of Social Services), all of which are open Monday through Friday from 8:30am to 4:30pm.<sup>342</sup> About one-third of the offices have extended or additional hours outside of traditional business hours.<sup>343</sup>





Applicants can apply for SNAP benefits in person, by mail, by fax, or online.<sup>344</sup> New Jersey has a "one app" website that allows individuals to apply for SNAP, New Jersey FamilyCare/Medicaid, TANF, and General Assistance (GA – Work First New Jersey) with one application.<sup>345</sup>

In order to receive benefits, eligible individuals must complete an application and an interview (or send an authorized representative to interview in their place).<sup>346</sup> The interview can be conducted in person, over the phone (under a waiver from the federal government), or during a home visit by a qualified eligibility worker.<sup>347</sup> Although New Jersey county welfare agencies are not required to conduct interviews in person, the county welfare agencies reserve the right to conduct interviews in person if the circumstances so warrant or if the applicant requests an in person interview.<sup>348</sup>

Under state and federal law, applications must generally be processed not later than thirty days after the application was filed or not later than seven days in emergency situations.<sup>349</sup>

Participants must be recertified either every twelve or twenty-four months, depending on the household's circumstances.<sup>350</sup> Under New Jersey regulations, county welfare agencies are directed to allow for the longest certification period possible based on the reliability of the household's financial circumstances, but not to exceed twelve months.<sup>351</sup> Households in which all adult members are elderly or disabled can be recertified every twenty-four months.<sup>352</sup>

#### SPECIAL SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM FOR WOMEN, INFANTS, AND CHILDREN

WIC is the second largest federal nutrition assistance program.<sup>353</sup> This program, unlike SNAP, serves a targeted population, namely: pregnant women, breastfeeding women, non-breastfeeding postpartum women, infants up to one year old, and children up to five years old that are found to be at nutritional risk.<sup>354</sup> The program is far reaching: an estimated 8.9 million people in the United States used WIC in 2011,<sup>355</sup> and the USDA estimates that WIC serves 53% of all infants born in the United States.<sup>356</sup> Unlike SNAP, for which any qualified individual will receive benefits, state agencies receive a set amount of funding for WIC which they then must apportion among eligible participants in their state.<sup>357</sup> Also unlike SNAP, which has broad guidelines for qualifying foods, WIC has a strict set of eligible foods for which participants can use their benefits (see below for more specific information on New Jersey's food eligibility guidelines).<sup>358</sup> While states must still meet federal standards, because they receive block grants under the WIC program states have more responsibility in implementing program criteria and distributing benefits than they do under SNAP.

#### Participation Rates in New Jersey WIC

In fiscal year 2011, the New Jersey WIC program served 295,191 individuals.359 Nationally, in fiscal year 2011, 8,961,000 individuals participated in WIC programs.<sup>360</sup> In New Jersey, the average monthly participation in fiscal year 2011 was 168,467 individuals.<sup>361</sup> Preliminary data for fiscal year 2012 indicates that the average monthly participation in 2012 was 172,333 individuals.<sup>362</sup> Nationally, the average monthly participation rate in fiscal year 2012 was 8,907,840 individuals.363 Of those participating in New Jersey's WIC program in fiscal year 2011, 38,451 were women, 37,768 were infants, and 92,249 were children.<sup>364</sup> In calendar year 2009, New Jersey had a 60% participation rate; only 161,684 out of 269,296 eligible individuals participated.<sup>365</sup>

#### Accessing New Jersey's WIC Benefits

To be eligible for New Jersey's WIC program, individuals must be categorically eligible and must meet the following criteria: be declared to be at nutritional or medical-related health risk by a qualified health professional, live in New Jersey (requires proof of residency), and meet income guidelines (185% FPL).<sup>366</sup> Eligible participants enroll by contacting one of seventeen local WIC agencies to schedule an appointment.<sup>367</sup> Applicants must apply in person and each person applying for WIC benefits must be physically present at the local WIC office at the time of application.<sup>368</sup> Applicants must bring proof of identity, proof of pregnancy, proof of income, proof of residency, and a healthcare referral form (if completed by the applicant's healthcare provider).<sup>369</sup>



#### New Jersey's WIC Benefits

Participants in New Jersey's WIC program received an average of \$53.17 a month per person in 2011, and the preliminary data for 2012 shows that the average per person benefit was \$52.72.<sup>370</sup> In 2007, the average monthly benefit per person was \$39.66; the amount of monthly benefits increased between 2007 and 2011 before decreasing slightly in 2012.<sup>371</sup>

In October 2009, the New Jersey WIC program made significant changes to the WIC food package in order to encourage participants to exclusively breastfeed their babies; to consume more fruits and vegetables; to eat more fiber (including whole grains); to decrease the intake of saturated fat; and to reduce the amount of sweetened beverages and juice consumed.<sup>372</sup> Since that update, the basic categories of WICauthorized foods in New Jersey include: milk; 100% juice; eggs; whole grain cereal; cheese; peanut butter; dried or canned beans, peas or lentils; whole grain bread, brown rice or whole wheat tortillas; fruits and vegetables; canned fish; tofu; soy beverage; infant cereal; baby food fruits and vegetables and baby meats; and infant formula.373

#### FRUIT AND VEGETABLE PROGRAMS

As part of its food assistance programs, the federal government provides additional monetary benefits to help increase the amount of fresh fruits and vegetables consumed by WIC participants and the elderly SNAP participants: the WIC Cash Value Vouchers Program (CVV), the WIC Farmers Market Nutrition Program (FMNP), and the Senior Farmers Market Program (S-FMNP). The federal government nutrition is also increasing the opportunities for SNAP benefits to be spent at farmers markets.

#### WIC Cash Value Voucher Program

Under federal WIC regulations, as part of their WIC food package, states provide WIC participants with a small amount of additional money with which to purchase fresh fruits and vegetables on a monthly basis.<sup>374</sup> This CVV program, which provides WIC participants with an additional \$6 or \$10 a month, was added to the WIC program in fiscal year 2009.<sup>375</sup> Most often, WIC participants spend these vouchers at traditional WIC vendors.<sup>376</sup> States can authorize farmers to accept CVV for their products at farmers markets or roadside stands.<sup>377</sup> As of 2012, only about one-third of states authorize farmers to accept CVV, including New Jersey.<sup>378</sup>

#### WIC Farmers Market Nutrition Program

FMNP is WIC designed to serve two purposes: (1) to provide fresh, nutritious food from farmers markets to WIC participants; and (2) to expand awareness and sales at farmers markets.<sup>379</sup> The federal government provides between \$10 and \$30 per WIC participant per year.<sup>380</sup> In fiscal year 2011, New Jersey and forty-five other states, agencies, and tribal governments received federal funding to operate WIC FMNP in their jurisdictions.<sup>381</sup> States are permitted to supplement this amount with additional funds.

In New Jersey, WIC participants receive \$20 per year to purchase fruits and vegetables from authorized farmers.<sup>382</sup> The number of WIC participants that receive funding through this program depends on the amount of funding New Jersey receives from the federal government.<sup>383</sup> In fiscal year 2012, New Jersey received \$1,124,804 in grant funds for the FMNP, and served 45,555 individuals.<sup>384</sup> In 2011, the WIC FMNP coupons were used to purchase \$0.6 million worth of produce from 248 authorized New Jersey farmers.<sup>385</sup> In fiscal year 2012, the number of authorized farmers fell to 231.<sup>386</sup>

#### Senior Farmers Market Nutrition Program

S-FMNP, also housed within New Jersey WIC, provides coupons to low-income senior citizens to purchase fresh fruit and vegetables.<sup>387</sup> Nationally, seniors receive anywhere from \$20 to \$50 in coupons per participant per year; these coupons can be used at farmers markets, roadside stands, or to help pay for a share in a community supported agriculture program (CSA).<sup>388</sup> In New Jersey, eligible individuals receive \$20 per growing season.<sup>389</sup> In fiscal year 2012, New Jersey received \$1,189,963 in federal grant funds; with that money, New Jersey served 53,548 individuals.<sup>390</sup>

In order to participate, individuals must be at least sixty years old and have household incomes of not more than 185% FPL.<sup>391</sup> Similar to the WIC FMNP, the state decides where S-FMNP benefits can be spent and authorizes vendors to accept S-FMNP benefits.<sup>392</sup>





#### SNAP Benefits at Farmers Markets

An increasing number of farmers markets across the nation are accepting SNAP benefits as a form of payment. The federal government has a number of resources—for example, farmers market application guidance, fact sheets, funding opportunities, and a directory of state SNAP directors—to facilitate states' efforts to increase acceptance of SNAP benefits at farmers markets.<sup>393</sup>

Under New Jersey's Families First Program, SNAP participants are permitted to use their EBT cards at authorized retailers, which include farmers markets and roadside vendors.<sup>394</sup> In 2009, New Jersey initiated a pilot program to allow SNAP recipients to use their EBT cards at state farmers markets by providing farmers with wireless EBT readers.<sup>395</sup> The New Jersey Department of Agriculture (NJDA) maintains a list of markets throughout the state that accept EBT benefits.<sup>396</sup> According to NJDA, there are fifty-four farmers markets and nine farms (many of which serve multiple markets) throughout the state that accept EBT benefits.<sup>397</sup>

#### EMERGENCY FOOD ASSISTANCE -FOOD BANKS, FOOD PANTRIES, AND SOUP KITCHENS

Food banks, food pantries, and soup kitchens serve as an important source of food for many low-income individuals and households. According to Feeding America, in 2011, 5.1% of households in the United States (6.1 million households) utilized a food pantry at least once.<sup>398</sup>

#### Food Banks in New Jersey

In New Jersey, food banks serve as regional food distribution hubs. They receive donations; acquire, inventory, and store food; and distribute food to food pantries and soup kitchens throughout the region.<sup>399</sup> There are six regional food banks in New Jersey.<sup>400</sup> In 2011, these six food banks collectively distributed about 60.8 million pounds of food to more than 1.28 million people.<sup>401</sup> There are approximately 681 food pantries and 62 soup kitchens throughout New Jersey.<sup>402</sup> Because there are more food pantries than soup kitchens in New Jersey, more residents will have difficulties accessing hot, prepared meals than finding groceries to take home.

Some food banks have made efforts to reach local residents who are unable to get to food pantries because of lack of mobility and/or affordable transportation. The Food Bank of Monmouth and Ocean Counties operates food bank trucks that serve residents who live in neighborhoods with no convenient access to food pantries.<sup>403</sup> The mobile food bank trucks park in designated parking lots at low-income housing and seven other locations throughout Monmouth and Ocean Counties.<sup>404</sup> The Food Bank of South Jersey runs a similar mobile food pantry program named the "Hope Mobile."405 The Hope Mobile targets food deserts and reaches approximately 48,000 households each year.406

#### Funding

Food banks, pantries, and soup kitchens receive a variety of funding from federal, state, local and private sources to help provide their services. For example, in 2010, one of the regional food banks received the following mix of funding: \$5.8 million from Child Care Vouchers, \$14.4 million from Low Income Home Energy Assistance Program Vouchers, \$3.6 million from WIC Vouchers, \$7 million from the State of New Jersey, about \$1 million from local government, and \$2.4 million from the United Way and private donations.<sup>407</sup>

The New Jersey Department of Community Affairs disperses federal funds through the Community Service Block Grants to food banks.<sup>408</sup> In September 2012, New Jersey awarded about \$226,000 in Community Services Block Grants to six food banks in New Jersey.<sup>409</sup>

New Jersey facilitates the work of food banks, pantries, and soup kitchens across New Jersey in a few ways. In terms of funding, in addition to the \$7 million mentioned above, in 2012, the New Jersey Department of Human Services' Division of Disability Services gave \$15,000 in Kessler Foundation Grant Awards to three food pantries to make their facilities more accessible for residents with disabilities.410 The state also operates a program that provides aid to these emergency feeding operations. First, NJDA oversees the State Food Purchasing Program (SFPP), which gives grants to emergency feeding organizations and local distribution agencies in New Jersey to purchase healthy foods for their clients, particularly healthy food grown locally.<sup>411</sup> The



SFPP also provides funding to organizations that rescue food from local farms that would otherwise be wasted and instead donate it to food bank programs (called "gleaning").<sup>412</sup> In 2011, New Jersey allocated about \$6.8 million dollars for the SFPP.<sup>413</sup> Finally, New Jersey has also tried to make it easier for residents to donate directly to food banks. Starting in 2011, New Jersey residents were able to donate a portion of their income tax refund to food banks by simply checking a box on their state income tax forms.<sup>414</sup> For the 2010-2011 tax return, only \$33,495 was collected through this income tax donation program.<sup>415</sup> In November 2012, NJDA distributed \$58,223 to the state's six food banks; that money represents two years of contributions from this income tax check-off program.416

# Geographic Access to Healthy Food In New Jersey

Many communities across the United States that lack access to healthy food retailers are classified as "food deserts." Food deserts are broadly defined as "areas that lack access to affordable fruits, vegetables, whole grains, low-fat milk, and other foods that make up the full range of a healthy diet."417 The USDA defines food deserts as low-income census tracts (with a poverty rate of 20% or higher or median family income below 80% of the areas medium income) where a substantial number of people (500 people or 33% of the census tract) are located more than one mile from a grocery store in urban areas or more than ten miles in rural areas as food deserts.<sup>418</sup> In order to access a grocery store, residents in food deserts have to travel outside of their neighborhoods. Low-income residents are particularly burdened by having to travel to purchase food due to lack of access to a vehicle and the costs of public transportation. These residents may be forced to decrease their consumption of fresh fruits and vegetables because of the added cost of traveling to and from the store, particularly if grocery stores are not located near public transportation. Alternatively, low-income residents may choose to shop at local convenience stores or other locations that do not add any travel costs but that have restricted access to fresh foods.

According to the USDA, in 2011, 340,000 New Jersey residents lived in 134 federally recognized "food deserts" across the state.<sup>419</sup> However, the Reinvestment Fund, a community investment group that finances charter schools and supermarkets in underserved areas in Pennsylvania, New Jersey, Maryland, and Delaware, suggests that as many as 924,000 residents—10% of New Jersey's population lack access to affordable, healthy food, even if they do not live in a federally recognized "food desert."<sup>420</sup> New Jersey's food deserts are scattered throughout the state including in urban, suburban, and rural neighborhoods. According to the USDA, South Jersey has a particularly high concentration of food deserts, with 60% of the state's food deserts located in Atlantic, Burlington, Camden, Cape May, Cumberland, and Ocean counties alone.421

### **RETAIL FOOD ESTABLISHMENTS**

In 2009, the Food Trust—a nonprofit focused on increasing access to healthy, affordable food<sup>422</sup>—released a report on supermarkets in New Jersey indicating that the state has 25% fewer supermarkets per capita than the national average and needs 269 new supermarkets in order to meet that average.<sup>423</sup> Moreover, the report showed that existing supermarkets are unevenly distributed across the state.<sup>424</sup> The majority of supermarkets in New Jersey are located in suburban areas, while there are comparatively few stores in rural and urban areas.<sup>425</sup> According to the Food Trust, the New Jersey cities most at-risk for food insecurity-those with low income and lacking access to supermarkets—are Camden, Vineland, Bridgeton, Salem, Atlantic City, Hammonton, Lakewood, Trenton, New Brunswick, Perth Amboy, Phillipsburg, Newark, and Paterson.426

In 2010–2011 the Food Trust convened a New Jersey Food Marketing Task Force to make recommendations on how the state could increase access to affordable, healthy food in underserved communities.<sup>427</sup> The Task Force included thirty members from the public and private sectors, including members of state government, public health organizations, real estate companies, supermarkets, and investment companies.<sup>428</sup> A year later, the Task Force produced a report titled "Expanding New Jersey's Supermarkets" that included the following nine recommendations:





- (1) identify underserved areas;
- (2) provide assistance in the land assembly process;
- (3) reduce regulatory barriers and expedite permit and licensing processes in underserved areas;
- (4) streamline the process into one government agency;
- (5) better utilize existing economic development programs;
- (6) increase loan capital;
- (7) better utilize workforce development programs for supermarket staff;
- (8) provide transportation for residents without access to supermarkets; and,
- (9) create an advisory group to oversee implementation of the recommendations.<sup>429</sup>

In response to the Food Trust report, the New Jersey Economic Development Authority (EDA) and the Reinvestment Fund have partnered to create the New Jersey Food Access Initiative (NJFAI).430 NJFAI provides predevelopment loans to supermarket operators that choose to locate in low-income and underserved communities in order to create new supermarket facilities and improve existing facilities.<sup>431</sup> The loans range in size from \$200,000 to \$4,500,000.432 NJFAI also provides grants of between \$5,000 and \$150,000 for facilities located in "very low income census tracts."433 In order to be eligible for funding through NJFAI, a supermarket must serve a low-income community with poor access to supermarkets or healthy food retailers, must provide a certain amount of unprocessed and healthy food, and must promote community development, among other criteria.434 Currently NJFAI focuses on projects located in Atlantic City, Camden, East Orange, Elizabeth, Jersey City, Newark, New Brunswick, Paterson, Trenton, and Vineland.435

There are also efforts in New Jersey to improve access to healthy food in corner stores. These efforts are primarily funded by private and non-profit organizations. The New Jersey Partnership for Healthy Kids (NJPHK), a project of the Robert Wood Johnson Foundation and The YMCA State Alliance, is working to prevent childhood obesity in Camden, New Brunswick, Newark, Trenton, and Vineland.<sup>436</sup> One of NJPHK's six strategic goals is to increase access to grocery stores and transform bodegas and corner stories into healthier retail establishments.<sup>437</sup> In Vineland, NJPHK set a goal of transforming fifteen corner stores and small restaurants by providing healthier options for residents, working to become WIC-certified vendors, and labeling the healthy options for easy identification by shoppers.<sup>438</sup> As of July 2012, seven of the fifteen target corner stores had signed on to the program.<sup>439</sup>

The federal government also has a few programs that encourage permanent retail food establishments to open in low-access areas across the country. For example, the Healthy Food Financing Initiative, launched in 2011, is a collaboration between various federal agencies that provides funding (through loans, grants, and tax credits) to facilitate the development of healthy food retailers in low-access areas.<sup>440</sup>

In a similar vein, as part of its Campbell's Healthy Communities Initiative, Campbell's Soup Corporation has helped corner stores in Camden transform to provide healthier options for residents.<sup>441</sup> Campbell's is also providing residents with nutrition and shopping classes, cooking classes, menu planning, and food safety skills training so that residents can take advantage of the new, healthier options in their neighborhoods.<sup>442</sup>

#### FARMERS MARKETS

The number of farmers markets across the United States has been steadily increasing over recent years. In August 2013, the USDA listed 8,144 farmers markets in its National Farmers Market Directory, which is an increase of 3.6% from 2012 alone.<sup>443</sup> When located in easily accessible areas, farmers markets can play an important role in increasing consumers' access to fresh, healthy food. As of 2008, there were more than 100 farmers markets operating in New Jersey.<sup>444</sup> This is a substantial increase from 2000, when there were only about forty markets reported in the state.<sup>445</sup>

#### MOBILE VENDING

Another way consumers access healthy foods is through use of mobile vending units. Unlike traditional brick-and-mortar food retailers, mobile vending units bring the food to where the consumers are. Restaurants, grocery



stores, and farmers markets are using mobile units as a method to increase access to their products.

In 2011, the New Jersey legislature passed the "New Jersey Fresh Mobiles Pilot Program Act."<sup>446</sup> The motivation behind the mobile market pilot program legislation was to authorize NJDA to develop and assist in the creation of a mobile farmers market program throughout the state to provide fresh produce to New Jerseyans in food deserts.<sup>447</sup>

NJDA was directed to work with volunteer municipalities to develop a mobile vending pilot program.<sup>448</sup> In May 2013, the Fresh Mobile market—"a community garden on wheels" made its debut in Camden.<sup>449</sup> This market is the first pilot mobile market program under the New Jersey Fresh Mobiles Pilot Program.<sup>450</sup> The mobile farmers market in Camden was met with excitement,<sup>451</sup> and the pilot program will be evaluated in one year to determine whether state support for mobile markets should continue.<sup>452</sup>

Around the time the New Jersey Fresh Mobiles Pilot Program Act passed, the Greensgrow Philadelphia Project—a nonprofit "that fosters economic development through the incubation of financially sustainable foodbased businesses"—also began operating a mobile farmers market in Camden.<sup>453</sup> The Greensgrow Farms Neighborhood Markets in Camden accept EBT/SNAP benefits and offer a program to double the value of food assistance coupons used to purchase fresh fruits and vegetables.<sup>454</sup>

# Access to Healthy Food at School

Children spend a significant amount of time at school during their K-12 years. Children not only learn various academic topics at school, but also learn and build habits that last through their adult lives. These children need to learn, at a young age, how to lead a healthy lifestyle by eating well and incorporating physical activity as an integral part of their schedules. In New Jersey, low-income children between the ages of two and five have one of the highest rates of obesity in the nation; this population is already at risk for a lifetime of chronic disease and associated complications. Further, there are numerous opportunities for children to eat at school throughout the day—some children will eat breakfast and/ or lunch at school and many will eat snacks. Understanding how children access food at school in New Jersey is an important part of finding ways to improve the long-term health outcomes for New Jersey's children.

During the 2011-2012 school year, 1,363,996 children were enrolled in the New Jersey Public School System.<sup>455</sup> The New Jersey Department of Education (DOE) and the members of the New Jersey State Board of Education oversee the state's 2,500 public schools and 603 school districts.<sup>456</sup> In 1997, the state's Bureau of Child Nutrition Programs was transferred from DOE to NJDA in order to consolidate the state's child nutrition programs into one department in state government.457 Thus, in addition to DOE and the New Jersey State Board of Education, NJDA is also involved in coordinating school food, nutrition, and wellness programs for New Jersey's public school students.

In recent years, the economic picture for children and families across New Jersey has worsened; in 2010, nearly one-third of the state's children lived in low-income households.<sup>458</sup> While the state has made strides to assist these children and their families by providing them with healthy school meals at lunchtime at a free or reduced price, the success of some other child nutrition programs, such as school breakfast, have lagged behind.<sup>459</sup> School meals have the potential to address significant challenges for New Jersey youth by providing healthy meals to students who otherwise might lack access to healthy food; in 2011, only 28% of New Jersey high school students ate vegetables two or more times per day, and 19% drank a can, bottle, or glass of soda at least once a day.<sup>460</sup>

Both the federal and New Jersey state governments are involved in school nutrition and wellness programs. The federal government has established a variety of programs addressing nutrition, food, and wellness in schools, including the National School Lunch Program (NLSP), the National School Breakfast Program (NSBP), and the Summer Food Service Program (SFSP).<sup>461</sup> The USDA's Food and Nutrition Service (FNS) is the federal agency in charge of establishing standards for these programs, including nutrition standards for the foods served.<sup>462</sup>



Children also purchase food outside of the federal meal programs; these "competitive foods"-foods that are not sold as part of a federal meal program—provide children additional opportunities to eat food during the school day. Many of these competitive foods are sold in vending machines and by outside food companies that are allowed to sell their meals during lunchtime. Until the passage of the Healthy, Hunger-Free Kids Act of 2010, the USDA did not have the authority to establish nutrition standards for competitive foods.463 In June 2013, the USDA finally established nutrition standards for all food sold in schools pursuant to this new authority.464 Under the Healthy, Hunger-Free Kids Act of 2010, states are allowed to establish stricter standards for competitive foods served in schools than the ones outlined in the new regulations.<sup>465</sup> Additionally, as discussed below, the Healthy, Hunger-Free Kids Act of 2010 strengthened requirements for school wellness policies.466

### SCHOOL WELLNESS POLICIES

Under federal law, schools that participate in the NLSP are required to establish a school wellness policy.<sup>467</sup> Under the Healthy, Hunger-Free Kids Act of 2010, local school wellness policies must be reviewed by the community and must include an implementation plan that meets new assessment standards.<sup>468</sup> The regulations for wellness policies apply directly to schools and school districts; states are not required to act with regard to these school wellness policies, but can take action to strengthen the requirements.

In 2005, New Jersey promulgated a regulation requiring all school districts to adopt a local school nutrition policy.<sup>469</sup> The new rule stated that school districts were required to implement a wellness policy consistent with NJDA's Model School Nutrition Policy by September 2007.<sup>470</sup> The Model School Nutrition Policy includes the following provisions:

 A commitment to provide students with healthy foods, encouraging the consumption of fresh fruits and vegetables, supporting healthy eating through nutrition education, encouraging students to select and consume all components of the school meal, and providing students with the opportunity to engage in daily physical activity;

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- Implementation of nutrition standards for school food available on campus;<sup>471</sup>
- A commitment to allow adequate time for student meal service and consumption, as well as a pleasant dining environment;
- Incorporation of nutrition education and physical activity into the school district's curriculum; and,
- A commitment to promoting the Nutrition Policy with all food service personnel, teachers, nurses, and other school administrative staff.<sup>472</sup>

Legislation accompanying this regulation requires new school districts participating in any of the federally funded school meal programs to submit their local policies to NJDA for a compliance check, and encourages local boards of education to establish more stringent nutritional policies for students.<sup>473</sup>

Beyond the Model Nutrition Policy, NJDA produced several guidance documents and resources to aid implementation of these enhanced nutritional standards. For example, NJDA published a Q&A document concerning all aspects of the required nutrition policy,<sup>474</sup> resources underscoring the rationales underlying each component of the Model Policy,<sup>475</sup> and a Wellness Policy Evaluation Tool to help districts assess their success at meeting the goals of their wellness policies.<sup>476</sup>

Additionally, in 2003, the New Jersey State Legislature created an Obesity Prevention Task Force.<sup>477</sup> The Task Force, housed in the New Jersey Department of Health (DOH), was created to develop recommendations "for specific actionable measures to support and enhance obesity prevention among New Jersey residents, particularly among children and adolescents."478 The state pledged to incorporate the recommendations of the Task Force into a New Jersey Obesity Action Plan, which was to include measures such as media health promotion campaigns targeted to children and parents and school-based nutrition education and physical activity programs.479

The New Jersey Obesity Prevention Action Plan was published in 2006.<sup>480</sup> One of the primary goals articulated in the Plan was to "mobilize and empower... schools to take local action steps to help families raise healthier



children and increase the number of schools that view obesity as a public health issue."<sup>481</sup> Recommended strategies to further this goal included the following:

- Encourage all schools to exceed the federal requirements for local wellness policies and the state requirements for the New Jersey Model School Nutrition Policy;
- Collect Body Mass Index (BMI) data from students;
- Promote physical activity throughout the school day;
- Provide all students with opportunities for healthy eating throughout the school day, as well as information about healthy eating; and,
- Include obesity prevention in professional development for school personnel.<sup>482</sup>

While this state plan was aspirational, it sent a clear message to local municipalities from the state government that tackling childhood obesity and promoting healthy lifestyles were priorities. Further, New Jersey required local wellness policies well before the federal government required them. The early adoption of nutrition and wellness requirements and the state obesity plan indicate that New Jersey is taking action to improve the health of its school-aged children.

#### SCHOOL LUNCH

The following discussions about the federal school meal programs focus on increasing access to food for low-income children specifically, because they are more likely to be at risk of not having access to good food than their more affluent counterparts. The federal school meal programs allow low-income children to receive either free or reduced-price meals at school.

The USDA's NSLP serves over thirty-one million children each day and cost \$11.6 billion in fiscal year 2012.<sup>483</sup> The NSLP provides a per-meal cash reimbursement to schools to provide nutritious meals to children.<sup>484</sup> NSLP meals must meet federal nutrition requirements, and every school district that participates in the program must enact a school wellness policy.<sup>485</sup> Students that meet certain criteria may qualify for free or reduced-price (F/RP) meals.<sup>486</sup> The basis of

eligibility for F/RP meals can be determined in one of three ways: income-based eligibility, categorical eligibility, or community eligibility.<sup>487</sup>

The most common way a child may be qualified as eligible for F/RP meals is based on *household income*.<sup>488</sup> Households in this category must complete the school meal application to show income eligibility; children from families with incomes at or below 130% FPL are eligible for free meals, while those from households with incomes between 130% and 185% FPL are eligible for reduced-price meals.<sup>489</sup>

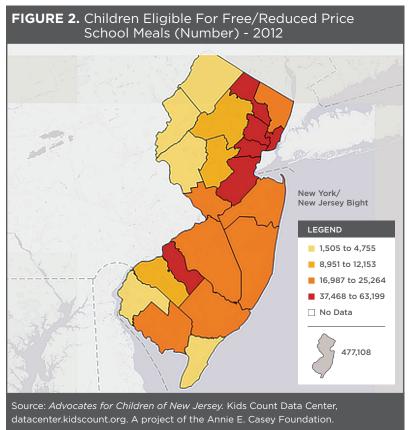
Categorical eligibility means that all children who fall within a certain category may receive free school meals; children are categorically eligible for free lunch if: (1) the child is in foster care or Head Start, (2) the child is homeless or migrant, or (3) the child is living in a household receiving SNAP, TANF, or Food Distribution Program on Indian Reservations benefits.490 Categorically eligible children may be enrolled in free meal programs using a traditional income-based paper application or they may be *directly certified*.<sup>491</sup> A school district employing direct certification exchanges data with a corresponding authority, such as the TANF office, to identify gualifying students.<sup>492</sup> All school districts nationwide are required to directly certify children living in households that receive SNAP benefits for free school meals.<sup>493</sup> In 2012, New Jersey received a \$206,857 grant from the USDA to improve its Direct Certification system and increase participation in the school lunch and school breakfast programs.494

Community eligibility, the third basis of eligibility for F/RP meals, allows schools with high percentages of low-income children to provide free breakfast and/or lunch to all students without collecting school meal applications.<sup>495</sup> Schools can use this option if 40% or more of its students are directly certified for free meals.<sup>496</sup> An increasing number of states have started offering this option: Illinois, Kentucky, and Michigan in the 2011-2012 school year; and Washington D.C., New York, Ohio, and West Virginia in the 2012-2013 school year.497 Georgia, Florida, Maryland, and Massachusetts began offering this option in the 2013-2014 school year.<sup>498</sup> As of the 2014-2015 school year, all schools nationwide that meet the 40% direct



( 33

certification threshold will be eligible to utilize the community eligibility option.<sup>499</sup> (See Figure 2)



727,528 in fiscal year 2011), amounting to a total of 118,632,732 lunches sold in that year (down from 118,752,274 lunches in fiscal year

2011).<sup>505</sup> In the 2011-2012 school year, 477,108 students in New Jersey were eligible for F/RP lunch (up from 448,306 in 2010-2011),<sup>506</sup> and 79.7% of students eligible for F/RP lunch received it (up from 77.9% in 2010-2011).<sup>507</sup>

Schools with the highest numbers of students eligible for F/RP lunch are most densely clustered in the northeastern regions of the state.<sup>508</sup> Specifically, Essex County, Hudson County, Passaic County, Union County, and Middlesex County are most heavily-populated with low-income students.<sup>509</sup>

New Jersey certifies student eligibility for F/RP meals by using an incomebased paper application or through direct certification

Although the federal government plays a major role in the school meal programs, the states also have a significant role to play in implementing the programs.<sup>500</sup> First, under New Jersey law, each school district is required to make available to all eligible children a school lunch that meets minimum nutritional standards established by NJDA.<sup>501</sup> Second, each school district is responsible for enrolling eligible students in the program.<sup>502</sup> Under state law, schools with 5% or more students eligible for F/RP meals must make lunch available (but not necessarily free) for all children enrolled in the school.<sup>503</sup> In addition to establishing nutrition requirements and certifying eligible students to receive F/RP meals, New Jersey law empowers the boards of education of school districts within the state to install, equip, supply, and operate cafeterias to dispense food to students on a not-for-profit basis.504

#### Eligibility and Participation in New Jersey

In fiscal year 2012, 729,099 New Jersey students participated in the NSLP (up from

based on categorical eligibility criteria.<sup>510</sup> During the 2011-2012 school year, 77% of school-aged SNAP participants in New Jersey were directly certified for free school meals;<sup>511</sup> 310,000 students were identified as categorically eligible for F/RP lunch, 211,500 were directly certified, and 29,100 were categorically eligible but approved only by application.<sup>512</sup> Based on these figures, 78% of categorically eligible children in New Jersey were certified in some manner for school meals.<sup>513</sup>

#### Nutrition Standards

Although New Jersey maintains nutrition standards for school meals, most of these nutritional requirements are identical to federal regulations. State law requires that each school district meet minimum nutrition standards established by NJDA when providing school lunches to its students (while the language of the statute names DOE as the agency to establish the nutritional standards, with the reorganization in 1997, NJDA is now the agency in charge of setting

nutritional standards for school meals).<sup>514</sup> The state administrative code calls for the nutritional standards established by NJDA to be identical to USDA regulations,<sup>515</sup> and adopts the federal nutritional requirements as the basis for local school district nutritional standards.<sup>516</sup> However, New Jersey law also states that local boards of education may establish stricter nutritional policies for students.<sup>517</sup> School districts are permitted to establish stricter nutrition standards, but must meet the minimum standards set by NJDA (which are identical to the federal nutrition standards).<sup>518</sup>

#### SCHOOL BREAKFAST

In addition to school lunches, the federal government provides reimbursable school breakfasts to schools throughout the country. Although the NSBP is very similar to the NSLP, participation in the NSBP has lagged behind participation in the NSLP. Nationally, as of 2009, at least 16,000 schools that participated in the NSLP did not participate in the NSBP.<sup>519</sup> Since then, the federal government and other state players have made huge efforts to increase participation in the NSBP. For example, the Healthy, Hunger-Free Kids Act of 2010 includes grants to expand free breakfast.<sup>520</sup> These efforts have been yielding positive results. In the 2011-2012 school year, 91.2% of schools across the country that participated in the school lunch program also participated in the school breakfast program.<sup>521</sup> Although an increasing number of schools are offering school breakfast programs, student participation in the school breakfast program is not yet as high. However, progress is being made nationally; in the 2011-2012 school year, for the first time, more than half of the lowincome children that participated in the school lunch program also participated in school breakfast program across the United States.522

In 2003, New Jersey enacted a law requiring the establishment of school breakfast programs in public schools where 20% or more of the students enrolled in the school are eligible for F/RP meals under the NSLP or NSBP.<sup>523</sup> Pursuant to this law, New Jersey school districts must submit plans for the establishment of school breakfast programs for each affected school.<sup>524</sup> DOE and NJDA are charged with reviewing these plans, as well as making any necessary recommendations regarding "how the school breakfast program can operate within the limits of the federal and State reimbursement rates for the federal [SBP]."<sup>525</sup> If school districts fail to submit a school breakfast plan for review, the law requires affected schools to establish school breakfast programs based on a model school breakfast plan provided by NJDA.<sup>526</sup> Finally, school districts implementing a school breakfast program are subject to certain requirements once school breakfast programs are approved and established, including:

- School districts are required to publicize the availability of the school breakfast program to parents and students;
- Schools and school districts must make efforts to ensure that students eligible for F/RP breakfast are not recognized as program participants by the student body, faculty, or staff in a manner distinct from student participants who are not income-eligible. One example of such efforts is the establishment of a meal plan or voucher system under which students receiving subsidized breakfasts are not distinguished from students receiving non-subsidized breakfasts;
- Schools and school districts are required to make every effort to encourage students who are not income-eligible to participate in the program; and,
- School breakfasts must abide by New Jersey's nutritional requirements to the extent that they are stricter than the USDA's.<sup>527</sup>

During the 2011-2012 school year, 182,339 F/RP students in the state participated in the NSBP, amounting to 41.3 F/RP students participating in NSBP per 100 participating in NSLP (compared to 37.6 in 2010-2011).528 These figures ranked New Jersey forty-sixth in participation levels amongst the states in 2011.529 The low participation rate can be attributed to low rates of school participation in the NSBP across the state. During the 2010-2011 school year, 1,833 schools in New Jersey offered NSBP, while 2,686 offered NSLP.530 Thus, only 68.2% of schools with school lunch programs also participated in school breakfast in the state.<sup>531</sup> In this regard, New Jersey was ranked last amongst the states.<sup>532</sup> In 2011-2012, New Jersey saw an increase in school participation in the school breakfast





and school lunch programs. During that school year, 1,920 schools participated in the NSBP, while 2,704 participated in the NSLP.<sup>533</sup> In that school year, 71.0% of schools with school lunch programs also participated in school breakfast programs.<sup>534</sup> Despite the increase, New Jersey is still ranked last in participation in school lunch and school breakfast programs across the country.<sup>535</sup>

It is important to note, however, that in the 2011-2012 school year, New Jersey was one of ten states to achieve a double-digit increase in the percentage of low-income students participating in the school breakfast program.<sup>536</sup> In response to the low school breakfast program participation, the non-profit organization Advocates for Children of New Jersey launched a partnership with NJDA and DOE to form a statewide coalition to promote school breakfast.537 The Statewide School Breakfast Campaign also included teacher and principal unions, school boards, and the New Jersey Dairy Council.538 The group focused on promoting school breakfast through fall and spring kick-off events with paid media, flyers for children and parents, and website promotion.<sup>539</sup> Because of this campaign, New Jersey moved up in the rankings from fortyeighth to forty-sixth in the 2011-2012 school year.540 The Food Research and Action Center, a non-profit research group based in Washington, D.C., reports that New Jersey's successes in improving participation rates in the school breakfast program are serving as a model for other states (namely Nebraska and Iowa) in their efforts to increase participation rates.<sup>541</sup> In October 2013, Advocates for Children of New Jersey released their third annual "Food for Thought: New Jersey School Breakfast Report" and reported that between 2010 and 2013, the number of children receiving F/RP breakfast rose 35%.<sup>542</sup> Because the federal government reimburses based on participation, this increase means that school districts within the state will access \$10.2 million more in federal funds for fiscal year 2014 (for a total of \$66 million for school meals).543

#### **COMPETITIVE FOODS**

Any foods not sold as part of the NLSP or NSBP are considered "competitive foods" because they are sold "in competition" with the federally sponsored meals.<sup>544</sup> Until the Healthy, Hunger-Free Kids Act of 2010 mandated that the USDA create nutrition guidelines for all food sold on school campuses, the USDA did not have the authority to set nutritional standards for these competitive foods.<sup>545</sup> Prior to the Healthy, Hunger-Free Kids Act, the federal government could only prohibit the sale of "foods of minimal nutritional value" in schools.<sup>546</sup> In June 2013, the USDA released an interim final rule establishing nutritional standards for competitive foods.<sup>547</sup>

States have the ability to create higher standards for school meals and competitive foods than federal law, and can set standards for food sold in vending machines.<sup>548</sup> Before the Healthy, Hunger-Free Kids Act of 2010 set nutritional standards for competitive foods, New Jersey had made some efforts to fill the federal regulatory gap. New Jersey law restricts the content of all "snack and beverage items, sold or served anywhere on school property during the school day, including items sold in a la carte lines, vending machines, snack bars, school stores and fundraisers, or served in the reimbursable After School Snack Program."<sup>549</sup> New Jersey prohibits schools from serving, selling, or giving away certain foods, such as candy and food and beverages listing sugar as the first ingredient "anywhere on school property at any time before the end of the school day, including items served in the reimbursable After School Snack Program."550

All snacks and beverages sold in New Jersey schools are required to meet the following standards:

- No more than eight grams of total fat per serving, with the exception of nuts and seeds, and no more than two grams of saturated fat per serving;
- All beverages, other than milk containing two percent or less fat, or water, shall not exceed a twelve-ounce portion size; and whole milk may not exceed an eight-ounce portion;
- In elementary schools, beverages shall be limited to milk, water, or 100% fruit or vegetable juices;
- In middle and high schools, at least 60% of all beverages offered, other than milk or water, must be 100% fruit or vegetable juice; and,



 In middle and high schools, no more than 40% of all ice cream and frozen desserts shall be allowed to exceed the above standards for sugar, fat and saturated fat.<sup>551</sup>

While these federal and state competitive food standards are relatively comprehensive, food and beverages served during special school celebrations or during curriculum-related activities are exempt from this law.<sup>552</sup> To the extent that the federal standards are stricter, New Jersey must meet the requirements set forth in the interim final rule published by the USDA. However, where New Jersey's standards are stricter, those requirements must be followed in the state. For example, the federal rules restrict the size of beverages that can be sold in elementary and middle schools, whereas New Jersey's current standards do not set a limitation on serving size of beverages. Here, New Jersey must follow the federal requirements.

#### SUMMER FEEDING PROGRAM

The federal government has two summer feeding programs: the SFSP and the Seamless Summer Option (SSO). The SFSP provides free, nutritious meals and snacks to help children in low-income areas access proper nutrition throughout the summer months when they are out of school.<sup>553</sup> The SSO is geared toward helping schools feed children from low-income areas during the summer vacation months.<sup>554</sup>

New Jersey administers summer meals through both federal summer meal programs. In New Jersey, NJDA administers the SFSP; NJDA works with approved, local sponsors, such as school districts, local government agencies, camps, or private nonprofit organizations, to run SFSP.<sup>555</sup> These sponsors provide free summer meals to groups of children at a central location, such as a school or a community center.<sup>556</sup> Local sponsors then receive payments from the USDA through NJDA for meals served and for documented operating costs.<sup>557</sup>

At most SFSP sites in New Jersey, children receive either one or two reimbursable meals each day. SFSP is available to children under the age of eighteen.<sup>558</sup> There are three types of summer feeding locations available in New Jersey: open, enrolled, and campsites.<sup>559</sup> Open *sites* operate where at least half the children in the area are from families earning less than 185% FPL (making these children eligible for F/RP meals).<sup>560</sup> Any child at an open site receives free meals.<sup>561</sup> *Enrolled sites* provide free meals to children enrolled in an activity program at the site if at least half of those enrolled children are eligible for F/RP meals.<sup>562</sup> *Camps* may also participate in SFSP, but they only receive payments for meals served to children who are eligible for F/RP meals.<sup>563</sup>

The NJDA also administers the SSO.<sup>564</sup> Both public and private schools that participate in NSLP or NSBP may apply for SSO.<sup>565</sup> The SSO program will only operate feeding sites in areas where at least 50% of the children in the area served, or 50% of children enrolled in that site's programming, are eligible for F/RP meals.<sup>566</sup> However, all children in the community must be able to attend or enroll in summer feeding at these sites, regardless of their F/RP eligibility.<sup>567</sup> SSO feeding sites may serve up to two meals daily, and earn the "free" federal reimbursement rates for each meal served.<sup>568</sup>

New Jersey's participation rate in summer nutrition programs is incredibly low. In July 2010, 68,533 students in New Jersey participated in one of the summer nutrition programs.<sup>569</sup> Yet, during the 2009-2010 school year, 378,029 children participated in NSLP.570 Therefore, in July 2010, there were only 18.1 children in the summer nutrition programs per 100 children in the NSLP during the preceding school year.<sup>571</sup> In July 2009, there were 20.5 children enrolled in the summer nutrition programs per 100 children in the NSLP that school year; that means that New Jersey saw a 4.3% decrease in summer feeding program participation.<sup>572</sup> NJDA reports that in 2012, the SFSP had ninety-eight sponsoring organizations with 1,100 feeding sites in New Jersey; there is no data included, however, about how many students participated during the summer of 2012.573

# FOOD AND PHYSICAL ACTIVITY INFRASTRUCTURE

How local and state governments decide to use their land—for example, to encourage the production of healthy food and to encourage increased physical activity—are important issues to address when discussing the





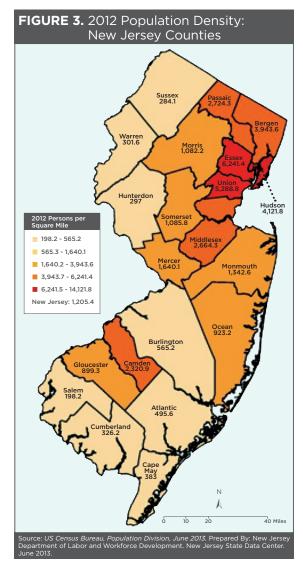
prevention and treatment of chronic diseases. This section provides background on the food system infrastructure in New Jersey as well as various initiatives focused on increasing physical activity opportunities for New Jersey residents.

# Food System Infrastructure and Land Use

The "food system infrastructure" refers to the activities and players that take a seed and turn it into food. The food system infrastructure is the foundation of the food system-from growing to processing, to aggregation and distribution, to marketing and distribution, to retail and consumption, and food waste. Building a strong and supportive food system infrastructure is critical to ensuring New Jersey can grow and provide healthy food for its residents. This section focuses on smallerand mid-sized agricultural operations and on specialty crops-fruits, vegetables, and nuts-rather than on the mainstream United States food system because in the long run, it will be important for New Jersey to have a strong food system to ensure New Jersey residents have continued access to fruits and vegetables. Although the food system infrastructure is made up of many parts, this section will discuss only a few of them to provide an introduction to issues impacting the food system infrastructure that produces healthy food for New Jersey residents. In addition to the food system infrastructure. this section's discussion of land use and planning takes a broad look at how land can be used in ways that support residents' abilities to live healthy lives.

With only 7.354 square miles of landmass and over 8.7 million people (compared to a state like North Carolina, which has approximately 9.5 million people spread over 48,617 square miles), New Jersey must think carefully about how it uses its limited land.<sup>574</sup> New Jersey is an extremely densely populated state: seven out of the twenty-one counties have population densities of more than 1,640.2 people per square mile.<sup>575</sup> Hudson County is the most densely populated, with 14,121.8 people per square mile.<sup>576</sup> Overall, New Jersey has 1,205.4 people per square mile.<sup>577</sup> To compare, in North Carolina, only three of the state's one hundred counties have a population density of more than 1,000 people per square mile.578

The vast majority of counties in North Carolina have between 1-250 people per square mile.<sup>579</sup> (See Figure 3)



New Jersey's landmass of 7,354 square miles translates to 4,706,560 acres of land (one square mile is the equivalent of 640 acres). According to the 2007 Census of Agriculture, about 733,000 acres in New Jersey were farmland.<sup>580</sup> The number of farmland acres in New Jersey fell from 2002 to 2007; in 2002, New Jersey had 833,682 acres in farmland.581 Of the total acres in farmland, 488,697 acres are cropland (66% of total), which "includes harvested cropland, cropland used only for pasture or grazing, cropland on which all crops failed or were abandonded, cropland in cultivated summer fallow, and cropland idle or used for cover crops or soil improvement but not harvested and not pastured or grazed"; 415,542 acres (56% of total) are harvested



cropland, which "includes land from which crops were harvested and hay was cut, land used to grow short-rotation woody crops and land in orchards, citrus groves, Christmas trees, vineyards, nurseries, and greenhouses," while another 39,175 acres (5%) are used for pasture or grazing.<sup>582</sup>

#### PRODUCTION

Production includes any infrastructure that helps with planting and growing of foods and agricultural products. According to the most recent USDA Census of Agriculture (2007), there are 10,327 farms in New Jersey, up from 9,924 farms in 2002.<sup>583</sup> Seventy-five percent of farms in the state are between one and fortynine acres.<sup>584</sup> In terms of food production, the Census of Agriculture reports that in New Jersey there are:

- 1,456 farms on 50,641–54,062 acres producing vegetables;<sup>585</sup>
- 718 farms on 10,537 acres in orchard production;<sup>586</sup>
- 641 farms on 13,323 acres producing berries;<sup>587</sup>
- 692 farms on 10,419 acres producing non-citrus fruit;<sup>588</sup> and,
- 59 farms on 118 acres producing nuts.589

Although there has been an increase in the number of farms in vegetable production in New Jersey, the number of acres of vegetable production fell between 2002 and 2007 by about 5,000 acres.<sup>590</sup> The number of farms producing non-citrus fruits increased slightly between 2002 and 2007.<sup>591</sup> In New Jersey, therefore, the majority of fruit and vegetable production takes place on relatively small farms.

In 2007, the total market value of agricultural products sold in New Jersey in 2007 was \$986 million.<sup>592</sup> Nursery, greenhouse, floriculture, and sod had the highest amount in sales (\$442 million).<sup>593</sup> The next highest categories were sales of vegetables, melons, potatoes, and sweet potatoes (at \$181 million) and sales of fruits, tree nuts, and berries (at \$147 million).<sup>594</sup> Fruit and vegetable production, therefore, is a significant economic contributor to New Jersey's agricultural profile. In fact, New Jersey is the third largest producer of cranberries and the fourth largest producer of blueberries, freestone peaches, and bell peppers in the country.<sup>595</sup>

In terms of the state's economy, agriculture is a very small industry. In 2012, the gross domestic product from agriculture in New Jersey was \$758 million.<sup>596</sup> The gross domestic product from all private industries in New Jersey in 2012 was \$452,301,000,000; agriculture represented 0.17% of the state's gross domestic product in 2012.<sup>597</sup> (See Table 2)

The federal government provides support to agricultural production in a number of ways, especially in the form of financial assistance. Although much of the financial assistance provided by the federal government goes to support commodity crops-such as corn, soy, wheat, and cotton-in the form of subsidies, the federal government provides some financial support to the production of "specialty crops"-such as fruits, vegetables, and nuts.<sup>598</sup> The Specialty Crop Block Grant program provides federal funds to projects across the United States that focus on the production of fruits, vegetables, and nuts.599 These specialty crop projects received \$55 million in 2011 and \$55 million again in 2012.600 To compare, commodity crops received nearly \$5 billion in subsidies in 2011.601 Note this number includes the amount paid out in direct and countercyclical payments, and does not include financial support through conservation, disaster, and crop insurance subsidies.602 The total amount of subsidies paid out in 2011 for all four kinds of subsidies (conservation, disaster, commodity, and crop insurance) totaled around \$15 billion.<sup>603</sup>

The Specialty Crop Block Grant program is funded by the federal government and administered by state governments. The federal government provides a baseline grant to each state to distribute to specialty crop projects, and any amount above the baseline is determined by the state's proportion of specialty crop production in the country.<sup>604</sup>

In 2012, NJDA distributed \$816,127 in grants to specialty crop projects.<sup>605</sup> Some of the projects included expanding community gardens throughout the state, educating low-income families about the nutritional value of fruits and vegetables, and promoting certain fruits and vegetables at the farmers markets (such as "Strawberry Day").<sup>606</sup> Although it does not appear that New Jersey provides any state funds for specialty crop





production, NJDA operates a number of programs to promote agriculture throughout the state. The "Jersey Fresh" program, for example, helps consumers find farmers markets, roadside stands, community supported agriculture operations, and organic farms throughout the state.607

New Jersey does not currently have any special tax breaks or incentives for specialty crop producers. However, as in many states, New Jersey has a law that reduces the amount of

property taxes landowners paid on farmland.608 A 1964 law provides significant property tax exemptions for landowners who farm at least five acres and meet an income threshold.<sup>609</sup> The law was intended to preserve farmland throughout the state, but over the years the exemption had been falsely claimed by many landowners.<sup>610</sup> In order to reduce the amount of fraud under the law, the New Jersey legislature passed a bill in 2012 to increase the income requirement and sets stricter standards for

TABLE 2. New Jersey Agriculture at a Glance		
Aquaculture	Anglefish, Bluegill, Brook trout, Brown trout, Comet, Discus, Eastern oysters, Fathead minnow, Hybrid striped bass, Koi, Largemouth bass, Mummichog, Northern quahog, Rainbow trout, Tilapia, Triploid grass carp, White sucker, Yellow perch, Various ornamental plants	
Christmas Trees	Canaan fir, Frasier fir, Concolor fir, Norway spruce, Blue spruce, White pine, Scotch pine	
Field Crops	Barley, Corn, Hay, Potatoes, Soybeans, Sweet potatoes, Winter wheat	
Floriculture/Nursery	Aquatic plants, Bedding/Garden plants, Bulbs, Chrysanthemums, Foliage, Geraniums, Hostas, Impatiens, Lilies, Marigolds, New Guinea Impatiens, Pansies, Petunias, Poinsettias, Potted plants, Shrubs, Sod, Trees	
Fruit	Apples, Blackberries, Blueberries, Cantaloupe, Cranberries, Nectarines, Peaches, Raspberries, Sour cherries, Strawberries, Watermelon <sup>8</sup>	
Herbs	Arugula, Basil, Cilantro, Dill, Marjoram, Methi, Mint, Oregano, Parsley, Sage, Tarragon, Thyme <sup>9</sup>	
Livestock/Poultry	Alpaca, Bees, Bison, Cattle, Chickens, Cows (beef and milk), Deer, Donkeys, Ducks, Elk, Emus, Gees, Goats (meat and milk), Horses, Llamas, Mules, Ostriches, Pheasants, Pigeons, Pigs, Rabbits, Quail, Sheep, Turkeys	
Specialty Products	Asian fruits and vegetables, Baby arugula, Baby spinach, Chestnuts, Corn stalks, Cut flowers, Garlic, Grapes and wines, Hay, Honey, Indian Corn, Maple syrup, Mums, Popcorn, Shell eggs, Straw, Tomatillos	
Vegetable	Asparagus, Beans (green, pole, and snap), Beets, Bok Choy, Broccoli, Broccoli Raab, Cabbage (red, green, Chinese, and Savoy), Cauliflower, Celery, Collards, Corn (sweet), Cucumbers, Dandelion Greens, Eggplant, Eggplant (Sicilian), Escarole, Fennel, Horseradish root, Kale, Kohlrabi, Leeks, Lettuces, Mustard greens, Okra, Onions, Parsnips, Peas, Peppers, Pickles, Potatoes, Pumpkins, Radishes, Rhubarb, Rutabaga, Shallots, Spinach, Squash, Sweet potatoes, Swiss chard, Tomatoes, Turnips, Turnip greens	

proving the land is actively being farmed.<sup>611</sup> Under the new law, a farm must produce \$1,000 of income per acre per year in order to receive the property tax exemption.<sup>612</sup>

#### PROCESSING

Once an agricultural product is grown and harvested, it is often processed in some way—for example, washed, packed, chopped, dried, frozen, or turned into products like baked goods, jams, and granola. The food processing infrastructure is an important part of a state's food system. Examples of food processing infrastructure include cold storage facilities; shared-use food processing centers and agricultural facilities (for grading, storing, and packaging foods); grain milling facilities; dairy processing facilities (for milk bottling and cheese making); and meat and poultry slaughter and processing facilities).

In 2007, there were 1,660 food and beverage manufacturers with \$12.12 billion in sales in New Jersey.<sup>613</sup> In 1997, Cook College published a report that identified the needs of New Jersey's food industry; some of the challenges facing New Jersey's food industry included access to new technologies, product and market development assistance, regulatory and permitting solutions, and low-cost processing equipment to make high-quality value added products.<sup>614</sup> In response to this report, in 2001, Rutgers University established the Food Innovation Center to "provide[] business and technology expertise to startup and established food and value-added agriculture businesses in New Jersey and the surrounding region."<sup>615</sup> In 2008, the Food Innovation Center opened an Incubator Facility that provides shared-use processing space for farmers and food processors to create value-added food products.<sup>616</sup> The shareduse processing space meets local, state, and federal regulatory requirements (for both the Food and Drug Administration and the USDA), which means farmers and food processors can sell their products across state lines, thus increasing market opportunities.<sup>617</sup> The Food Innovation Center plays an important role in the development of food processing capacity within New Jersey. In 2008, the Food Innovation Center was "the nation's only one-stop, totally custom, shared use, University-based innovation center."618 As part

of Rutgers University, the Food Innovation Center is able to provide crucial business and technical services to small- and mid-sized food producers that would otherwise not be able to afford such business development services.<sup>619</sup>

#### AGGREGATION AND DISTRIBUTION

Aggregation and distribution are integral parts of the food and agriculture system. It is critical that a strong aggregation and distribution infrastructure exist within New Jersey to ensure that food products (both unprocessed and processed) get to market. Aggregators gather products from a variety of producers in one central location and distribute those products to the larger purchasers. Aggregators often serve as facilitators for farmers transitioning to larger institutional markets. One type of aggregator is known as a "food hub." Food hubs are organizations (private or nonprofit) that act as centralized supply chain coordinators (like a middle-man between producers, distributors, and retailers),<sup>620</sup> and often offer a variety of services centered on bringing together producers and consumers,621 such as product storage, branding and market promotion, and food safety and good agricultural practices (GAP) training.622 The USDA defines a regional food hub as "a business or organization that actively manages the aggregation, distribution, and marketing of source identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand."623

Thirty-four states have food hubs, including New York and Pennsylvania, which have five and three food hubs, respectively.<sup>624</sup> However, there are no food hubs operating in the state of New Jersey.<sup>625</sup>

#### STATE LAND USE POLICIES

Statewide land use plans are useful for addressing various land use issues in a comprehensive way. Many statewide land use plans include conservation of natural resources and agricultural use as important planning topics. When New Jersey signed its State Planning Act into law in 1986, the legislature declared that:

> New Jersey, the nation's most densely populated State, requires sound and integrated Statewide planning and coordination of Statewide planning with local and regional planning in



order to conserve its natural resources, revitalize its urban centers, protect the quality of its environment, and provide needed housing and adequate public services at a reasonable cost while promoting beneficial economic growth, development and renewal.<sup>626</sup>

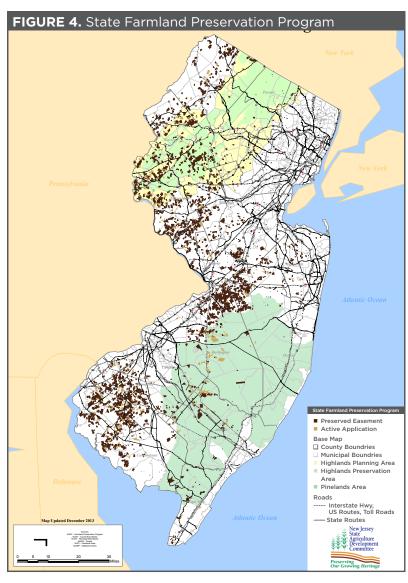
Some of the objectives of the legislation included identifying "areas for growth, limited growth, agriculture, and open space conservation" (emphasis added).<sup>627</sup> In 2012, New Jersey revisited its State Strategic Plan to update the plan.628 One of the values articulated in the revised State Strategic Plan includes "support[ing] agriculture and locally-grown food consumption through protection and preservation of farmland."629 In order to accomplish this goal, the State Strategic Plan requires the identification of "Agricultural Development Areas" as "Priority Preservation Investment Areas" by a number of state and local government entities.<sup>630</sup> The State Strategic Plan is "not a land-use regulatory tool, but a strategic framework to coordinate and channel public and private investments" and relies on coordination among state and local government entities.631

#### AGRICULTURAL LAND PRESERVATION

Farmland preservation techniques can be part of a statewide land use plan, or can be independent policies focused on preventing farmland from being developed into other uses. There are a number of ways states restrict land to agricultural uses. New Jersey has implemented two programs to preserve farmland within the state. **(See Figure 4)** 

First, New Jersey passed a State Transfer of Development Rights Act, which both authorized local Transfer of Development Rights programs and empowered the State Transfer of Development Rights Bank Board to provide planning assistance grants to municipalities.<sup>632</sup>

Second, New Jersey has a Farm Preservation Program, which allows farmers to voluntarily place a restriction on the non-agricultural development of their land for a period of eight years.<sup>633</sup> Farmers are not compensated in any way for placing the restriction on their land. Instead, the state provides grants to offset up to 50% of the cost of any soil or water conservation projects.<sup>634</sup> Additionally, farmers who participate in the program receive protection against nuisance complaints,



zoning changes, emergency fuel and water rationing, and eminent domain actions.<sup>635</sup> New Jersey administers this program in conjunction with municipalities and county governments.<sup>636</sup> The State Agriculture Development Committee provides County and Municipal Planning Incentive Grants; in order to participate in the grant program, counties and municipalities must pass comprehensive farmland preservation programs.<sup>637</sup> At the end of 2012, eighteen counties and forty-six municipalities had created comprehensive farmland preservation plans.<sup>638</sup>

As of July 2013, New Jersey had preserved 2,183 farms, and a total of 204,452 acres.<sup>639</sup> As the map indicates, the farmland preserved appears to be in relatively small parcels scattered around the state.<sup>640</sup> In November 2012, the New Jersey



legislature approved an allocation of \$83.1 million to the State Agriculture Development Committee to continue farmland preservation efforts within the state.<sup>641</sup>

#### **URBAN AGRICULTURE**

Given New Jersey's small size and the fact that it is the most densely populated state in the country, the discussion of land use and agricultural land preservation must also include a discussion of urban agriculture. Urban agriculture can include both urban farming for commercial purposes as well as community gardens used by individuals and families to grow food for themselves. Data on the number of urban farms in New Jersey is difficult to find. Information on community gardens is more easily found; one article suggests there are approximately 800 community gardens within the state of New Jersey.<sup>642</sup>

The New Jersey legislature passed a law in 2011 to encourage and facilitate the development of urban farming within New Jersey's municipalities.<sup>643</sup> The law allows municipalities to sell or lease "vacant land to nonprofit entities to cultivate these lands [to] provide both recreational opportunities and a source of fresh, locally grown fruits and vegetables for local residents."<sup>644</sup> Further, nonprofit entities that lease or buy these vacant lands are exempt from property taxation.<sup>645</sup>

# **Physical Activity Infrastructure**

An evaluation of the physical activity infrastructure in New Jersey includes questions of whether residents are able to walk outside safely on sidewalks or paths; whether children can bike or walk to school; and, whether community members who cannot access physical activity resources such as gyms can utilize local resources, such as school multi-purpose rooms, as places to get physical activity. Low-income individuals are often unable to access resources that support healthy lifestyles. Governments and communities are increasingly working to ensure that all residents have the opportunity to live healthy lives *where they are*.

# COMPLETE STREETS

Complete Streets is a national movement to convert existing neighborhood infrastructure into pedestrian- and bike-friendly roadways.<sup>646</sup> Complete Streets policies instruct state

transportation planners and engineers to reevaluate sidewalks, streets, and transportation routes to ensure safe access for all users.<sup>647</sup> According to the National Complete Streets Coalition, more than 200 jurisdictions across the United States have adopted Complete Streets policies.648 Currently, no federal law exists to support Complete Streets efforts. However, on June 20, 2013, the Safe Streets Act of 2013 was introduced in the House of Representatives.<sup>649</sup> Among other things, the bill would require that within two years each state have a law or explicit policy statement that all transportation projects that receive federal funding will comply with certain Complete Streets principles.<sup>650</sup> The bill has six co-sponsors, one of whom is New Jersey Representative Frank LoBiondo.651

In order to increase the amount New Jersey's citizens walk each day, New Jersey established a Complete Streets policy in 2009.652 The New Jersey Department of Transportation (DOT) was one of the first state departments of transportation in the country to adopt such a policy.<sup>653</sup> In addition to requiring the New Jersey DOT to implement Complete Streets efforts, the policy recognizes the many benefits of Complete Streets-including improved safety, promotion of healthy lifestyles, creation of more livable communities, and reduction of traffic congestion—and encourages regional and local jurisdictions to adopt similar policies.<sup>654</sup> The New Jersey Complete Streets policy requires curb extensions, bike lanes, crosswalks, pedestrian scale lighting, and other bicycle and pedestrian accommodations in every new project.655

In addition to the statewide policy, counties and cities across New Jersey are adopting their own Complete Street policies. According to a recent report, five counties and seventyseven municipalities have passed Complete Streets policies, as of November 20, 2013.656 In order to facilitate local Complete Streets policy adoption, DOT published a Complete Streets Guide for municipalities, which includes model language, checklists, design assistance, and other resources,<sup>657</sup> and Sustainable Jersey developed a Complete Streets Toolkit to assist municipalities as they convert neighborhood streets to be convenient for walkers and bikers.<sup>658</sup> In addition, the Alan M. Voorhees Transportation Center has provided strong statewide leadership, hosting the



2013 Complete Streets Summit with 300 officials, engineers, and planners from across the state.<sup>659</sup>

There are initial indicators that Complete Streets programs may be effective at reducing the dangers pedestrians and bicyclists face, which may encourage more residents to walk and bike. For example, since Hoboken began its Complete Streets program in 2010, it has reduced bicycle-car collisions by over 60% and reduced pedestrian-car collisions by 30%.<sup>660</sup>

#### SAFE ROUTES TO SCHOOL

Safe Routes to School (SRTS) is another nationwide initiative that seeks to increase physical activity by encouraging children to walk or bike to school.<sup>661</sup> SRTS is a collaborative effort between federal, state, and local governments, and requires the support of local school districts, parents, and community members.<sup>662</sup> In 2005, Congress created the SRTS program as part of the Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); the United States Department of Transportation Federal Highway Administration provided funding to state departments of transportation to improve state infrastructure to increase the number of children that bike and walk to school.<sup>663</sup> Each state is responsible for creating and administering its own program.<sup>664</sup>

Congress allocated over \$1 billion for the SRTS program for fiscal years 2005-2012; New Jersey was allocated approximately \$31 million.<sup>665</sup> In July 2012, Congress passed a new transportation bill (Moving Ahead for Progress in the 21st Century (MAP-21)) that allows SRTS programs to compete for grant funding along with other "transportation alternatives" programs.<sup>666</sup> It appears that New Jersey has funds remaining from the initial Congressional grant.<sup>667</sup> In January 2013, the Christie Administration announced a package of \$6.8 million in grant-funding awards, including ten state-funded grants for emergency road repairs (due to Hurricane Irene in 2011), and twenty-five federally-funded grants for SRTS.668

DOT has been very active in promoting the SRTS program and working to expand SRTS efforts throughout the state. For fiscal years 2005-2009, the state received \$15 million for the SRTS program.<sup>669</sup> DOT provides funding to schools and communities for both infrastructure

improvements (e.g., planning, design, and construction or installation of sidewalks, crosswalks, etc.) and non-infrastructure activities (e.g., public awareness campaigns, trainings, and traffic education, etc.).<sup>670</sup>

#### JOINT USE AGREEMENTS

In addition to increasing physical activity by improving the built environment, communities can increase physical activity by putting underutilized community resources to use. This is particularly important in low-income communities that lack access to safe, free places to engage in physical activity. One way to accomplish this is through joint use agreements. A joint use agreement is a written contract that lists the terms and conditions for shared use of public property or facilities.<sup>671</sup> For example, a school and a community may agree that community members can use the school's outdoor athletic facilities after school, or a school may contract with an afterschool program so that students can use the indoor gym in the evenings. A joint use agreement alleviates concerns about liability for injuries or costs of maintaining the facilities with increased use that schools may have by formalizing cost-sharing agreements and addressing any liability concerns.

New Jersey has long recognized the potential for joint use to increase communities' access to facilities that promote fitness. A state law passed in 1967 allows the New Jersey Board of Education to permit municipalities to use land owned by the state Board of Education for recreational purposes.<sup>672</sup> The law has been interpreted to clarify that schools do not have a duty to supervise students who are on school property under the terms of joint use agreements.<sup>673</sup> Liability for property damage as a result of use by the municipality is placed on the municipality rather than the school board.<sup>674</sup> The New Jersey Office of Nutrition and Fitness (ONF) published a Joint Use Agreement Toolkit in June 2012 to help schools and communities create these partnerships.675 The toolkit includes checklists and model joint use agreements developed by the National Policy and Legal Analysis Network.676

#### OTHER PHYSICAL ACTIVITY INITIATIVES

Municipalities across New Jersey are also making changes to their local environments to promote residents' active and healthy lifestyles. For example, many counties are improving





infrastructure for residents to spend more time outdoors: Paterson City is developing walking paths and walking clubs, Montclair Township is installing bike racks and park trail signs, and Atlantic County is purchasing new playground equipment and promoting fitness opportunities.677 These projects, as well as seven additional projects, are funded by a partnership between Walgreens, NJPHK, and Partners for Health, which awarded obesity prevention grants to a total of ten county and local health departments in 2011.678 New Jersey communities also received more than \$1 million in federal grants from the Federal Highway Administration's Recreational Trails Program to improve parks and trails so that residents have more walking, jogging, and biking opportunities.679

# NUTRITION, HEALTH, AND PHYSICAL EDUCATION

Nutrition, health, and physical education are important parts of establishing and maintaining a healthy lifestyle, particularly in the prevention and maintenance of type 2 diabetes and other chronic diseases. Not all individuals feel equipped to follow instructions from a medical professional to improve their diets and increase their daily exercise. Educational efforts associated with federal nutrition programs and school programs are instrumental in facilitating participants' ability to incorporate healthy habits into their daily lives. Further, consumer education efforts. such as providing nutritional information on menus at restaurants, allow people to make more-informed decisions about the foods they are choosing to consume and may lead them to make healthier choices.

# Federal Nutrition Assistance Program Education

#### SNAP-ED

The Nutrition Education and Obesity Prevention Grant Program, also called SNAP-Ed, provides funding to states to create nutritional education programs and activities that increase healthy eating habits and promote a physically active lifestyle for SNAP participants. Under federal law, states are not required to provide nutrition education for SNAP participants; however, all fifty states provide nutrition education for SNAP participants and other low-income individuals.<sup>680</sup> The Healthy, Hunger-Free Kids Act of 2010 directed the federal government to provide grants to states to help implement their SNAP-Ed programs.<sup>681</sup>

New Jersey's SNAP-Ed Program is run through a partnership with Rutgers University Extension Service.<sup>682</sup> The New Jersey SNAP-Ed Program has programs in nineteen of the twenty-one counties in New Jersey (Sussex and Morris counties do not have SNAP-Ed programs).683 In fiscal year 2000 (the year with the most recent data on the New Jersey SNAP-Ed website), New Jersey SNAP-Ed delivered nutrition education classes to 2,556 adults and 5,242 youth.<sup>684</sup> For fiscal year 2014, New Jersey received \$7,338,139 for its SNAP-Ed Program.<sup>685</sup> SNAP-Ed funds in that year were distributed based on the state's percentage of national SNAP-Ed expenditures from 2009; after 2013, the state will receive an amount of SNAP-Ed funding that is partly based on the state's percentage of national SNAP-Ed expenditures and partly based on the state's percentage of national SNAP participation.686

### WIC-ED

Unlike in SNAP-Ed, federal law requires states to ensure that nutrition education is offered to WIC participants.<sup>687</sup> Nutrition education within the WIC program must be offered at no cost to the participant, and it must be tailored to the participants' situations (nutritionally, culturally, and personally).<sup>688</sup> States are responsible for, among other things, developing and coordinating the nutrition education component with local agencies, providing training and technical assistance to local agency employees, developing educational resources and materials for use in the local agencies, and monitoring local agency compliance with the regulations.<sup>689</sup>

New Jersey offers nutrition education opportunities through individual counseling, group classes, interactive displays, and health fairs.<sup>690</sup> In 2009, New Jersey launched a customized nutrition education website, NJWIConline.org.<sup>691</sup> The following year, all WIC local agency administrative offices were provided with kiosks which had the New Jersey WIC Online website ready for participants to use.<sup>692</sup> According to a New Jersey WIC report, in fiscal year 2011, more than 85% of local agencies providing WIC education had internet access.<sup>693</sup>





# School Nutrition, Health, and Physical Education

Many New Jersey children are falling short of the recommended amount of daily physical activity; among New Jersey high school students, for example, 32.9% watch television for three or more hours on an average school day, and 37.3% use a computer for non-school related purposes or play video/computer games for three or more hours on an average school day.<sup>694</sup> Increasing physical activity during the school day could help reduce sedentary habits in this population. Further, in 2011, only 28% of New Jersey high school students ate vegetables two or more times per day and 19% drank a can, bottle, or glass of soda at least once a day.<sup>695</sup>

New Jersey mandates courses in health and physical education for every public school pupil.<sup>696</sup> Specifically, all students in grades one through twelve are required to participate in 150 minutes of instruction in health, safety, and physical education each school week.<sup>697</sup> However, the state does not require students to engage in a minimum number of minutes of moderate to vigorous physical activity per school week. In order to help schools and school districts meet these health and physical education requirements, DOE developed the New Jersey Core Curriculum Content Standards (CCCS) for Comprehensive Health and Physical Education.<sup>698</sup> The CCCS are mandatory and describe what all New Jersey public school students should know and be able to do by the end of their time in public school.<sup>699</sup> As such, "[d]istrict boards of education shall ensure that curriculum and instruction are designed and delivered in such a way that all students are able to demonstrate the knowledge and skills specified by the CCCS."<sup>700</sup> Local school districts decide how many minutes per week should be allocated to each educational area to achieve the required CCCS.<sup>701</sup>

One of the standards required under the Comprehensive Health and Physical Education CCCS is wellness.<sup>702</sup> Generally, the wellness standard requires "all students to acquire health promotion concepts and skills to support a healthy, active lifestyle."<sup>703</sup> One element of this wellness standard is nutrition. The following table illustrates the content statement and cumulative progress indicators required for nutrition education following grades 2, 4, 6, 8, and 12:<sup>704</sup> (See Table 3)

These standards are accompanied by a framework designed to suggest a variety of activities, instructional strategies, and assessment methods that may assist in the development of local curricula aligned with the CCCS.<sup>705</sup>



TABLE 3. Nutrition Education in New Jersey Schools		
Grade	Content Statement	Cumulative Progress Indicators
variety of r	Choosing a balanced variety of nutritious	<ul> <li>Explain why some foods are healthier to eat than others.</li> </ul>
	foods contributes to wellness.	<ul> <li>Explain how foods in the food pyramid differ in nutritional content and value.</li> </ul>
		<ul> <li>Summarize information about food found on product labels.</li> </ul>
variety foods c	Choosing a balanced variety of nutritious foods contributes to	<ul> <li>Explain how healthy eating provides energy, helps to maintain healthy weight, and lowers risk of disease.</li> </ul>
	wellness.	<ul> <li>Differentiate between healthy and unhealthy eating practices.</li> </ul>
		<ul> <li>Create a healthy meal based on nutritional content, value, calories, and cost.</li> </ul>
		<ul> <li>Interpret food product labels based on nutritional content</li> </ul>
Grade	Content Statement	Cumulative Progress Indicators
are influ	Eating patterns are influenced by a	<ul> <li>Determine factors that influence food choices and eating patterns.</li> </ul>
	variety of factors.	<ul> <li>Summarize the benefits and risks associated with nutritional choices, based on eating patterns.</li> </ul>
		<ul> <li>Compare and contrast nutritional information on similar food products in order to make informed choices.</li> </ul>
are in	Eating patterns are influenced by a variety of factors.	<ul> <li>Analyze how culture, health status, age, and eating environment influence personal eating patterns.</li> </ul>
		<ul> <li>Identify and defend healthy ways for adolescents to lose, gain, or maintain weight.</li> </ul>
		<ul> <li>Design a weekly nutritional plan for families with different lifestyles, resources, special needs, and cultural backgrounds.</li> </ul>
r f l	Applying basic nutritional and fitness concepts to	<ul> <li>Determine the relationship of nutrition and physical activity to weight loss, weight gain, and weight maintenance.</li> </ul>
	lifestyle behaviors impacts wellness.	<ul> <li>Compare and contrast the dietary trends and eating habits of adolescents and young adults in the United States and other countries.</li> </ul>
		<ul> <li>Analyze the unique contributions of each nutrient class.</li> </ul>



# Community Nutrition, Health, and Physical Education

Outside of the federal nutrition assistance programs and school context, it is important that consumers have information about the food they are purchasing and eating. Increased access to information about the foods a consumer is purchasing can help the consumer make healthier choices; for example, by showing the calorie counts for various food options at a restaurant, a consumer has helpful information he or she can use when deciding what food to purchase and consume. Consumer education, through cooking classes, food labeling, and community physical activity courses, is helpful in empowering residents to make healthy choices. Because type 2 diabetes is closely linked to an individual's food and physical activity choices, increasing the number of opportunities for individuals to receive education about nutrition, health, and physical activity will help in the prevention and maintenance of the consequences of type 2 diabetes.

#### LABELING

Nutrition labeling can provide a useful tool to empower consumers to make healthier decisions about the foods they purchase. With the passage of the federal Affordable Care Act, restaurants across the country with more than twenty locations will soon be required to provide consumers with nutritional information for the foods served on menus and display boards.<sup>706</sup> Some states, such as California, already had menu labeling laws.<sup>707</sup> The federal requirements only apply to restaurants with more than twenty locations, but states are permitted to require menu labeling for restaurants with fewer than twenty locations in the state and to expand labeling requirements to other food establishments.708

In June 2012, the New Jersey legislature passed a law requiring retail food establishments with twenty or more locations to include calorie information on menus, menu boards, and in drive-through windows.<sup>709</sup> The law mimics the federal requirements in that the menu labeling requirements apply to restaurants with more than twenty locations and requires calorie information. New Jersey's law does not apply the menu labeling requirements to smaller-chain restaurants or non-chain restaurants within the state.<sup>710</sup>

# STATE AND LOCAL PHYSICAL ACTIVITY INITIATIVES

In 2010, 62.9% of New Jersey adults were physically active, 41.4% were highly active, and 26.8% reported no leisure-time physical activity.711 Nationally, 64.5% of adults in the United States were physically active, 43.5% were highly active, and 25.4% did not participate in any leisure-time physical activity.712 Rates of physical activity in New Jersey are about average, as compared to national data. However, other states have much higher rates of physical activity among their adult residents. Another study reports that 47.5% of adults in New Jersey participate in either thirty or more minutes of moderate exercise per day on five or more days per week OR twenty or more minutes of vigorous exercise on three or more days per week.713

In 1999, the New Jersey legislature created the New Jersey Council on Physical Fitness and Sports to support programs related to recreation and physical activity.714 The sixteen volunteer-members of the Council, all appointed directly by the Governor, come from a variety of agencies and organizations with a stake in fitness and wellness in the state.715 The Council organizes an annual Leaders' Academy, which brings together members of local government, educators, citizens, and other relevant stakeholders to discuss how to effectively make healthy changes at the community level.<sup>716</sup> The Council also awards grants of between \$2,500 and \$10,000 to municipalities to undertake obesity prevention projects.717

# BACKGROUND ON NEW JERSEY'S HEALTHCARE SYSTEM

# **HEALTH INSURANCE**

The availability and affordability of health insurance is an essential part of a successful type 2 diabetes system of care. In order to afford the key services described above, nearly all New Jerseyans need the financial help that comes from insurance coverage. In the absence of coverage for these services, people at risk for and living with type 2 diabetes are more likely to forego the care they need, increasing their risk of developing serious complications.<sup>718</sup>

# **Rates of Insurance Coverage**

From 2010 to 2011, 16% of New Jerseyans lacked insurance, the same percentage as the national rate of uninsurance in 2011.<sup>719</sup> Employer-sponsored insurance was common, with 54% of New Jerseyans receiving this type of coverage compared with 49% nationally.<sup>720</sup> In terms of government insurance programs, while 16% of United States residents received Medicaid, only 12% of New Jerseyans did; Medicare covered 13% of people, both in the state and nationally.<sup>721</sup>

New Jerseyans' access to health insurance varies by income, race, and geography. From 2010 to 2011, 46% of adults with income below 100% of the federal poverty level (FPL) lacked insurance,<sup>722</sup> and 44% of adults with income under 139% FPL also went without.<sup>723</sup> The uninsurance rate for adults with income under 200% FPL was similar, at 43%.<sup>724</sup> By contrast, the rate of uninsurance coverage for those with income above 400% FPL was 6%.<sup>725</sup>

From 2010 to 2011, 10% of non-elderly, white New Jerseyans lacked insurance, while 24% of black New Jerseyans and 33% of Latino New Jerseyans went without coverage.<sup>726</sup> This is similar to the national data on race and insurance status; across the United States, 13% of whites, 21% of blacks, and 32% of Latinos lacked insurance in 2011.<sup>727</sup> Some New Jersey counties experience higher uninsurance rates than others. For example, in Hunterdon County, 7% of residents lacked health insurance in 2009, while 23% of Hudson County residents did.<sup>728</sup> Passaic (19.7%), Essex (18.8%), Cumberland (18.6%), Union (16.9%), and Atlantic (15.5%) comprise the other counties with uninsurance rates over 15%.<sup>729</sup> It is likely that these counties will benefit most from new coverage opportunities under the Affordable Care Act (ACA).<sup>730</sup>

# The Role of National Health Reform in Expanding Insurance Coverage

The ACA will play a major role in shaping access to health insurance in New Jersey as well as nationally.

The ACA includes two major coverage expansions. First, the law allows states to expand Medicaid eligibility to most adults with income at or below 138% FPL.<sup>731</sup> This applies only to adults who are either United States citizens or "qualified" non-citizens. "Qualified" means that the person has a particular immigration status. The main category of qualified non-citizens is people who have been Legal Permanent Residents (i.e., green card holders) for at least five years.<sup>732</sup>

Under the ACA, the federal government will pay the full cost of the Medicaid expansion for the first three years (2014-2016).<sup>733</sup> In 2017, the states will begin to pay a small amount of the cost until, in 2019, states will pay 10% of the cost.<sup>734</sup> This is much lower than the usual state share of Medicaid expenses, which has been 43% on average.<sup>735</sup>

While the ACA intended for this expansion to be implemented in all states, the Supreme Court ruled in 2012 that the expansion had to be optional for states.<sup>736</sup> In February 2013, New Jersey Governor Chris Christie agreed to



accept the Medicaid expansion, at least for the first year (2014).<sup>737</sup> The New Jersey Medicaid expansion is expected to cover an additional 104,000 adults, and overall Medicaid is expected to grow by 234,000 people as people who were already eligible learn about coverage due to the publicity and enroll for the first time.<sup>738</sup>

The other major coverage expansion is through the private insurance market. The federal government will now provide subsidies for people to buy insurance in new Health Insurance Marketplaces.<sup>739</sup> The subsidies are available for people with income above 100% FPL, up to and including those with income equaling 400% FPL.<sup>740</sup> People with income below 100% FPL are expected to sign up for Medicaid instead.<sup>741</sup> The one exception is for people who are Legal Permanent Residents but who have not yet had this status for five years. These non-citizens can get federal subsidies to buy private insurance even with income below 100% FPL because they cannot get Medicaid yet.742 Also, people who can get insurance from their employer at a cost equal to or below 9.5% of their family income are expected to take the employer's insurance, and cannot get federal subsidies.<sup>743</sup> An estimated 610,000 New Jerseyans will benefit from these subsidies.744 States had the opportunity to run their state Marketplaces or else have the federal government do it (possibly in partnership with the state). New Jersey has decided to let the federal government run the state's Health Insurance Marketplace.745

# Public Health Insurance Programs

As explained above, over half of New Jerseyans receive insurance through their employment, while 12% currently receive Medicaid and 13% receive Medicare.<sup>746</sup> Because insurance coverage so significantly affects access to care, it is helpful to understand the structure and role of these two programs, as well as the services related to type 2 diabetes that they provide.

#### MEDICARE

Medicare is a federally funded program that provides health insurance to people over age sixty-five who are eligible for Social Security.<sup>747</sup> Disabled adults who are under age 65 can also get Medicare if they have worked enough years to qualify for Social Security Disability Insurance (SSDI).<sup>748</sup> After a disabled adult receives SSDI for two years, he or she becomes eligible for Medicare.<sup>749</sup>

Medicare includes several parts. Part A is designed for hospital inpatient care, while Part B generally covers other medical care.<sup>750</sup> Part D, in turn, covers prescription drugs.<sup>751</sup> Part C pays for beneficiaries to enroll in private Medicare Advantage Plans.<sup>752</sup> Under Medicare Advantage Plans, beneficiaries are offered health plan options through Medicareapproved private companies.<sup>753</sup> These organizations provide Part A and B coverage and usually include Part D as well.<sup>754</sup> Diabetes services generally fall under Medicare Part B.<sup>755</sup>

As noted above, approximately 14% of New Jerseyans have Medicare insurance, and as the state population ages, Medicare will represent an increasing portion of the insurance coverage in New Jersey. Nationally, 28% of Medicare beneficiaries over age 65 had been diagnosed with diabetes in 2012.<sup>756</sup> These factors make the program's reimbursement policies especially important to diabetes prevention and care.

#### Medicare Covered Services

#### 1. Diabetes Equipment and Supplies

Glucose test strips can be surprisingly expensive, ranging from \$0.40 per strip to \$1.00 per strip.<sup>757</sup> For a patient who must test eight times per day, the total cost could therefore reach over \$200 per month. Insurance coverage is essential to help defray this cost.

Medicare Part B covers glucose meters and testing strips.<sup>758</sup> However, beneficiaries must pay a 20% co-insurance rate towards services they receive, including test strips.<sup>759</sup> Under old Medicare reimbursement rules, Medicare would reimburse up to \$34 for a box of fifty test strips, while beneficiaries paid the 20% co-insurance of \$8.50.<sup>760</sup> For an insulin-dependent diabetic testing eight times per day, the cost for a month's worth of strips would thus total about \$38.

In July 2013, Medicare rolled out a new policy relating to diabetes supplies. Under this plan, called the National Mail Order Program, eighteen contracted suppliers will be reimbursed for delivering glucose testing supplies to Medicare beneficiaries.<sup>761</sup> It is still possible to buy supplies at retail stores, if



#### PREVENTIVE HEALTH CARE SERVICES REQUIRED BY THE AFFORDABLE CARE ACT

The ACA enhances access to some preventive services that can improve diabetes prevention and treatment. The preventive services in question are those that the United States Preventive Services Task Force designates as being especially cost-effective. The ACA requires that Medicare and private insurance plans cover certain preventive services without any costsharing. Medicaid plans are not required to provide the services without cost-sharing, but get an extra 1% in federal Medicaid funding for the listed services if they choose to provide them without cost-sharing. New Jersey Medicaid intends to provide these services without cost-sharing, taking advantage of the enhanced federal funding to provide these important services free of charge. The preventive services most important for diabetes prevention and treatment include:

- Blood pressure screening;
- Cholesterol screening (for older adults and those at higher risk);
- Depression screening;
- Type 2 diabetes screening (for adults with high blood pressure);
- Diet counseling (for adults at higher risk for chronic disease); and,
- Obesity screening and counseling.

Access to these services can help identify problems before patients experience dangerous symptoms, and access to diet and obesity counseling may be able to help prevent diabetes from developing or worsening.

Sources: Centers for Medicare and Medicaid Services, *What Are My Preventive Benefits*?, Healthcare.gov. Available at https://www.healthcare.gov/what-are-my-preventive-care-benefits/. Dylan Scott, *3 States Expand Medicaid Preventive Services Under Obamacare*, GOVERNING (July 26, 2013).

the store accepts Medicare "assignment."<sup>762</sup> Assignment means that the provider agrees to accept the Medicare payment as payment in full, only charging beneficiaries their 20% co-insurance and any applicable Part B deductible rather than requiring that the beneficiary pay the full difference between the Medicare allowable amount and the "sticker price" for the service or supply.<sup>763</sup>

One effect of the new policy is that beneficiaries may need to look for a mail order supplier that carries the person's preferred supplies, or else switch to a different brand.<sup>764</sup> There is some risk of confusion as beneficiaries work through their new options. One positive effect, though, is that the costs should be lower, as Medicare is reducing the amount it pays by 72%.<sup>765</sup> Instead of paying \$34 for fifty strips, Medicare will now pay \$10.41.766 This reduction will bring beneficiaries' co-insurance costs down by the same 72%, so that where beneficiaries used to pay \$8.50 for a box of fifty strips, they will now pay about \$2.60. Over a month, the cost for a person testing eight times per day would be about \$11.60.

For many older people with low, fixed incomes and other healthcare expenses to manage, the cost of supplies can become prohibitive. According to PATHS community partners, it is not unusual for people to skip testing or try to cut strips in half to avoid buying more, but this can increase the risk of diabetes-related emergencies.<sup>767</sup> This change in Medicare policy should help alleviate this problem for beneficiaries, but will require close monitoring to ensure that confusion does not disrupt testing regimens.

#### 2. Diabetes Self-Management Education

Medicare Part B, the division of Medicare for non-hospital healthcare services, covers Diabetes Self-Management Education (DSME) for Medicare beneficiaries who have been diagnosed with diabetes.<sup>768</sup> Note that this excludes people with pre-diabetes. Beneficiaries can get DSME when prescribed by a physician or qualified non-physician provider.<sup>769</sup>

Medicare refers to the service as Diabetes Self-Management Training (DSMT), which is another term for DSME.<sup>770</sup> The program



consists of ten hours of initial training within the first year-one hour of individualized assessment and nine hours of group classesand two hours of follow-up training each year after that.771 The DSMT curriculum includes a nutrition management component and eight other content areas, such as checking for warning signs of complications and medication safety.772 In addition to reimbursing registered dietitians, Medicare reimburses registered pharmacists with the Certified Diabetes Educator credential for providing diabetes education services.<sup>773</sup> PATHS partners have explained, however, that this reimbursement is not available to pharmacists providing diabetes education within a primary care context rather than an official DSMT course.774

DSMT is subject to the Medicare Part B cost-sharing rules, meaning that beneficiaries must have met their Part B deductible and must pay 20% co-insurance for the service.<sup>775</sup>

#### 3. Medical Nutrition Therapy

As part of the federal Medicare, Medicaid, and State Children's Health Insurance Program (SCHIP) Benefits Improvement and Protection Act of 2000, Medicare Part B covers medical nutrition therapy (MNT) when prescribed by a physician for individuals with diabetes or renal disease whose fasting blood sugar levels meet specific criteria.<sup>776</sup> The MNT program covers a maximum of three hours of services in the first twelve months including an initial assessment, counseling, and assessment of lifestyle factors, and two hours per year thereafter for followup visits.<sup>777</sup> Medicare may cover additional hours if a change in diagnosis or medical condition necessitates a change in diet.<sup>778</sup>

Unlike for DSMT, Medicare beneficiaries do not pay any cost-sharing for MNT as long as the provider accepts assignment.<sup>779</sup>

#### 4. Lifestyle Interventions

Medicare does not provide reimbursement for lifestyle interventions like the Diabetes Prevention Program (DPP). There is pending legislation in Congress that would allow Medicare to reimburse patients for the DPP; sponsored by Senator AI Franken, the Medicare Diabetes Prevention Act of 2013 had reached the Senate Finance Committee in March 2013, where it has since been stalled.<sup>780</sup>

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#### 5. Case Management

Medicare Fee-for-Service does not explicitly cover any case management or care coordination services. In part, this is because Medicare only allows providers to bill for services provided to beneficiaries in face-to-face visits, and much care coordination consists of communication between a patient's providers.<sup>781</sup> Some case management services are embedded in Medicare's Evaluation and Management billing codes; for example, a provider may counsel a patient about medication management while conducting a reimbursable physical examination.782 However, as it stands, providers operating within Medicare Fee-for-Service are generally not paid for case management.783

#### MEDICAID

Medicaid is a program funded jointly by the federal government and states, covering a broad array of health and long-term care services, including many services not typically covered by private insurance.<sup>784</sup> New Jersey's Medicaid program is administered by the Department of Human Service's Division of Medical Assistance and Health Services (DMAHS).<sup>785</sup>

Nationally, 6% of Medicaid enrollees had been diagnosed with diabetes in 2003.<sup>786</sup> Note that this relatively low percentage reflects the fact that many Medicaid enrollees are children, who are far less likely to have type 2 diabetes.<sup>787</sup>

From the inception of Medicaid in 1965, the program has generally only served low-income people who fall into particular categories. Parents, children, pregnant women, and the disabled who have low incomes have qualified.<sup>788</sup> As discussed above, this is changing under the ACA, which allows states to cover adults with income up to 138% FPL regardless of whether they are parents, pregnant, or disabled.<sup>789</sup>

In New Jersey, Medicaid eligibility for children varies by age and income. Children under one year old are eligible with income up to 185% FPL, children age one to five years old are eligible with income up to 133% FPL, and children ages six to nine years old are eligible with income up to 100% FPL.<sup>790</sup>



Adults who are not disabled or parents of dependent children have been able to obtain a limited Medicaid plan if their income is below 23% FPL.<sup>791</sup> As a result of the ACA, however, many low-income, non-disabled adults without children will be eligible for comprehensive benefits.<sup>792</sup> This is expected to cover an additional 104,000 adults in the state.<sup>793</sup>

Adults who are over age 65 and/or determined by the Social Security Administration to be either blind or disabled may be eligible for New Jersey's Special Medicaid Program for the Aged, Blind, and Disabled.<sup>794</sup> The income limit for the program is 100% FPL.<sup>795</sup>

New Jersey has extended insurance for children and parents through the New Jersey FamilyCare program (New Jersey's SCHIP program). Children are eligible for FamilyCare coverage with income up to 350% FPL, and parents of dependent children are eligible with income up to 133% FPL.<sup>796</sup> Pregnant women qualify for coverage in FamilyCare if their family income is up to 200% FPL.<sup>797</sup> Families with income above 200% FPL must pay premiums for their children's health coverage under FamilyCare.<sup>798</sup>

It is possible for people to have both Medicaid and Medicare. A person with Medicare Parts A and B and income below 100% FPL will be eligible for the Special Medicaid Program for the Aged, Blind, and Disabled.<sup>799</sup> These "dual-eligibles" can have New Jersey Medicaid pay the premiums associated with Medicare Part B (and A if applicable).<sup>800</sup> There are 205,909 dual-eligibles in New Jersey.<sup>801</sup>

#### Medicaid Managed Care

Federal law forms the backbone of the Medicaid program in all states. States participating in the Medicaid program must write State Plans describing their programs, and the federal Centers for Medicare and Medicaid Services (CMS) must approve these plans, ensuring that they comply with federal Medicaid rules.<sup>802</sup> In some cases, a state will want to operate Medicaid in a way that does not work with the usual federal rules.<sup>803</sup> When this happens, the state may be eligible for a waiver of those rules.<sup>804</sup> There are a number of waiver types, each authorized by a different part of the federal Medicaid statute.<sup>805</sup>

While federal Medicaid law allows states to contract with private insurance companies to provide managed care to beneficiaries who sign up for this care, states usually cannot require all beneficiaries to pick a private plan.<sup>806</sup> New Jersey, however, does require this.<sup>807</sup> New Jersey's authority to require Medicaid beneficiaries to pick a managed care plan (instead of staying in the traditional Medicaid program) comes from a federal waiver called the New Jersey Comprehensive Waiver.<sup>808</sup> The Comprehensive Waiver is authorized under Section 1115 of the Social Security Act, which allows states to test new approaches to Medicaid coverage.<sup>809</sup> CMS can allow states to use federal Medicaid and SCHIP funds in ways that are not otherwise allowed under federal rules, as long as the initiative is a "research and demonstration project" that furthers the purposes of the program.<sup>810</sup> The 1115 waiver authority is very broad.<sup>811</sup>

New Jersey has had other waivers in the past that also allowed mandatory enrollment in managed care. These are now included in the Comprehensive Waiver, which was approved in 2012.<sup>812</sup> In addition, the Comprehensive Waiver allows managed care rules to apply to Home and Community-Based Services and other long-term care services.<sup>813</sup> Note that the regular federal Medicaid rules continue to apply unless the Comprehensive Waiver specifically waives them.<sup>814</sup>

New Jersey Medicaid and FamilyCare use health maintenance organizations (HMOs) to manage care for beneficiaries.<sup>815</sup> There are four HMOs contracted with the state at this time: Amerigroup New Jersey, Inc., Healthfirst New Jersey, Horizon Blue Cross Blue Shield New Jersey, and UnitedHealthcare Community Plan.<sup>816</sup> Horizon Blue Cross Blue Shield covers the most Medicaid beneficiaries, with enrollment of 470,000 out of a total of about one million beneficiaries.<sup>817</sup> United HealthCare, in turn, covers another 350,000 people.<sup>818</sup> Amerigroup and HealthFirst cover the remaining 180,000 beneficiaries.<sup>819</sup>

In general, plans that contract with Medicaid agencies are called managed care organizations, or MCOs.<sup>820</sup> This report refers to the four Medicaid managed care companies in New Jersey as MCOs in order to be consistent with this usual terminology, even though New Jersey sometimes calls them HMOs.<sup>821</sup>



# 1. Comprehensive Waiver Special Terms and Conditions

The approval of the Comprehensive Waiver was conditioned on the state's compliance with a list of Special Terms and Conditions (STCs) outlined by CMS.<sup>822</sup> The STCs describe the state's obligation to conduct an evaluation of the demonstration project over the time it is in operation.<sup>823</sup> The STCs also outline the level of federal involvement in the demonstration project, as well as definitions of the benefits that must be provided to beneficiaries enrolled in managed care.<sup>824</sup>

According to the STCs, the state must ensure the delivery of all Medicaid covered benefits, including ensuring delivery of high-quality care.<sup>825</sup> Services must be delivered in a culturally competent manner and the MCO must be able to provide access to covered services to the low-income population.<sup>826</sup> Notably, the STCs require that beneficiaries with special needs have direct access to specialists appropriate for the individual's health condition.<sup>827</sup>

Further, the STCs require that an MCO contracting with the state provide annual assurances to the state that it has the capacity to service the expected enrollment in its area and can continue to offer an adequate range of preventative, primary, pharmacy and specialty care to the anticipated number of beneficiaries who may enroll.<sup>828</sup> The STCs fail to define what is considered "adequate care." However, the STCs do require that the state verify the MCO's assurances by reviewing demographic, utilization and enrollment data for enrollees in the demonstration.829 Further, the MCO must operate a grievance/complaint system that lets beneficiaries participating in a particular program register grievances and complaints about any aspect of the services being offered.830

Additionally, the STCs outline specific quality monitoring requirements that must be met by the state and the MCOs.<sup>831</sup> The state must develop a comprehensive quality strategy with measures related to Managed Care Measures reflecting the Medicaid, SCHIP, Behavioral Health, and Managed Long-Term Services and Supports programs now operating under the demonstration.<sup>832</sup> Further, all managed care quality strategies must include the application of a continuous quality improvement process which requires representative sampling, frequent data collections and analysis, and performance measures.<sup>833</sup>

These requirements are important because they outline the limited role that the federal government is playing in the demonstration, apart from a review of the program's success at the end of five years. The requirements described in the STCs are also reflected in the state's contracts with MCOs, discussed below.

# 2. Managed Care Quality Control and Accountability

DMAHS has an extensive contract that covers provisions for MCOs providing managed care services for the state. DMAHS requires that MCOs implement and maintain a Quality Assessment Performance Improvement Program (QAPI) in order to produce an analysis of the implemented program.<sup>834</sup> The contract also sets forth requirements for the implementation and execution of the QAPI.<sup>835</sup> MCOs must establish a Quality Management Committee, employ a Medical Director who is licensed in the state, write an expression of enrollee rights and responsibilities, and obtain credentialing services.<sup>836</sup>

MCOs must prepare and submit an annual report on quality assurance activities and present annual plans to DMAHS with quality goals and strategies.<sup>837</sup> MCOs must also prepare monitoring and evaluation systems to assure overall quality management.<sup>838</sup> DMAHS must create a scope and set forth criteria for review, review sites, and identify relevant time frames for obtaining information.<sup>839</sup> Finally, the contract outlines the data that MCOs must collect to inform these state evaluations, including appointment availability studies, grievance reports, and semi-annual documentation of internal quality assurance activities.<sup>840</sup>

#### Medicaid Covered Benefits

#### **1. Federal Service Requirements**

Federal law identifies a set of "mandatory services" that states must cover for the traditional Medicaid population.<sup>841</sup> Most Medicaid beneficiaries are entitled to receive these mandatory services subject to a determination of medical necessity by the state Medicaid program or a managed care plan under contract with the state.<sup>842</sup>

The required services include:

- Physician services;
- Hospital services (inpatient and outpatient);
- Laboratory and x-ray services;
- Early and periodic screening, diagnostic, and treatment services for individuals under age twenty-one;
- Federally-qualified health center (FQHC) and rural health clinic services;
- Family planning services and supplies;
- Pediatric and family nurse practitioner services;
- Nurse midwife services;
- Nursing facility services for individuals twenty-one and over;
- Home health care for persons eligible for nursing facility services; and,
- Transportation services.843

### 2. Optional Services in Medicaid

States have flexibility to cover additional services that federal law designates as "optional."<sup>844</sup> Examples include prescription drugs—which all states cover—personal care services, rehabilitation services, and habilitation services.<sup>845</sup> Other optional services include: clinic services, dental services, prosthetic devices, eyeglasses, rehabilitation, case management, home and community-based services, personal care services, and hospice services.<sup>846</sup>

New Jersey Medicaid provides the following optional services:

- Treatment in residential treatment centers;
- Dental care;
- Optometry services;
- Chiropractic services;
- Psychologist;
- Podiatrist;
- Prosthetics and orthotics;
- Drugs necessary during long-term care;
- Drugs at retail cost;
- Durable medical equipment;

- Hearing aid services;
- Personal care services;
- Licensed practitioner services;
- Private duty nursing; and,
- Services in a clinic.847

New Jersey Medicaid covers diabetes screenings,<sup>848</sup> prescription drugs such as metformin and insulin, and diabetes equipment and supplies such as disposable needles, syringe combinations, and glucose test strips.<sup>849</sup>

Available information indicates that New Jersey Medicaid does not cover DSME, MNT, or lifestyle interventions such as the DPP.

# Mandated Private Insurance Benefits

In 1995, New Jersey passed a law called the Diabetes Cost Control Act, requiring that insurance plans regulated by the state (i.e., all insurance plans except employer selfinsured plans) provide coverage for a variety of diabetes-related medications, equipment, supplies, and education.<sup>850</sup> This law has ensured that there is a basic level of coverage for these services in most private insurance plans. Because the state's mandated benefits for diabetes have been in place since before passage of the ACA, these service requirements remain in place for the new private plans that will be sold through the New Jersey Marketplace.<sup>851</sup>

### DIABETES EQUIPMENT AND SUPPLIES

Insurance plans are required to cover certain diabetes equipment and supplies, including blood glucose monitors and test strips, insulin, injection aids, syringes, insulin pumps and diffusion devices, and oral agents for controlling blood sugar.<sup>852</sup> Insurance plans also must cover devices designed for use by the legally blind.<sup>853</sup> These must be provided if recommended or prescribed by a physician or advanced practice nurse.<sup>854</sup>

#### DIABETES SELF-MANAGEMENT EDUCATION

Insurance plans in New Jersey also must offer DSME services to persons with diabetes to "ensure that a person with diabetes is educated as to the proper self-management and treatment of their diabetic condition, including information on proper diet."<sup>855</sup> New Jersey statutes limit the benefits to visits that are



"medically necessary" after diagnosis, due to a change in symptoms or conditions necessitating a change in self-management, or those that are based on a physician's or nurse practitioner's determination that a refresher course is necessary.<sup>856</sup> The training must be provided by a registered dietitian, certified diabetes educator, or registered pharmacist qualified for management education for diabetes.<sup>857</sup>

#### MEDICAL NUTRITION THERAPY

New Jersey does not require that insurance providers cover MNT services. When insurance companies do cover MNT, registered dietitians are the only nutrition professionals who can be reimbursed for MNT services.<sup>858</sup>

#### LIFESTYLE INTERVENTIONS

As part of a national Centers for Disease Control and Prevention-led program,<sup>859</sup> the YMCA of the USA works with a number of private insurance companies across the country to provide access to the Diabetes Prevention Program.<sup>860</sup> In New Jersey, UnitedHealthCare is the only insurance plan to reimburse the New Jersey YMCA for enrollees in the DPP.<sup>861</sup>

#### CASE MANAGEMENT

Case management is not a required benefit for health plans in New Jersey. It is typical for managed care plans to offer some types of case management for patients with more complex health needs. For example, Horizon Blue Cross offers a free Complex Case Management Program that is available to people enrolled in any of their insurance plans<sup>862</sup>

#### HEALTHCARE DELIVERY SYSTEM

New Jersey has maintained a strong healthcare sector, even during the worst of the recent economic downturn. From 2000 to 2012, sectors other than healthcare lost 223,000 jobs, while the healthcare sector added 92,500 jobs.863 From 1990 to 2012, ambulatory care center employment has more than doubled, and nursing and residential care center employment is set to double by 2014.864 Employment in hospitals has grown steadily as well, but not as fast as these other areas.<sup>865</sup> Overall, the healthcare sector has grown by an average of 2.3% per year since 1990, compared with 0.1% for all other areas of nonfarm employment.<sup>866</sup> In addition, the healthcare sector pays about 5.9% more in New Jersey than nationally.867

At the same time, some hospitals in New Jersey are closing or merging with others, which can include a shift from public to private and/or for-profit status. As of October 2012, 67% of the state's acute care facilities were part of a multi-hospital network.<sup>868</sup> From 2008 to 2012, Hoboken University Medical Center, Christ Hospital, and Pascack Valley Hospital all shifted from non-profit to for-profit status as a consequence of merging or being purchased by other companies.<sup>869</sup>

The healthcare sector's growth can also be framed as a cost to those paying for services, and New Jersey's healthcare costs are higher than those in most other states. According to the Dartmouth Atlas, in 2006 New Jersey had the highest Medicare reimbursement per enrollee during the last two years of life.870 From 1999-2003, the state also had the highest number of intensive-care-unit days and physician visits, and the highest percent of patients seeing more than ten physicians in the last six months of life.871 In addition, according to the Commonwealth Fund's 2009 State Scorecard on Health System Performance. New Jersey ranks forty-eighth in the country on avoidable hospital use and costs.872

Unfortunately, these costs have not yielded particularly good diabetes quality measures. In 2006-2007, only 43.1% of adult diabetics in New Jersey received recommended preventive care, compared with a national average of 44.8% and a top-five average of 57.1%.<sup>873</sup> New Jersey ranked twenty-eighth on this measure.<sup>874</sup> (See Table 15) In many of the outcomes listed above, New Jersey ranks below many states with lower per capita income, including Mississippi, Louisiana, North Carolina, and Georgia.<sup>876</sup>

In summary, New Jersey spends a lot on health care, especially at the end of life, but struggles to ensure that everyone needing basic diabetes management services gets them.

ANNUAL FOOT EXAM	ANNUAL EYE EXAM	A1C CHECKED MORE THAN 2X/YEAR	DAILY BLOOD GLUCOSE SELF- MONITORING	EVER ATTENDED DIABETES SELF- MANAGEMENT	ANNUAL FLU VACCINE
67.5%	69.7%	71.5%	59.7%	43.7%	52.0%

# Provider Availability and Role

Perhaps the most essential element of the healthcare delivery system is the availability of healthcare professionals to provide those services necessary to controlling type 2 diabetes. Here, we review the availability of primary care physicians, advanced practice nurses (APNs), registered dietitians (RDs), and certified diabetes educators (CDEs), as well as their role in diabetes care.

#### PRIMARY CARE PHYSICIANS

While the total number of physicians in New Jersey is adequate today, the state faces shortages in certain fields, notably in family medicine. In addition, the state can expect shortages in both primary care and some specialties to increase over time, and even today some regions of the state already face shortages.

Compared to other states, New Jersey does not face a severe overall physician shortage. In 2008, New Jersey had 253 total patient care physicians per 100,000 people, a rate well above the median rate for all states of 236.6.<sup>877</sup>

However, New Jersey's physician workforce is characterized by a strong emphasis on specialty care as compared with primary care. In 2005, there were 104.6 licensed primary care physicians per 100,000 people in the United States.<sup>878</sup> By contrast, New Jersey had 101.6 licensed primary care physicians per 100,000 people.<sup>879</sup> The nation overall had 30.6 licensed medical subspecialists per 100,000 people, while New Jersey had 38.5 licensed medical subspecialists per 100,000 people.<sup>880</sup>

This ratio translates to higher utilization of specialists compared with primary care physicians, which increases costs. According to a 2006 report from The Dartmouth Atlas Project, New Jersey residents experienced greater labor input from medical specialists than from primary care physicians in the last two years of their lives.<sup>881</sup> While many states utilized more primary care towards the end of life, New Jersey used 0.7 primary care labor units for every 1 unit of specialist labor.<sup>882</sup> New Jersey had the lowest primary to specialist care ratio in the country, showing the most significant tendency toward specialist care in the last two years of life.<sup>883</sup> In 2010, New Jersey continued to utilize more specialty care in the last two years of life compared with the rest of the United States; New Jerseyans in their last two years of life received an average of 50.8 specialist visits, the highest level in the country and well above the national average of 28.1.<sup>884</sup>

In 2008, New Jersey had a ratio of 94 primary care physicians providing clinical care per 100,000 people, which is higher than the national average of 88.<sup>885</sup> One way to measure adequacy of the primary care physician workforce is by examining a state's Primary Care Health Professional Shortage Areas, or HPSAs. A HPSA occurs where there are 3,500 or more people per primary care physician.<sup>886</sup> There are thirty HPSAs in New Jersey, out of 5,768 nationally.<sup>887</sup> Only Delaware, Hawaii, New Hampshire, Rhode Island, and Vermont had fewer HPSAs than New Jersey.<sup>888</sup>

Although New Jersey performs better than other states and the nation overall in terms of the primary care workforce, the state nevertheless faces real challenges. One major problem is that primary care physicians are not evenly distributed across the state. While Mercer County has 119.6 primary care physicians per 100,000 people, Sussex County has only 57.8.889 In fact, twelve out of New Jersey's twenty counties fall below the national average.<sup>890</sup> Of these, nine meet the State Office of Rural Health and New Jersey Primary Care Association's definition of "rural," (750 or fewer people per square mile)<sup>891</sup> including Atlantic, Burlington, Cape May, Cumberland, Gloucester, Ocean, Salem, Sussex, and Warren.<sup>892</sup>

The primary care shortage is especially acute with respect to family medicine. The American Academy of Family Physicians recommends a ratio of 41.6 family physicians per 100,000 population, yet New Jersey had a ratio of





21.1 per 100,000 people.<sup>893</sup> This translates to a deficit of about 480 physicians.<sup>894</sup> Only Hunterdon County has enough family physicians to meet this recommended ratio.<sup>895</sup> By 2020, the New Jersey Physician Workforce Task Force estimates that the deficit will reach 1,816 physicians across the state.<sup>896</sup>

#### Primary Care and Medicaid

In addition to shortages of primary care physicians in general and family physicians in particular, New Jerseyans enrolled in Medicaid face further barriers because there are too few physicians accepting Medicaid patients. While nationally about 69% of physicians accept Medicaid, only about 40% do in New Jersey, giving the state the lowest rate of Medicaid participation in the country.<sup>897</sup> In 2011 and 2012, 54% of New Jersey primary care physicians did not take new Medicaid patients, compared with 33% nationally.<sup>898</sup> One PATHS partner observed that in some cases, physicians have stopped taking Medicaid entirely, leaving existing Medicaid patients to either pay out of pocket, which is impossible, or find a new provider.899

#### ADVANCED PRACTICE NURSES

In New Jersey, nurse practitioners (NPs) and clinical nurse specialists are known as APNs.<sup>900</sup> According to the New Jersey State Nurses Association, there were approximately 3,700 APNs licensed in the state in 2006, of whom about 75% were NPs and 25% were clinical nurse specialists.<sup>901</sup> By 2011, the state Board of Nursing reported 5,479 licensed NPs in the state,<sup>902</sup> yielding a ratio of 62 NPs per 100,000 people.<sup>903</sup> This is above the national rate of 58 NPs per 100,000 people, and New Jersey falls squarely in the middle of the states on this measure, with twenty-four states having a higher ratio of NPs to population.<sup>904</sup>

#### Certification and Scope of Practice

APNs must be certified by the New Jersey Board of Nursing.<sup>905</sup> In order to be certified, applicants must already be certified as registered professional nurses, complete an additional approved educational program, and pass a written examination.<sup>906</sup> The educational requirements are to either have a master's degree in nursing or a master's degree in nursing *plus* a post-master's program focused on Advanced Practice Nursing.<sup>907</sup> The programs must include at least thirtynine hours of pharmacology instruction, plus at least six contact hours in pharmacology related to controlled dangerous substances.<sup>908</sup>

APNs may manage preventive care services and diagnose and manage illnesses, initiate laboratory and other diagnostic tests, and prescribe or order treatments, including referrals to other providers and performing certain procedures.<sup>909</sup> APNs may also prescribe or order medications or devices, as long as they have a written joint protocol with a collaborating physician, and review, update, and sign the joint protocol annually.910 The prescriptive authority extends to controlled substances as long as there is a joint protocol in place.<sup>911</sup> The physician must be present on site or available through electronic communications.<sup>912</sup> The APN and collaborating physician must periodically review patient charts and records where the prescriptive authority is used.913

APNs are considered Independently Licensed Practitioners/Providers, which means that they are permitted to independently bill Medicare, New Jersey Medicaid and FamilyCare, and a variety of private insurance companies.<sup>914</sup> As of 2009, only Aetna and Horizon Blue Cross-Blue Shield did not allow APNs to bill independently in New Jersey.<sup>915</sup> However, Medicare only allows reimbursement up to 85% of the rate for physicians.<sup>916</sup> It is typical for other insurers to follow Medicare in this regard, only allowing reimbursement up to 85% of the physician rate.<sup>917</sup>

#### Advanced Practice Nurse Shortage

Unfortunately, New Jersey faces a shortage of nurses in general and APNs in particular. While New Jersey is in the mid-range of states in terms of nurse practitioner-to-population ratios, the state is nevertheless facing a shortage that is likely to become more acute when more New Jerseyans seek care following full ACA implementation in 2014. The United States Department of Health and Human Services Health Resources and Services Administration projects that New Jersey's supply of registered nurses will be nearly 50% below demand by 2020.<sup>918</sup> Given that APNs must first become registered nurses, this shortage means there will be a shortage of APNs as well.

A major reason for the shortage of nurses is that there are not enough nursing faculty to teach both entry-level and graduate students in nursing. In 2011, 12,000 students applied to



college nursing programs in New Jersey and only 1,000 were able to enroll; this mirrors the national trend, which saw over 75,000 nursing school applicants turned away in 2011.<sup>919</sup> The nurse faculty vacancy rate in New Jersey is currently at 10.5%.<sup>920</sup>

# THE ROLE OF REGISTERED DIETITIANS IN NEW JERSEY

New Jersey is one of four states that have not enacted legislation regulating the practice of dietetics.<sup>921</sup> RDs, however, must still the meet academic and professional requirements established by the Academy's credentialing agency, the Commission on Dietetic Registration: earning a bachelor's degree from a regionally accredited college or university, completing an accredited, pre-professional experience program, passing a national level examination, and completing continuing education requirements.<sup>922</sup>

The goal of the New Jersey Dietetic Association is to "(1) inform the public about good nutrition, (2) help consumers make healthy food and physical activity choices to promote good health, and (3) assist patients and their providers to improve health conditions."923 To help New Jerseyans find an RD, the Association provides links to every hospital in the state.<sup>924</sup> Of the seventy-three hospitals listed, forty-one hospitals expressly offer access to RDs as part of their diabetes education or management programs. Another seventeen hospitals offer diabetes programs with nutrition counseling, but it is unclear if an RD or a diabetes educator dispenses the nutrition information to the patient. Only fifteen hospitals, or around 20% of hospitals listed, appear to offer no diabetes program or RD access.

During the diabetes education program, RDs can help create personalized meal plans that help patients lose weight, stabilize their blood sugar, count carbohydrates, read food labels, and monitor their progress.<sup>925</sup> According to a National Academy Institute of Medicine report, providing nutrition services to elderly populations resulted in reduced overall costs, because the program's costs were offset by reduced illness.<sup>926</sup> Another study done by the Department of Veterans Affairs Medical Center in Long Beach, California showed that "more than half the people who saw a dietitian only a few times lowered their cholesterol so much they no longer needed cholesterol medication," saving the healthcare system the cost of prescription drugs.<sup>927</sup>

To enroll in most of the hospitals' diabetes education programs, patients need only to call and register for the program. For some programs, however, patients must have a physician prescription or referral to an RD. The hospital websites claim that, "most insurance covers the program."<sup>928</sup> Outside hospital settings, RDs cost around \$100 an hour, though some insurance companies and healthcare providers may cover the cost of patient visits (especially if the visit is listed for medical reasons such as high blood pressure or diabetes) such that patient co-pay costs tend to end up being 10-20% of the visit.<sup>929</sup>

# THE ROLE OF DIABETES EDUCATORS IN NEW JERSEY

The American Association of Diabetes Educators (AADE), the professional association for diabetes educators nationally, has 13,000 members across the country.<sup>930</sup> Of these, 67% are CDEs and/or Board-Certified - Advanced Diabetes Management (BC-ADMs), 53% are nurses, 28% are dietitians, 8% are pharmacists, and 4% are other health professionals.<sup>931</sup> The AADE defines diabetes educators as "healthcare professionals – primarily nurses, dietitians and pharmacists - who focus on helping people with diabetes achieve behavior change goals which, in turn, lead to better clinical outcomes and improved health status."<sup>932</sup>

#### Credentialing & Training

Credentialed by the National Certification Board, CDEs are medical and healthcare professionals "who have job responsibilities that include the direct provision of diabetes self-management education."<sup>933</sup> For certification, aspiring CDEs must pass the CDE Examination, have a minimum of two years professional practice experience, and have a minimum of 1,000 hours DSME experience.<sup>934</sup> There are only about 17,000 CDEs in the country compared to nearly twenty-six million Americans with diabetes and another seventynine million with pre-diabetes.<sup>935</sup>

BC-ADM certification is a credential for advanced level practitioners that "validate a healthcare professional's specialized knowledge and expertise in the management



of people with diabetes."<sup>936</sup> BC-ADM candidates hold an active RN, RD, RPh, PA or MD/DO license in a state or territory of the United States, have a graduate degree from an accredited program, and complete a minimum of 500 clinical practice hours in advanced diabetes management.<sup>937</sup> So long as BC-ADM holders act within the scope of their practice, they "may adjust medications, treat and monitor acute and chronic complications, provide medical nutrition therapy, help patients plan out regimens, counsel patients to manage behaviors and psychosocial issues, participate in research and mentor."<sup>938</sup>

AADE is advocating for state licensure of diabetes educators. The AADE notes, "[a]s management of diabetes becomes increasingly complex, it is imperative that diabetes healthcare professionals be well educated and appropriately credentialed. Licensure of the diabetes educator will provide for consumer safety and provide minimum standards for recognition of the professional."939 Without a state-recognized CDE licensure, many hospitals are not willing to hire these professionals, which hampers access to their services.940 Nurses who are also CDEs cannot necessarily be reimbursed for their DSME services due to the lack of state recognition of the CDE profession.<sup>941</sup> Currently, New Jersey does not have a diabetes educator licensing procedure.942

#### **Contribution to Diabetes Management**

Diabetes educators participate in DSMT and DSME.<sup>943</sup> Diabetes educators help their patients focus on healthy eating, being active, monitoring their blood glucose levels, taking medication, problem solving, health coping, and reducing risks.<sup>944</sup>

Diabetes educators are valuable not only to patients, but also to care providers as they: "increase [a] practice's efficiency by assuming time-consuming patient training; engage in counseling and follow-up duties; help [providers] meet pay-for-performance and quality improvement goals; track and monitor patients' care and progress; provide [providers] with status reports; help [providers] manage patients' metabolic control, lipid levels and blood pressure; [and h]elp delay the onset of diabetes with prevention and self-management training for patients who are at high risk."945 In addition, CDEs can help train community health workers to provide support to diabetes patients.946

#### Availability of Diabetes Educators in New Jersey

The AADE's website provides a comprehensive search function that allows users to search for diabetes educators by zip code, accepted insurance, and languages.<sup>947</sup> A search based on a 07739 zip code (Central New Jersey) revealed that within a fifty-mile radius, there are 506 diabetes educators available.<sup>948</sup> Of these educators, six noted that they spoke Spanish.<sup>949</sup> Another search revealed eight educators in the City of Newark<sup>950</sup> and another 537 within a fifty-mile radius of the city.<sup>951</sup> Finally, a search of Atlantic City revealed three educators within the city<sup>952</sup> and another forty-one within fifty miles.<sup>953</sup>



# MOVING NEW JERSEY FORWARD: RECOMMENDATIONS

Having built an understanding of the challenges of type 2 diabetes and capturing a picture of the state of New Jersey, this report now turns to the opportunities New Jersey has to prevent and manage type 2 diabetes among state residents. This section makes recommendations for state advocates and policymakers on how to take advantage of these opportunities.

This recommendation section begins with an analysis of the need for New Jersey to invest

in the state, through state government and by leveraging private philanthropies. The next set of recommendations cover the state's food system and built environment, by increasing access to healthy food and opportunities for physical activity. Finally, the recommendation section addresses how the state can improve access to and the adequacy of health insurance and enhance the capacity of its healthcare delivery system to provide highquality case management for people living with type 2 diabetes.

# **INVESTING IN THE GARDEN STATE**

New Jersey has significant resources at both the state and local levels. The state needs to utilize these resources in an efficient and targeted manner and invest in their preservation in order to preserve and enhance the state's capacity to respond to type 2 diabetes.

# **INVEST IN STATE GOVERNMENT**

As described above, New Jersey has been operating for several years in a challenging budgetary environment. Starting in 2006, governors Corzine and then Christie have reduced the size of the state workforce in efforts to address these challenges.

The state bears much of the burden of higher disease rates, in the form of higher healthcare costs in public and state employee insurance programs as well as in lower tax revenue from reduced productivity. As a matter of efficiency, then, the state must make an investment in its own capacity to reduce this burden. While the steady decrease in staffing levels does not necessarily preclude state agencies from fully performing their role in maintaining public health, and while increases in staff do not necessarily mean increases in performance quality, the state must consider whether it has now reached the point where further reductions will be destructive. Each state agency must assess whether it can achieve its mandate with current staffing levels, and if not, identify the necessary new positions. This process should take place within the budget cycle, when agencies present their budget requests to the governor.

As reflected throughout this report, diabetes prevention and management directly implicates many elements of society, from health insurance to primary care to case management, from the Supplemental Nutrition Assistance Program (SNAP) to school food to bike lanes. What this means for the state government is that many different agencies have a role to play in addressing the type 2 diabetes epidemic. Here, we discuss these roles and how the legislature and governor can strengthen the agencies to meet the state's needs.

# **Department Of Health**

New Jersey's Department of Health (DOH) has the potential to be the state's command center in the battle against type 2 diabetes. This is only possible if the state legislature appropriates, and the Governor approves, adequate resources to ensure necessary staffing levels.





#### NEW STRUCTURE FOR THE CHRONIC DISEASE PREVENTION AND CONTROL UNIT

As described above, the Chronic Disease Prevention and Control Unit (CDPC) is undergoing a re-organization to comply with a new federal Centers for Disease Control and Prevention (CDC) funding design. The current CDC grant is organized into four domains. Domain 1 is epidemiology and surveillance; Domain 2 is environmental approaches that promote health and support and reinforce healthful behaviors; Domain 3 is health system interventions to improve the effective delivery and use of clinical and other preventive services; and Domain 4 is strategies to improve community-clinical linkages.<sup>954</sup>

The CDPC grant from the CDC includes Domains 1, 2, 3, and 4.955 Activities under Domain 2 include the work that the Office of Nutrition and Fitness (ONF) has done with ShapingNJ for the past five years, yet are broadened to include topics beyond obesity prevention.<sup>956</sup> CDPC has also integrated beyond the explicit requirements of the grant, by joining tobacco prevention with obesity prevention.<sup>957</sup> This is a reasonable structure because both efforts are truly primary prevention, geared toward keeping people from getting sick in the first place, as opposed to more clinical prevention efforts aimed at catching illness early and preventing complications.

# NEW ROLE AS CREATOR OF DIABETES ACTION PLAN

In May 2013, the New Jersey legislature passed a bill to require the Department of Health to create a "diabetes action plan."958 Governor Christie signed the bill into law on August 7, 2013.959 Under this new law, DOH is required to work with the Departments of Children and Families (DCF) and Human Services (DHS) to produce a report for the Governor and legislature describing: (1) the financial impact of diabetes; (2) the benefits of existing programs to prevent or control the disease; and (3) the level of coordination among the three departments.<sup>960</sup> The report also must provide a "detailed action plan" with a set of items the legislature can consider for action.961 In addition, the report must contain a detailed budget for implementing the plan.962

The law gives DOH twenty-four months from the law's enactment to produce the first report, and requires updated reports every two years.<sup>963</sup> This means that the first report is due in August 2015.

While both DCF and DHS are required to coordinate with DOH to produce the reports, the bulk of the responsibility falls on DOH. Within DOH, the CDPC is the most appropriate setting for the action plan work, because its work is most closely tied to the goals and functions described in the law.

In order for DOH and the CDPC to undertake this important project, the department and unit must be adequately staffed. As noted above, DOH has faced a steady decline in staffing levels since 2006-a reduction of approximately 30% over six years. In addition, the average age of DOH employees in 2012 was fifty-one.<sup>964</sup> Given a retirement age of fifty-five, many more retirements will likely take place between now and when the first diabetes action plan report is due in 2015. It is also noteworthy that in 2011, the most recent year for which data is available, 4,171 employees retired from state service overallthe largest number recorded since 1960 and nearly twice as large as the next-highest number (2,608 retirements in 2007).965

#### Recommendations

#### 1. Maintain the Investment in the ShapingNJ Partnership and Brand and in Office of Nutrition and Fitness Capacity

ShapingNJ has been committed to primary prevention since its inception. Because DOH does not educate children, build sidewalks and bike lanes, or craft agriculture policy, the partnership has developed strong relationships with other state departments, such as DCF, the Department of Education (DOE), the Department of Transportation (DOT), and the Department of Agriculture (NJDA), as well as private non-profit organizations that focus on these environmental factors. Essentially, as one PATHS partner described it, ShapingNJ is a partnership that brings health professionals together with those whose professions are not in health care but whose decisions significantly impact population health.966

The relationships with other departments and non-profits are extremely valuable for CDPC. The credibility built over time by ShapingNJ



has helped to promote progress in areas from land use to child care center regulations. If the re-organization causes staff to pull back from maintaining these connections, it would constitute a major set-back.

In addition, DOH has invested considerable resources in developing the ShapingNJ brand, and the name and logo are familiar to communities across the state. For example, two communities have named their local efforts after the state project.<sup>967</sup> The goodwill associated with the brand, built on years of communication, technical assistance, and local community grants, should be preserved. CDPC should keep the name and logo in addition to ensuring that staff are able to maintain ongoing communication and technical assistance to community partners.

ONF was created because the state needs a functioning central coordinating body to work on obesity prevention. This has not changed. Therefore, it is important that CDPC retain the capacity for this coordinating work, whether through ShapingNJ or otherwise.

#### 2. Maintain and Integrate Chronic Disease Prevention and Control Unit Coalitions

Several of the formerly separate disease-based teams that are now integrated within CDPC host coalitions. This includes the ShapingNJ partnership, as well as the coalitions and advisory groups associated with the offices of asthma, stroke, heart disease, cancer control, and tobacco control.<sup>968</sup>

CDPC should continue to staff these groups at levels comparable to those before the recent re-organization. Staff working with the groups should communicate regularly to share ideas relating to primary prevention and consider holding meetings that include all groups together. This will enhance integration of CDPC while maintaining existing CDPC resources.

# 3. Direct State Resources to Invest in the Department of Health

DOH is largely staffed by employees funded through federal sources. Nearly all state agencies have some federally-funded staff, but the proportion for DOH is much higher. Across all departments in 2012, approximately 18% of employees were federally funded.<sup>969</sup> At DOH, however, 41% of all employees were federally funded.<sup>970</sup> This reflects a significant failure on the part of the state to invest in public health.

The work of CDPC is almost entirely funded by federal grants from the CDC. As the available funding has shrunk, it is clear that in spite of strong efforts on the part of DOH to fundraise for its public sector work, this is not a long-term sustainable approach. A commitment from the state itself to fund public health and chronic disease prevention and control is essential.

Of course, the state budget is a significant challenge and the pension fund is and will remain a limiting factor for several years. Nevertheless, within these limits, New Jersey's legislative and executive leadership must prioritize DOH rather than permitting it to languish and continue to shrink year after year. The alternative would be to spend staggering sums on healthcare services in Medicaid and the state employee health plans as the rates of type 2 diabetes and other chronic diseases climb, while receiving lower sums in tax revenue as a sicker population becomes less and less productive.

### Other Essential Departments DEPARTMENT OF CHILDREN AND FAMILIES AND DEPARTMENT OF HUMAN SERVICES

DCF and DHS are named in the diabetes action plan law as participants in the report with DOH. This requires that the three agencies work together to create and implement the report—a process that, as described above for DOH, requires a financial commitment to staffing this work.

As described above, DCF controls licensing standards for child care centers. ONF, through ShapingNJ, worked with DCF to build new regulations that enhance nutrition and physical activity requirements in this setting. Enforcement responsibilities lie with DCF, which inspects all child care facilities at the time of their license renewal.<sup>971</sup> DCF will need adequate personnel to visit all sites and make sure they are in compliance with new regulations.

DHS controls two crucial pieces of the type 2 diabetes puzzle in New Jersey: Medicaid/ FamilyCare and SNAP.



Medicaid is directly affected by type 2 diabetes costs, which are a crucial element of the diabetes action plan report. In addition, Medicaid issues like expanded eligibility, reimbursement for key services and providers, case management programs, and Medicaid Health Homes directly impact the disease, so that DHS's plans affect the report's projections and options. Therefore, it is very important for DHS to work with DOH to prepare the report.

Its oversight of SNAP is another reason that DHS will play a large role in the diabetes action plan process. As discussed below, access to SNAP is associated with reduced food insecurity, which in turn yields reduced obesity and reduced type 2 diabetes. Implementation of the program to maximize both enrollment and healthy food purchasing opportunity can directly affect long-term diabetes rates.

#### Recommendations

#### 1. Collaborate with the Department of Health

DCF and DHS should embrace the chance to collaborate with DOH on the diabetes action plan. This is a place where interests converge. DCF is concerned with child protection, which includes protection from obesity and type 2 diabetes through the new child care center standards. Working with DOH can yield synergies that enhance both departments' efforts. DHS is concerned with Medicaid, a program whose costs are in danger of skyrocketing if type 2 diabetes continues to increase in prevalence. A little cooperation can go a long way toward bridging the gaps between departments whose interests may not usually converge explicitly.

#### 2. Ensure adequate staffing

Like DOH, these agencies require adequate staff. DCF cannot enforce the new child care center regulations if the number of employees continues to shrink year after year. DHS has significant responsibilities, especially with the expansion of Medicaid eligibility, and it will be difficult for the agency to take on the reporting required by the diabetes action plan law—not to mention other recommendations discussed in this report—without adequate staffing.

#### DEPARTMENT OF EDUCATION, DEPARTMENT OF AGRICULTURE, AND DEPARTMENT OF TRANSPORTATION

The diabetes action plan law does not identify DOE, NJDA, or DOT as required participants. Yet they are integral to any meaningful statewide strategy to prevent type 2 diabetes. As explained above, DOE and NJDA collaborate on school wellness, especially regarding school nutrition programs, and DOE works with schools to develop wellness teams and provide professional development on obesity prevention topics. NJDA also deals with policies impacting farmers markets and the overall food system, which greatly impacts the food choices available to New Jersey consumers, now and in the future. DOT, meanwhile, has a powerful voice on urban planning, dealing directly with issues such as Complete Streets and Safe Routes to School.

These departments all have a significant impact on the living environment of New Jersey residents, from what they eat to how they move through their days. Accordingly, they must be involved in diabetes prevention planning, because only with their active cooperation can plans be effective and meaningful across the population.

This means that each organization must receive the resources it needs to collaborate with DOH in the diabetes action plan report process, and should commit to participating in this vital area.

# LEVERAGE NEW JERSEY PHILANTHROPIES

New Jersey has a number of private foundations that are deeply engaged in work to prevent obesity and type 2 diabetes and improve health care in the state. This presents opportunities to leverage these resources through active public-private partnerships and mutual learning. Here, we identify just a few key philanthropies with which the state should develop close working relationships.

The Bristol-Myers Squibb Foundation's Together on Diabetes<sup>™</sup> Initiative, of which this report is a part, funds two New Jersey healthcare organizations, the Camden Coalition of Healthcare Providers (CCHP) and the Zufall Health Center (though the American Pharmacist Association Foundation). Both organizations are exploring new ways to enhance type 2 diabetes management,



through intensive case management and integration of pharmacists into the care team, respectively. CCHP's Care Management Program targets patients who tend to use more expensive health care, providing them with care coordination services upon discharge from hospitals.<sup>972</sup> The companion Care Transition Program works with patients when they enter the hospital, helping to coordinate patient care in cooperation with patients' existing medical homes.<sup>973</sup> CCHP's Citywide Diabetes Collaborative and Integrated Diabetes Care Program work to increase access to DSME, enhance the capacity of primary care practices to deliver patient-centered care, and improve care coordination.<sup>974</sup> Zufall Health Center, in turn, runs a Clinical Pharmacy Services program, which focuses on regular one-on-one encounters between the clinical pharmacist and the patients enrolled in the program.<sup>975</sup> The staff pharmacist provides medication therapy management, diet and nutritional counseling, and insulin management to avoid serious diabetic emergencies.976 The Bristol-Myers Squibb Foundation also supports policy analysis in New Jersey through the PATHS initiative.

The Merck Foundation's Alliance to Reduce Disparities in Diabetes "aims to help decrease diabetes disparities and enhance the quality of health care by improving prevention and management services."977 The Alliance has worked to develop and implement programs that will address healthcare disparities with proven, collaborative, and community-based approaches; enhance communication between patients and healthcare providers; disseminate important findings to further develop prevention and management programs; increase awareness among policymakers of changes that can reduce disparities; and promote collaboration and information-sharing among stakeholders across the country who share Alliance goals.<sup>978</sup> The Alliance provided funding for the CCHP Citywide Diabetes Collaborative, supporting the Collaborative's approach of "improving diabetes care at the patient, practice, and community level."979

The Robert Wood Johnson Foundation has a childhood obesity program area that can help inform New Jersey policy going forward.<sup>980</sup> The program focuses on school food and beverages; access to healthy affordable food through grocery stores and

corner stores; physical activity in schools, after-school programs, and the community; pricing strategies to incentivize healthier food purchasing; and regulation of food marketing to children.<sup>981</sup> The foundation's work in each priority area includes grants to direct service organizations as well as reports and advocacy.<sup>982</sup> One of the foundation's most exciting projects is the New Jersey Partnership for Healthy Kids (NJPHK).<sup>983</sup> A collaboration with the New Jersey YMCA State Alliance, NJPHK operates local coalitions in Camden, Trenton, Vineland, New Brunswick, and Newark.<sup>984</sup> The project works to ensure that all food and drinks available in schools meet or exceed dietary guidelines; to increase access to healthy food through more grocery stores and healthier corner stores; to increase the physical activity opportunities in school and in out-of-school programs, as well as through improved community built environment; to use pricing strategies to encourage people to buy healthier food; and to reduce exposure to unhealthy food marketing.985

The Horizon Foundation for New Jersey, funded by Horizon Blue Cross Blue Shield, has partnered with the New Jersey YMCA State Alliance to launch and sustain a program called Healthy U, which works to reduce childhood obesity through improved nutrition, increased physical activity, and parental involvement.<sup>986</sup> Healthy U operates in pre-school, elementary, and after-school settings, implementing a program called the Coordinated Approach to Child Health (C.A.T.C.H.) curriculum.987 C.A.T.C.H. involves age-appropriate nutrition education, opportunities for exercise and play, and regular engagement with parents and families to reinforce the messages delivered through the program.<sup>988</sup> The program currently operates in all twenty-one New Jersey counties, through fifty elementary school partners and 480 YMCA sites.<sup>989</sup> It is currently reaching 40,000 New Jersey children ages three to thirteen.990

The Campbell's Soup Company, headquartered in Camden, New Jersey, launched a program called Campbell Healthy Communities in 2011.<sup>991</sup> The program focuses on access to fresh, nutritious food; access to safe places to play, walk, and exercise; nutrition education; and building public will within the community for healthy changes.<sup>992</sup> Campbell's plans to work in several cities, but has concentrated



its work in Camden for the past two years.993 Program elements include working with corner stores to add healthy food options, providing nutrition classes, promoting organized urban gardening, and expanding availability of seasonal produce via farmers markets and mobile markets.<sup>994</sup> The program also provides physical activity in schools via the C.A.T.C.H. train-the-trainer curriculum, and works with the Camden Coalition of Healthcare Providers to implement the Pregnancy, Parenting Partners program, which focuses on prenatal and well-child visits that include nutrition education.<sup>995</sup> The program partners with local community organizations to implement these program elements.996

The Nicholson Foundation is bringing principles of care coordination, data collection and analysis, enhancement of primary care services, and linking of funding to outcomes to its grants for healthcare provision and technical assistance.<sup>997</sup> For example, the Foundation has provided funding for the Camden Coalition of Healthcare Providers to develop its case management model.<sup>998</sup> The Foundation is supporting efforts to develop the Accountable Care Organization model, also discussed in detail below.<sup>999</sup>

#### Recommendations

DOH and other key state agencies can take advantage of a number of these private endeavors to enhance their own work. Foundations have identified numerous promising programs and practices. State agencies can use this knowledge to inform state projects, and also consider partnering with foundations to expand the reach of effective existing projects. DOH has already been very successful in developing ShapingNJ as a strong public-private partnership. ShapingNJ has convened stakeholders, provided consistent messaging for all partners to use, and evaluated the resulting efforts to inform ongoing work. This type of publicprivate partnership can serve as a model for how state agencies can engage with the philanthropies identified here, as well as many other programs taking place within New Jersey. Such partnerships can allow for co-investment, enhancing the reach of state agencies and allowing for greater mobilization of resources.

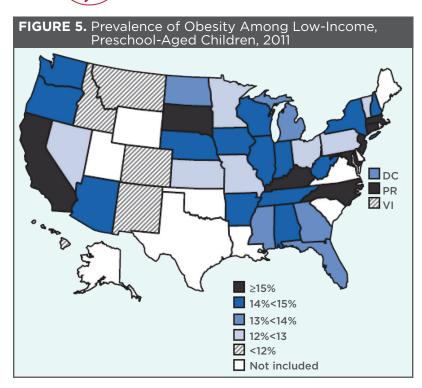
# NEW JERSEY'S FOOD SYSTEM AND BUILT ENVIRONMENT

A healthy food system is important to improving type 2 diabetes outcomes for two main reasons: first, having a healthy food system can help prevent the incidence of type 2 diabetes and other chronic diseases; second, once individuals have type 2 diabetes, a healthy and robust food system can help those individuals mitigate the consequences of the disease. Although much of the discussion around type 2 diabetes (and other chronic diseases) rightly focuses on the immediate treatment and care of those with or on the verge of getting type 2 diabetes, it is crucial that New Jersey take a step back and look at the long-term impact of increasing cases of type 2 diabetes in the state. PATHS partners emphasized the importance of changing the built environment so that when people with chronic diseases such as type 2 diabetes get out of the hospital, they have a supportive environment to which they can return.<sup>1000</sup> Another PATHS partner noted that "place matters; where you are born has a significant

impact on the trajectory of your life."<sup>1001</sup> Additionally, New Jersey's high rate of obesity among low-income children ages two to five should motivate the state government to take action now to prevent and mitigate the consequences of their childhood obesity.<sup>1002</sup> (See Figure 5)

These environmental issues—such as whether there are enough grocery stores in strategic places selling healthy food, whether schools have healthy breakfast programs, whether food assistance programs provide enough support and encouragement to participants to eat healthy, and whether the built environment supports physical activity and healthy living are issues New Jersey should explore in crafting its plan to reduce the incidence and consequences of type 2 diabetes in the state.

This section discusses the major areas of New Jersey's food and built environment that have an impact on the well-being and health of New Jersey's residents. Each section highlights



some of the barriers the state faces in ensuring a robust food and built environment system and provides recommendations for strengthening New Jersey's food and built environment.

# ACCESS TO HEALTHY FOOD

Ensuring access to healthy food is critical for maintaining a healthy lifestyle and avoiding or mitigating the impacts of chronic disease. For many low-income individuals and families in New Jersey, access to healthy food is not guaranteed. As discussed throughout this report, type 2 diabetes and the quality and quantity of food an individual eats are closely linked. If New Jersey wants to reduce the number of residents with the disease and improve the outcomes of those already with the disease, the state needs to consider the policies that help increase low-income residents' ability to access healthy food. The following sections discuss various policy recommendations for improving access to healthy food within New Jersey.

# **Economic Access to Healthy Food**

As mentioned in the background section, 13.5% of New Jersey's population was food insecure in 2010, which means that many low-income individuals and families in New Jersey are struggling to put food on the table.<sup>1003</sup> A lack of resources to obtain healthy food can have serious consequences for the health and well-being of these New Jersey residents. The federal government's food assistance programs and the emergency food aid infrastructure provide an important safety net for New Jersey residents. This section discusses some of the challenges and opportunities New Jersey faces in ensuring New Jersey residents have the economic ability to access healthy food.

#### Recommendations

#### 1. Increase Participation in SNAP by Identifying Barriers to Participation and by Increasing Awareness of SNAP

One of the largest hurdles facing the Supplemental Nutrition Assistance Program (SNAP) across the country is getting eligible individuals to participate in the program. At 60% of eligible people participating in its SNAP program, New Jersey has one of the lowest participation rates in the United States.<sup>1004</sup> The only state with a lower percentage of eligible but not participating individuals was California, which has only 53% of eligible individuals participating in SNAP.<sup>1005</sup> By contrast, five states have participation rates in the nineties or above: Maine (100%), Oregon (99%), Michigan (95%), Washington (91%), and Vermont (91%).<sup>1006</sup> Nationally, the SNAP participation rate over the past three years ranged between 70 to 72%.<sup>1007</sup>

Increasing participation in SNAP should be a priority in New Jersey. Given that SNAP is intended to aid low- or no-income persons in accessing food, it is critical that the state work to ensure that eligible residents of New Jersey are utilizing this benefit. Two initial steps the New Jersey Department of Human Services' (DHS) Division of Family Development (DFD) can take to start increasing participation in SNAP are discussed below.

In order to increase participation in SNAP, New Jersey should conduct a study to identify what barriers low-income New Jersey residents face that prevent them from enrolling in the SNAP program. For example, a 2008 national report from the Food Research & Action Center found a number of barriers to SNAP participation among eligible individuals, including stigma, inconvenience of traveling to



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and from the SNAP offices (including limited office hours, lengthy waiting periods, and costs associated with the travel), inadequate caseworker to applicant ratios, and challenges with the required paperwork.<sup>1008</sup> By studying the barriers in New Jersey, the state can plan to reduce those barriers and increase participation.

One barrier to participation in SNAP is a lack of awareness about the program and eligibility for it.<sup>1009</sup> New Jersey should implement policies that ensure that eligible residents are aware of their eligibility. One way to do this is for DFD to engage in outreach campaigns to educate the public about the eligibility criteria and available benefits. The outreach campaigns can utilize existing networks through churches, community groups, and schools to reach individuals and families who are eligible, but not enrolled, in SNAP.

#### 2. Increase Eligibility Under the Broad-Based Categorical Eligibility Rules

Although the federal government sets basic eligibility criteria for SNAP, the states have some flexibility to expand eligibility. New Jersey has already taken two important steps toward expanding the program to reach more New Jersey residents in need of this support, by raising the monthly income limit to 185% of the federal poverty level and by eliminating the asset test.<sup>1010</sup>

New Jersey has an opportunity to reach even more individuals in the state by adopting broad-based categorical eligibility rules. Broad-based categorical eligibility allows most households that qualify for non-cash Temporary Assistance for Needy Families (TANF) or a similar state program to automatically qualify for SNAP benefits.<sup>1011</sup> Currently, New Jersey allows individuals to participate in SNAP if their income is at or below 185% of the federal poverty level, but the state's TANF program sets eligibility at 130% of the federal poverty level.<sup>1012</sup> However, under the broad-based federal categorical eligibility rules, New Jersey could increase its TANF eligibility criteria to include individuals and households with income up to 200% of the federal poverty level, which would then allow those individuals and households to qualify for SNAP.<sup>1013</sup> Currently, twelve states and Washington, D.C. set their TANF gross income limit at 200% of the federal

poverty level (Arizona, Delaware, D.C., Hawaii, Maryland, Massachusetts, Michigan, Montana, Nevada, North Carolina, North Dakota, Washington, and Wisconsin).<sup>1014</sup>

New Jersey should increase the eligibility criteria to include those individuals and households at 200% of the federal poverty level.<sup>1015</sup> This would be an important step to reducing food insecurity in the state because, given the state's very high cost of living, food insecurity can easily reach those at this higher income level.

#### 3. Expand SNAP Offices' Hours of Operation

New Jersey's SNAP program is operated through its twenty-one county welfare agencies, about two thirds of which are open only during traditional business hours (Monday through Friday from 8:30am to 4:30pm).<sup>1016</sup> About one-third of the offices have extended or additional hours outside of traditional business hours.<sup>1017</sup> Given that many individuals and families accessing SNAP are working individuals and families, it is unlikely that they can leave their jobs during traditional work hours to attend meetings necessary to accessing their benefits.

DFD should encourage the county level welfare offices to expand the hours of operation for SNAP offices to meet the needs of working families. SNAP benefit offices should be open after working hours and on Saturdays to ensure that the population served by the SNAP program can, in fact, access their benefits.<sup>1018</sup>

#### 4. Expand Online SNAP Services

The SNAP application process needs to be accessible and provide sufficient information to help applicants complete the process. New Jersey has already taken a step toward making its application process more accessible to eligible New Jersey residents. New Jersey is part of a majority of states that provide online applications; as of 2010, thirty states provided applicants the opportunity to apply for benefits online.<sup>1019</sup> However, in addition to online applications, twelve states allow participants to view their case information online and in thirteen states, participants can report information that may change their eligibility and benefit rates online.<sup>1020</sup> However, as of 2010, New Jersey's SNAP program did not provide either of those online case management options.<sup>1021</sup>



DFD should work with the county level welfare offices to improve the online services provided to SNAP beneficiaries. It is important that SNAP participants be able to easily access and change information about their benefits. By allowing SNAP participants to see their case information online and to report information that may change their eligibility and benefits rates online, the county welfare offices can increase their responsiveness to changes in participants' economic situations and may be able to increase efficiency in processing these changes.

#### 5. Increase SNAP Incentive Programs

New Jersey should implement and increase SNAP incentive programs that encourage SNAP participants to use their SNAP benefits on healthy food items. A number of states have incentive programs run by non-profits and foundations that give SNAP participants extra money or vouchers to purchase fresh fruits and vegetables. For example, in Michigan, the nonprofit Fair Food Network offers an incentive program called the Double Bucks program.<sup>1022</sup> The Double Bucks program matches up to \$20 per market day any money that SNAP participants spend at farmers markets on fresh fruits and vegetables.<sup>1023</sup> New Jersey should implement this kind of program on the state level. New Jersey could provide matching funds for SNAP participants, up to a certain dollar amount, or could provide a certain amount of cash vouchers that SNAP participants could spend only on fresh fruits and vegetables.

#### 6. Identify Barriers to Special Supplemental Nutrition Assistance Program for Women, Infants, and Children Participation

In calendar year 2010, New Jersey had a 60.4% participation rate in its Special Supplemental Nutrition Assistance Program for Women, Infants, and Children (WIC); only 170,096 out of 281,663 eligible individuals participated.<sup>1024</sup> WIC provides an important service to women, infants, and children who are in need of nutrition assistance, and it is important that eligible individuals and families participate in the program. Nationally, some of the barriers to participation include stigma, lack of awareness of and information about WIC and its eligibility requirements, inconvenient WIC office locations and hours, lack of transportation, language barriers, and a perception of insufficient benefits.<sup>1025</sup> Across the country, women report ending their participation in the program

primarily due to long waiting lines in WIC offices (particularly during re-certification), and overcrowded and noisy WIC facilities.<sup>1026</sup> WICeligible women are, by definition, in a vulnerable position with regard to their income and nutritional status; increasing participation in the WIC program is important because it will help these women mitigate some of that vulnerability.

To help increase participation in the WIC program, New Jersey should conduct a study to identify what barriers eligible New Jersey women face that prevent them from enrolling in the WIC program. In fact, New Jersey is taking steps to address this issue; the Altarum Institute is conducting a WIC assessment in the Mid-Atlantic region, including New Jersey, to help the state identify and address barriers to participation in the WIC program.<sup>1027</sup>

#### 7. Provide State Funding to the New Jersey Special Supplemental Nutrition Assistance Program for Women, Infants, and Children

New Jersey does not currently provide any funding to the state WIC program.<sup>1028</sup> One PATHS partner highlighted the lack of state funding as a major area of concern for the WIC program in the state.<sup>1029</sup> This lack of funding is a problem because it reduces the number of eligible people that can be served by the program; given that New Jersey WIC participation is only at 60%, the state needs to invest in the program to help increase participation. At least one other state, Massachusetts, supplements the federal funding with its own state money to ensure that all eligible individuals can be served.<sup>1030</sup>

In fiscal year 2011, New Jersey's WIC program provided \$53.17 a month, which ranks New Jersey's average monthly WIC benefit fairly high as compared to the other states (not counting United States territories or recognized Tribal nations).<sup>1031</sup> Only four other states provided higher monthly benefits that year: Louisiana (\$53.23), Hawaii (\$53.96), Mississippi (\$54.78), and Georgia (\$61.68).<sup>1032</sup> Although New Jersey ranks toward the top in the amount of benefits it distributes to WIC participants, the reality is that the cost of living in New Jersey is incredibly high,<sup>1033</sup> so WIC participants struggle to meet all of their costs. The state should provide its own funding for WIC in order to increase the number of participants and to help participants purchase healthy food.





# 8. Increase Funding for WIC Fruit and Vegetable Programs

New Jersey has already taken some steps toward increasing access to fruits and vegetables for New Jersey residents, namely, by allowing WIC Cash Value Vouchers (CVV) benefits to be accepted by authorized farmers. In fact, New Jersey is one of only nineteen states that allows WIC CVV to be used at farmers markets.<sup>1034</sup> As part of the WIC Farmers Market Nutrition Program (FMNP), New Jersey WIC participants receive \$20 per year to purchase fruits and vegetables from authorized farmers.<sup>1035</sup> New Jersey's FMNP benefits fall in the middle of the range that the federal government provides to states;<sup>1036</sup> states are permitted to supplement this amount with their own funds. Under the Senior Farmers Market Nutrition Program (S-FMNP), housed within WIC, seniors participating in the program receive \$20 per growing season to spend at farmers markets, roadside stands, or to pay for a share in a community supported agriculture program.<sup>1037</sup> The S-FMNP benefit distributed in New Jersey is on the low-end of the range that S-FMNP provides.<sup>1038</sup>

New Jersey should provide supplemental funding for its fruit and vegetable programs. Currently, New Jersey does not provide any funding for WIC or its farmers market program. The federal amount of \$20 per year is insufficient and should be supplemented in order to increase consumption of fruits and vegetables among WIC participants. State funding could be used to increase the number of farmers markets that are allowed to accept FMNP and S-FMNP benefits as payment.

#### 9. Improve Access to Authorized Vendors

New Jersey should work to improve access to authorized vendors through innovative methods, such as hosting a small farmers market at their site on voucher distribution days. New Jersey should encourage local benefit offices to host these markets. For example, many of the clinics that distribute FMNP benefits in Georgia host small farmers markets on voucher distribution days.<sup>1039</sup> By doing this, Georgia has reached a 95% rate of redemption for the vouchers it distributes.<sup>1040</sup> Another option, used in Louisiana, is to distribute the vouchers at participating farmers markets.<sup>1041</sup> By following this model, only those WIC participants who are already at the markets get the vouchers. This incentivizes WIC participants to come to the farmers market, increases the utilization rate of the vouchers, and ensures that less money is sent back to the federal government at the end of the year. New Jersey can follow either of these models to reduce the barriers participants face in using their benefits to purchase healthy food.

# 10. Increase Number of Farmers Markets that Accept EBT

New Jersey should also implement policies that facilitate the acceptance of SNAP benefits at farmers markets. Many of New Jersey's farmers markets are inaccessible to low-income residents, particularly those utilizing public assistance to purchase food. New Jersey recognizes that this is a challenge and has taken steps to increase accessibility to these markets for New Jersey's low-income residents. In 2009, New Jersey initiated a pilot program that allowed SNAP participants to use their Electronic Benefit Transfer (EBT) benefits at farmers markets.<sup>1042</sup> The pilot program provided wireless EBT card readers to farmers to help facilitate the use of EBT benefits at the markets.<sup>1043</sup> In 2011, there were 148 farmers markets operating throughout New Jersey.<sup>1044</sup> During that year, nine farms were authorized to accept EBT; those nine farms sold their fruits and vegetables at fifty-three different markets in eleven counties.<sup>1045</sup> In 2013, although the number of farmers markets in the state fell to 141, the number of farms that accept EBT stayed the same (at nine farms throughout the state).<sup>1046</sup>

New Jersey should expand their 2009 pilot program that allowed SNAP recipients to use their EBT cards at state farmers markets by providing more farmers with wireless EBT readers.<sup>1047</sup> According to a United States Department of Agriculture (USDA) study, "the average annual cost of operating wireless EBT at a farmers' market open for a six-month growing season is approximately \$1,255."<sup>1048</sup> New Jersey should provide financial assistance to farmers to help offset the cost of a wireless EBT reader to help SNAP participants use their benefits at farmers markets.

#### 11. Increase Funding to Food Banks to Purchase Fruits and Vegetables

Even with SNAP and WIC benefits, some individuals and families are still unable to



secure enough food to maintain a healthy life. Food banks and other emergency food assistance programs play an important role in reducing food insecurity among New Jersey residents. Food banks, food pantries, and soup kitchens throughout the state have been making great strides in providing food for New Jersey residents in need. Some of the food banks in New Jersey have implemented innovative programs to reach the residents most in need of help, for example, through the use of mobile food pantries.<sup>1049</sup>

Although the state provides some funding for these operations, more support is needed to ensure that New Jersey residents in need of emergency food assistance can access food, and to make the food as healthy as possible. In recent years, the New Jersey state government has provided food banks with supplemental funding to purchase fruits and vegetables.<sup>1050</sup> For example, in 2010, the Northwest New Jersey Community Action Partnership, Inc., received a little over \$7 million dollars from the state of New Jersey.<sup>1051</sup> Further, in August of 2012, the state awarded \$225,000 in Community Services Block Grants to food banks to improve storage and distribution of produce grown in the state.<sup>1052</sup> Starting in 2012, the Community Food Bank partnered with Grow a Row,<sup>1053</sup> a non-profit that works to grow and donate fresh produce, which will produce 300,000 pounds of fruits and vegetables for the food bank to distribute each year.<sup>1054</sup> New Jersey should provide additional funding for these emergency food assistance programs that will make these important foods available to more New Jersey residents.

# Geographic Access to Healthy Food

Increasing access to healthy foods involves more than just providing financial assistance to those who cannot afford healthy foods. Improving access to healthy foods means guaranteeing that all New Jersey residents have access to healthy food retailers either in their community or easily accessible by public transportation. It is clear from the consumer access background discussion that New Jersey's residents would benefit from policies that improve consumer access to healthy food retailers across the state; recall that 134,000 New Jersey residents live in "food deserts" across New Jersey and that a total of approximately 900,000 New Jersey residents lack access to affordable, healthy food (even if they do not live in federally recognized "food deserts").<sup>1055</sup> A number of policies and initiatives, discussed below, can help increase access to and demand for healthy foods throughout New Jersey.

#### Recommendations

1. Provide Funding or Other Incentives to Increase the Number of Permanent Retail Food Establishments Offering Healthy Food in New Jersey

New Jersey has made some progress in reducing the number of communities that lack access to healthy foods, but can do more to improve in this area. One PATHS partner involved in the retail food business indicated that New Jersey needs more permanent stores that are open seven days a week, more than other alternative forms of retail food establishments (such as mobile markets).

According to a 2009 report from the Food Trust, New Jersey has 25% fewer supermarkets per capita than the national average and needs 269 new supermarkets in order to meet that average.<sup>1056</sup> Moreover, the report showed that existing supermarkets are unevenly distributed across the state.<sup>1057</sup> The majority of supermarkets in New Jersey are located in suburban areas, while there are comparably few stores in rural and urban areas.<sup>1058</sup> In response to the Food Trust report, the New Jersey Economic Development Authority and the Reinvestment Fund partnered to create the New Jersey Food Access Initiative (NJFAI).<sup>1059</sup> NJFAI provides grants and loans for retail food operations that open in low-access areas.<sup>1060</sup>

NJFAI has received initial funding from the state, but New Jersey is still working to create a source of long-term, continuous support. The New Jersey Economic Development Authority initially authorized a three million dollar investment in the joint public-private venture,<sup>1061</sup> which was supplemented by a \$12 million donation from the Robert Wood Johnson Foundation.<sup>1062</sup> With those two sources and the Reinvestment Fund's own fundraising, the New Jersey Food Access Initiative has raised \$20 million.<sup>1063</sup> In 2011, State Senator Donald Norcross (D-Camden/ Gloucester) introduced a bill to fund NJFAI by directing 5% of the sales taxes collected in urban enterprise zones to state efforts to





finance supermarket development.<sup>1064</sup> The bill passed both the Senate and the Assembly, but was rejected by Governor Christie through a pocket veto in January 2012.<sup>1065</sup> Senator Norcross reintroduced the bill in the 2012-2013 legislative session; as of November 2013, the last action taken on the bill was a referral to the Senate Economic Growth Committee.<sup>1066</sup> Advocates should encourage the New Jersey legislature and Governor Christie to pass and sign this bill into law or should provide funding through another avenue.

Other initiatives to improve consumer access at corner stores are being spearheaded by the New Jersey Partnership for Healthy Kids (NJPHK), the YMCA State Alliance, and Campbell's Soup Corporation.<sup>1067</sup> Currently, their efforts are funded primarily through private and non-profit organizations. New Jersey should supplement the funding coming from private foundations to support the development of healthy corner stores. Corner stores could be encouraged to increase healthy food offerings through grants or tax incentives. Providing state funding for corner store initiatives may help those stores provide healthier options, which will help New Jersey residents in low access areas have access to healthy food options.

#### 2. Provide State Funding to Expand Farmers Markets in New Jersey

Despite the rapid increase in farmers markets around the United States, New Jersey only has 1.5 farmers markets for every 100,000 people.<sup>1068</sup> Further, as compared to other mid-Atlantic states, with only 141 farmers markets, New Jersey has substantially fewer farmers markets.<sup>1069</sup> To compare, there are more than 200 farmers markets in Virginia, more than 250 in Pennsylvania, and more than 600 in New York.<sup>1070</sup> Further, New Jersey's farmers markets are not equally accessible to all residents across the state. Bergen, Camden, Essex, Hudson, Mercer, Middlesex, Monmouth, and Morris counties each have ten or more farmers markets while Cumberland, Burlington, Gloucester, Hunterdon, Salem, and Warren each have only three or fewer farmers markets.<sup>1071</sup> Increasing the number of farmers markets is important because farmers markets provide another way for New Jersey residents to access food, as well as provide farmers with a profitable market in which to sell their goods.

Efforts to expand farmers markets in New Jersey are generally funded and promoted at the national level or by non-profits, rather than at the state level. For example, the expansion of two farm stands in Ringwood into farmers markets in 2011 was funded by a Farmers Market Prevention Program grant from the USDA  $^{\rm 1072}$  and the launch of the New Brunswick Community Farmers Market in 2009 was supported by Johnson and Johnson and Rutgers Cooperative Extension.<sup>1073</sup> The state should invest some of its own money into the development and expansion of farmers markets. This investment will not only help New Jersey residents access healthy food, but will also provide New Jersey farmers with another opportunity to sell their food.

#### 3. Improve Access to New Jersey's Farmers Markets by Encouraging Development of Farmers Markets in New Areas and By Providing Public Transportation

Although New Jersey is characterized as an urban state, not all residents have access to their own modes of transportation; and, for those that rely on public transportation, they are not always able to easily reach their desired destination. The New Jersey Department of Agriculture (NJDA) has taken some initial steps to facilitate access to farmers markets by creating a list of public transportation options to New Jersey farmers markets.<sup>1074</sup> By hosting farmers markets on state-owned land, the state can encourage farmers markets to open in low-access areas, and thus further increase access. The state can also facilitate access to these farmers markets by including them on bus routes or providing additional public transportation to the markets.

# 4. Complete More Pilot Mobile Vending Programs in New Jersey

Mobile vending is growing in popularity as a way to increase consumer access across the United States. New Jersey passed a law establishing a mobile vending pilot program, which launched in May 2013.<sup>1075</sup> The legislation directed NJDA to work with one or more municipalities to test out the feasibility of mobile markets in New Jersey. So far, the pilot program has only been implemented in Camden.<sup>1076</sup> While this is a good start, New Jersey should work to establish pilot programs in other municipalities to increase access to



healthy foods in low-access areas within the state. If the pilot programs are found to be successful, the state should provide funding and technical assistance to help establish mobile vending programs across the state.

# Access to Healthy Food at School

Access to healthy food is a critical part of preventing and mitigating the impacts of type 2 diabetes, as well as ensuring a person's overall wellness. There are many places where individuals in New Jersey access food, including schools, grocery stores, restaurants, corner stores, and farmers markets. Further, children spend a significant amount of time at school and have numerous opportunities to eat food throughout the day; most children eat lunch at school, many eat breakfast, and perhaps just as many children eat snacks at some point during the day.

As discussed in the background section, there are a number of federal programs that provide food to children in schools. New Jersey plays an important role in all of these programs; the state has the responsibility to implement these programs, and as part of its implementation authority, it has a number of opportunities to strengthen them. Further, New Jersey has significant resources at its disposal, such as access to world-class universities and healthcare and research facilities, as well as organizations and innovators making progressive reforms to policies and programs geared toward improving child nutrition and wellness at both the state and local levels. Ensuring that policies around school food are robust and support a healthy lifestyle is an important step in establishing healthy habits in schoolchildren and should be an important goal for New Jersey.

#### Recommendations

#### 1. Require School Districts to Publish their Wellness Policies in a Centralized Location

School districts are required to make their wellness policies available to the public.<sup>1077</sup> However, the school district wellness policies are not published in a central location for easy access by interested parties. NJDA and the Department of Education (DOE) should publish all of the school districts' wellness polices on their websites; this would enable parents, wellness advocates, and other school districts to review other wellness policies to see how their wellness policy compares and to incorporate some best practices into their own wellness policies.

#### 2. Pass Legislation Requiring Schools to Conduct Body Mass Index (BMI) Screening in Public Schools

Currently, there is no state policy requiring body mass index (BMI) screening for public school children (although annual height and weight screenings for students in K-12 are required).<sup>1078</sup> For several years, however, state legislators have proposed legislation that would require DOE to adopt policies and procedures to ensure that each student in grades 1, 4, 7, and 10 receives a health screening that calculates the student's body mass index and the corresponding percentile information.<sup>1079</sup> This legislation would also require that the results of the BMI screening be provided to the students' parents.<sup>1080</sup> Requiring BMI screening in school children provides school officials more information to use in helping to establish healthy habits in those children and monitoring outcomes of school health programs.

#### 3. Increase Direct Certification of Eligible Children for School Lunch

New Jersey certifies student eligibility for free and reduced price meals by using an income-based paper application or through direct certification based on categorical eligibility criteria.<sup>1081</sup> A student is categorically eligible if his or her household participates in certain other federal assistance programs, such as SNAP, TANF, or the Food Distribution Program on Indian Reservations.<sup>1082</sup>

New Jersey generally has a very low rate of directly certifying categorically eligible children for free school meals. During the 2011-2012 school year, 310,000 students in New Jersey were identified as categorically eligible for free and reduced-price (F/RP)lunch, 211,500 were directly certified, and 29,100 were categorically eligible but approved only by application.<sup>1083</sup> Based on these figures, 78% of categorically eligible children in New Jersey were certified in some manner for school meals.<sup>1084</sup> This figure falls far below the national average of 92%; only five states have a certification rate for categorically eligible children lower than New Jersey's.<sup>1085</sup> For children who were categorically eligible due to their household's participation in SNAP,





during the 2011-2012 school year, 77% of school-aged SNAP participants in New Jersey were directly certified for free school meals.<sup>1086</sup> This direct certification rate for children on SNAP was well below the national average rate of 86%, making New Jersey one of the lowest performing states in this area.<sup>1087</sup>

Direct certification is typically accomplished using one of two methods. One method uses a central matching system, in which a state agency uses computer matching to link SNAP records with student enrollment records and distributes match results to local educational authorities (LEAs).<sup>1088</sup> The second method uses a local matching system, in which state agencies distribute SNAP data to LEAs and LEAs match these data with their student enrollment lists.<sup>1089</sup>

Building upon the challenges noted above related to New Jersey's limited success in achieving high direct certification rates, New Jersey should identify and implement a direct certification process to improve its successes in this area. The state might consider modeling its process on ones that have proven successful in other states. For example, using a centralized system, Oklahoma matches monthly SNAP and TANF program data with student enrollment data (including charter schools) that are updated daily to directly certify students.<sup>1090</sup> School districts are notified when the partial and matched lists are available for download and for finalizing certification.<sup>1091</sup> To ensure all eligible children are identified, school districts are provided with a list of unmatched students to review manually.<sup>1092</sup> Additionally, the Massachusetts Department of Elementary and Secondary Education is piloting a program that allows school food service directors to access a database managed by the state's Department of Transitional Assistance that provides the names of children in their schools who are enrolled in SNAP and emergency food assistance in real time.<sup>1093</sup> States that have been more successful in improving their direct certification rates find that critical success factors for direct certification processes include teamwork among program data partners, strong leadership, and userfriendliness.<sup>1094</sup>

In 2012, New Jersey received a \$206,857 grant from the USDA to improve its direct certification system and increase participation in the school lunch and school breakfast programs.<sup>1095</sup> New Jersey was one of only four states to receive such a grant;<sup>1096</sup> this money should help New Jersey accomplish its goal of increasing participation in the school breakfast and lunch programs.

New Jersey should first focus on improving direct certification for children in households receiving SNAP benefits. This would include regularly assessing progress towards reaching all children in households receiving SNAP benefits; refining the data matching process; using any available data to reach all children living in the household; conducting matches as often as possible in order to develop the capacity to look up individual children who might be overlooked; and regularly providing training and guidance for staff.<sup>1097</sup>

#### 4. Participate in the New Community Eligibility Option for High-Poverty Schools under the Healthy, Hunger-Free Kids Act of 2010

Individual New Jersey schools should consider taking advantage of the new community eligibility option for high-poverty schools created by the Healthy, Hunger-Free Kids Act of 2010.<sup>1098</sup> Although this option is not available to schools nationwide until the 2014-2015 school year, this option allows schools to serve breakfasts and lunches free to all students.<sup>1099</sup> In lieu of collecting and processing applications, schools are reimbursed based on an estimate of how many children would qualify for F/RP meals if they took applications under the standard rules.<sup>1100</sup> The reimbursement formula is based on the share of students who are in households receiving SNAP benefits.<sup>1101</sup> The option is designed to eliminate the administrative costs associated with applications and tracking eligibility categories in the lunch line, freeing up resources to focus on reducing hunger and improving the nutritional quality of the meals served.<sup>1102</sup> Unsurprisingly, more children ate at school once the meals were free for all students.<sup>1103</sup> In community eligibility schools, average daily lunch participation rose from 72% in October 2010 to 78% in October 2011, and average daily breakfast participation rose from 48% to 57%.<sup>1104</sup> Although participating schools receive the federal free meal subsidy for only a portion of meals, school districts report that administrative savings make up



for the meal charges they must forgo, and parents and staff have reacted positively to the program.<sup>1105</sup>

# 5. Provide Students with Adequate Time to Eat Lunch

Local governments and school boards within New Jersey also have a role to play in improving the state's school food programs, for example by improving the school lunch period. Often, children have to rush to eat lunch because, in an attempt to raise students' test scores, schools have reduced lunch periods to increase class time. This leaves students scrambling to buy a lunch that they can actually consume during a short time period rather than focusing on healthy choices.

Legislation mandating adequate time to eat for school lunch periods can be initiated at either the state or local level. Some states have already passed legislation mandating students be given adequate time to eat. The state or local initiative can set lunch periods for a minimum of thirty minutes so that students have time to order and eat a balanced, healthy meal, and should tailor school meal times to student age groups, and based on available research literature, curriculum needs, and parent input.<sup>1106</sup>

#### 6. Increase Participation in School Breakfast Programs by Restoring State School Breakfast Funds and Providing Universal Breakfast

Although New Jersey law already requires schools in which 20% of the students are eligible for free and reduced price meals to offer the school breakfast program, participation in the program is still low, ranking 46th nationally.<sup>1107</sup> In response to the low school breakfast program participation, the non-profit organization Advocates for Children launched a partnership with NJDA and DOE to form a statewide coalition to promote school breakfast.<sup>1108</sup> The Statewide School Breakfast Campaign also included teacher and principal unions, school boards, and the New Jersey Dairy Council, among many others.<sup>1109</sup> The group focused on promoting school breakfast in general, through fall and spring kick-off events with paid media, flyers for children and parents, and website promotion.<sup>1110</sup>

The most important idea was to encourage schools to allow for "breakfast in the classroom."<sup>IIII</sup> Breakfast in the classroom

has been shown to be a highly successful strategy for increasing school breakfast participation.<sup>1112</sup> Students eat breakfast in their classroom, either at the beginning of the school day or early during the day.<sup>1113</sup> Having breakfast available after the morning bell allows children to receive the food without arriving to school very early in the morning. Often breakfast is brought to classrooms from the cafeteria in containers or served from carts in the hallways by food service staff.<sup>1114</sup> Crucially, the Commissioner of DOE and the Secretary of NJDA collaborated on a letter to schools, informing principals that breakfast in the classroom would count as instructional time.<sup>1115</sup> This removed a significant barrier to implementation.

This progress, together with an ongoing commitment from the Statewide School Breakfast Campaign coalition members, is an excellent sign of good things to come in this area. Through these various efforts, New Jersey has gone from forty-eighth in school breakfast participation to forty-sixth, within the first year of the campaign.<sup>1116</sup> The state increased participation in the school breakfast program by 16.3% during this first year.<sup>1117</sup>

New Jersey can continue its success in the school breakfast program in three ways: (1) incorporate best practices from other school breakfast programs; (2) provide state funding to the school breakfast program; and (3) provide universal breakfast for students in New Jersey.

First, New Jersey can incorporate any best practices from the top performing states in this area—the District of Columbia, New Mexico, South Carolina and Vermont.<sup>1118</sup> Further, schools in New Jersey could consider implementing a "grab and go" model where children can easily grab all the components of school breakfast quickly from the cafeteria line or from carts elsewhere on school grounds.<sup>1119</sup>

Second, New Jersey should provide state funding to the school breakfast program. New Jersey initially made excellent strides towards increasing participation in the school breakfast program by passing a law requiring school breakfast to be offered in certain schools and by allocating state funds for school breakfasts.<sup>1120</sup> The state appropriated approximately \$3.2 million annually to provide \$0.10 for all breakfasts served (free, reduced-



price, and paid) through the 2009-2010 school year when the school breakfast bill was passed.<sup>1121</sup> However, the state subsidy for school breakfast was eliminated as of the 2010-2011 school year.<sup>1122</sup> Lack of support from the state could be a reason that New Jersey ranks toward the bottom amongst the states in terms of school breakfast participation. The New Jersey legislature should allocate funding toward the school breakfast program to ensure that more children in the state can participate in this important program.

Finally, another option for increasing participation in the school breakfast program is to provide a universal free breakfast to all students. Offering breakfast at no charge to all students can help remove the stigma for low-income children associated with participating in school breakfast. Universal free breakfast has a variety of benefits, including the following:

- Regardless of income, families lead busy lives, and long commutes and nontraditional work hours could make it difficult for children to have the chance to sit down and eat a nutritious breakfast before school;
- Studies conclude that students who eat school breakfast at the start of the school day show a general increase in math and reading scores;
- Children who have school breakfast eat more fruit, drink more milk, and consume a wider variety of foods than those who don't eat breakfast or have breakfast at home; and,
- Schools that offer breakfast free to all students in the classroom report decreases in discipline and behavior problems, visits to school nurses, and tardiness.<sup>1123</sup>

One way New Jersey can implement universal free breakfasts is by utilizing Provision 2 of the National School Lunch Act.<sup>1124</sup> Provision 2 allows schools and institutions to provide universal free meals to all students in their schools.<sup>1125</sup> The schools pay the difference between the federal reimbursement rate and the cost of serving free meals to all the students. Although costs to schools increase due to paying for meals not covered by the federal government, schools can benefit from reduced paperwork, simplification

of meal logistics, and increased student participation in meal programs.<sup>1126</sup> Especially in schools with a high percentage of low-income students (75% or more), there is likely to be a significant benefit, as the marginal cost of increased meals that the school must bear will be offset by eliminating high administrative costs of verifying and accounting for so many eligible students.<sup>1127</sup> While Provision 2 is an extremely promising option for the lowest-income school districts in New Jersey, outside financial support may be needed for other school districts.

#### 7. Improve the Quality of School Breakfast

Starting in the 2013-2014 school year, parts of the new federal nutrition standards for school breakfasts became mandatory.<sup>1128</sup> For example, in 2013-2014, in school breakfast programs half of the grains served must be whole-grain rich and zero grams of *trans* fats per portion are allowed.<sup>1129</sup> In the 2014-2015 school year, school breakfast programs will have to include a minimum of one cup per day of fruit; all grains served must be whole grains; and the first sodium reduction target must be met.<sup>1130</sup> However, as these new federal dietary standards are implemented over the coming years, New Jersey has the authority to impose higher standards; recall that New Jersey law allows school districts to require stricter nutrition standards in their school meal programs.<sup>1131</sup> New Jersey should encourage school districts to set higher nutrition standards to ensure children are receiving healthy breakfasts.

#### 8. Keep the Stricter Standards for Competitive Foods Established in New Jersey Law When Applying the New Federal Competitive Food Standards

The USDA recently released an interim final rule that establishes nutritional standards for competitive foods served in schools.<sup>1132</sup> Before this federal rule, however, New Jersey had established stricter standards for competitive foods.<sup>1133</sup> Because children eat many meals at school, and because competitive foods provide an alternative source of calories, often unhealthy, for students, it is important that New Jersey limit these unhealthy competitive food options. Although New Jersey must follow the new federal standards for competitive foods, the USDA has made it clear that the federal standards set a floor. Where New Jersey has



established stricter standards for competitive foods sold in schools, the state should ensure that those stricter standards are followed by school districts.

# 9. Limit What Can Be Sold in Vending Machines

New Jersey can also improve the school food environment by controlling vending machine sales. New Jersey can take cues from these successful policies in other states:

- Mississippi: Regulations restrict beverages by allowing only bottled water, low-fat or non-fat milk, or 100% fruit juices to be sold to elementary and middle school students during the day, with those options plus zero-calorie or low-calorie soft drinks and light sports drinks or juices for high school students.<sup>1134</sup> For food items, the Department of Education maintains a list of products approved for sale at schools (including vending machines); no single item may have over 200 calories.<sup>1135</sup>
- Oregon: Limits the calorie count to 150 calories per item in elementary school vending machines, 180 in middle schools, and 200 in high schools.<sup>1136</sup>
- Louisiana: Prohibits snacks exceeding 150 calories per serving, those with more than 35% of their calories from fat, or those with more than thirty grams of sugar per serving, except for plain nuts and seeds.<sup>1137</sup>
- New Mexico: Only allows vending machines in middle and high schools to serve certain beverages, nuts, seeds, cheese, yogurt, or fruit, and limits other foods (subject to calorie, fat and sugar restrictions).<sup>1138</sup> Vending machines in elementary schools are not allowed to sell food at all (only beverages).<sup>1139</sup>
- West Virginia: Limits the content of vending machines and prohibits corporate logos from being displayed on vending machines' exteriors.<sup>1140</sup> The state also encourages school districts to place vending machines in low-traffic areas, and to disallow any misleading marketing.<sup>1141</sup>

#### 10. Conduct a Study to Identify Barriers to Participation in the Summer Feeding Programs

New Jersey's participation rate in the two summer nutrition programs is incredibly low.

In July 2010, 68,533 students in New Jersey participated in one of the summer nutrition programs.<sup>1142</sup> Yet, during the 2009-2010 school year, 378,029 children participated in the national school lunch program.<sup>1143</sup> Therefore, in July 2010, there were only 18.1 children in the summer nutrition programs per 100 children in the national school lunch program during the preceding school year.<sup>1144</sup> The New Jersey legislature should require NJDA to conduct a study to find out what barriers exist that cause such a low participation rate in summer nutrition programs.

#### 11. Streamline the Application Process Between the Various Food Programs

One PATHS partner suggested that one barrier to participation is due to the administrative challenges in enrolling students.<sup>1145</sup> For the various food programs—school food, summer feeding, and after-school programs—there are three different applications, processes, and systems involved. This makes it difficult to enroll students, and may be a contributing factor to the low enrollment in summer feeding programs.

NJDA should work to find a way to streamline the application processes of the three different food programs. It is likely that the students who qualify for school lunch and breakfast would also qualify for the summer feeding and after-school programs. By streamlining the application processes, New Jersey could reduce the administrative burden related to these programs and increase the number of students served by these food programs.

# FOOD AND PHYSICAL ACTIVITY INFRASTRUCTURE

Improving access to healthy food, through measures addressing both economic and geographic access, is an important place to start in preventing and reducing the impact of type 2 diabetes within New Jersey. However, in order to ensure access in the future, it is critical that the infrastructure and land use policies that support a healthy food system be robust enough to provide a supply of healthy food. Further, state and local land use and planning policies directly impact whether New Jersey's communities are built in such a way to encourage or discourage physical activity. To look only at the healthcare system and/or the nutrition assistance programs as the ways





type 2 diabetes can be prevented and slowed is incomplete. The way our environments are built plays a significant role in our health and, therefore, the following sections identify various policy recommendations for improving the food system infrastructure and land use within the state.

# Food System Infrastructure and Land Use

The "food system infrastructure" refers to the activities and stakeholders that take a seed and turn it into a food to be consumed. The food system infrastructure is the foundation of the food system—from growing and processing, to aggregation and distribution, to marketing and distribution, to retail and consumption, to food waste. Building a strong and supportive food system infrastructure is critical to ensuring New Jersey can grow and provide healthy food for its residents.

New Jersey's fruit and vegetable production can play a significant role in providing healthy food to state residents. Finding ways to connect New Jersey farmers to markets that low-income individuals can access and implementing policies that support agricultural production in the state are important steps New Jersey can take to build a healthy food system infrastructure. Although the food system infrastructure is made up of many parts, this section will discuss only a few of them to provide an introduction to policies that can support a robust food system infrastructure that produces healthy food for New Jersey residents.

#### Recommendations

#### 1. Provide Funding Incentives for Specialty Crop Projects and to Encourage More Agricultural Production

New Jersey can support healthy food production through providing various types of funding, such as through grants, low-interest loans, and tax incentives, to farmers growing healthy foods.

First, New Jersey can help increase specialty crop production by providing supplemental funding to the federal Specialty Crop Block Grant program<sup>1146</sup> or by initiating a statelevel specialty crop block grant program. It is in the best interest of New Jersey to help individuals and groups within the state apply for and receive specialty crop block grants for two reasons: first, the grant funds help develop fruit and vegetable production in the state, which increases the amount of fruits, vegetables, and nuts available to New Jersey residents; and second, because the amount of money a state receives under the federal Specialty Crop Block Grant program is based on the amount of specialty crop production in the states, an increase in specialty crop production (e.g., fruits, vegetables, and nuts) in the state may yield more federal grant funds (by increasing the proportion of national specialty crop production in New Jersey).<sup>1147</sup>

In addition to providing state funding to supplement the federal specialty crop block grant program or starting a state-level specialty crop grant program, New Jersey can provide other grant funds or low-interest loans to encourage the development of the agricultural sector in the state. For example, New Jersey can provide grant funds or low-interest loans to farmers who are going to produce specialty products, to farms that are transitioning to more sustainable farming practices, to young and beginning farmers, and/or to farmers that are rehabilitating land to put into agricultural uses.

Finally, New Jersey can also help increase the production of fruits and vegetables in the state through tax incentives. By providing tax breaks or other incentives to farmers who produce healthy foods, in the form of reduced property taxes (if the farmers own the land) or lower income taxes for these individuals and entities, states will reduce some of the barriers farmers face when growing healthy foods. It is important that New Jersey focus on encouraging the production of healthy food that residents eat (such as fruits and vegetables), rather than on commodity crops that get further processed, often into less healthy products.

#### 2. Educate New Jersey Specialty Crop Farmers about Various Sources of Financial Support

New Jersey should work to educate specialty crop farmers throughout the state about the federal Specialty Crop Block Grant program and should help farmers navigate the grant application process. Educating farmers about this available funding opportunity will help those farmers take advantage of the grant



program and may lead to an increase in fruit and vegetable production within the state. Further, there are specific federal and state tax laws that apply to farming. The state should provide education and technical assistance to farmers looking to understand and take advantage of these tax laws. For example, in North Carolina, the North Carolina State University Cooperative Extension provides workshops for farmers on tax issues, such as sales tax and various tax incentives.<sup>1148</sup>

#### 3. Ensure Tax Laws Do Not Disadvantage Small Specialty Crop Producers

Updating the farmland tax assessment law to reduce fraud was an important step for New Jersey to take.<sup>1149</sup> However, it is critical that the updated law not disadvantage smaller scale farmers that are actively farming the land but are not able to meet the \$1000 an acre threshold income requirement. Instead, New Jersey may want to provide another form of tax break or incentive for these small scale farmers.

#### 4. Increase Farm to Institution Market Opportunities for Farmers by Passing New Legislation Requiring State Purchasing Preference for In-State Products or a Resolution Showing Support for Local Food Products

Institutional markets are an important outlet for farmers seeking to scale up their operations and find more stable incomes. Programs and policies that focus on farm to institution sales can play a key role in helping producers access those larger markets increasing economic development for producers and the provision of fresh, local, and healthy food to the individuals fed by these institutions. There are two main policy actions New Jersey can take to facilitate the development of farm to institution programs. First, New Jersey can pass a local procurement law that requires state agencies (and/or other state entities) to purchase in-state food products. New Jersey currently has a law that encourages, but does not require, state government to purchase in-state agricultural products.<sup>1150</sup> The new law could require the purchase of in-state agricultural products if the in-state food is not more than 10% more expensive, for example, or could require the state to purchase a certain amount of in-state food products, say 5%, by a certain date.

Second, New Jersey could pass a resolution or statement in support of local purchases to show its support for increased purchase of in-state food products. Both of these actions express the state's support for developing the state's agricultural sector by providing more market outlets for in-state agricultural goods.

#### 5. Provide Financial Support to Help Develop Food Hubs Throughout the State

Once agricultural products are grown and harvested, it is critical that these products (processed or unprocessed) get to market. Many small- and mid-sized producers sell their agricultural products through direct-toconsumer outlets, such as farmers markets and community supported agriculture operations. While these markets are an important source of income for these farmers and provide consumers outlets in which to purchase fruits and vegetables, many of these small- and mid-size producers look to access larger markets, such as through sales to universities, state agencies, and other larger institutions, to provide a more consistent income and to help scale up their operations. There are a number of steps New Jersey can take to help develop a strong aggregation and distribution infrastructure within the state. For example, there are currently no food hubs operating within New Jersey to facilitate the aggregation and distribution of food products from within the state.

In 2012, students at the Edward J. Bloustein School of Planning and Public Policy published a report exploring the possibility of starting a food hub in New Brunswick, New Jersey.<sup>1151</sup> The report outlines the benefits of food hubs, and identifies the existing infrastructure in New Brunswick that would support a food hub, potential buyers, related services and activities the food hub could provide, as well as potential locations for the food hub in New Brunswick.<sup>1152</sup> There are numerous benefits of establishing a food hub in New Jersey, given its size and proximity to markets within the state and in surrounding states.

New Jersey should provide financial support to help aggregators and food hubs start and develop throughout the state. Food hubs serve as an important resource for small-scale farmers by pooling agricultural products into a volume that can meet institutional needs. Institutions within the state, and the citizens





they serve, will benefit from having access to fresh, local products. The state can promote aggregators and food hubs through direct grants or low-interest loans.

# 6. Continue to Reduce the Barriers to Entry for Urban Agriculture

New Jersey has already taken some steps toward facilitating the development of urban agriculture within the state. First, the state legislature passed a law in 2011 that facilitates the development of urban agriculture by authorizing city governments to lease or sell vacant lands to non-profits.<sup>1153</sup> Through this law, the state legislature took an important first step to reduce one of the barriers to entry-access to land-for urban farming operations.<sup>1154</sup> However, there are many other barriers that urban farming operations face that the legislature can address to facilitate the development of urban food production, such as access to low-interest loans, outdated zoning regulations, and assistance accessing markets, among others.

Second, some municipalities within the state, such as Newark, have made urban agriculture and increasing access to healthy food a priority.<sup>1155</sup> Newark created a position within its Sustainability Office for a Food Policy Director to help push urban agriculture initiatives ahead. Newark is one of a small, but increasing, number of cities to have such a position in the city government, which speaks to the city's creative approach to increasing food access for its residents. In 2013, two urban farms and one urban garden in Newark received grants through the United States Department of Housing and Urban Development's Community Development Block Grant program.<sup>1156</sup> According to one source, supporting urban farming and gardening has been a priority for the city in applying for these Community Development Block Grants.<sup>1157</sup> Because Newark has made urban agriculture a priority, the legislature may look to the work of Newark's Food Policy Director and local non-profits to learn more about how the state can reduce the barriers urban farmers face.

# 7. Provide Funding for the Development of Urban Agriculture Operations

The city of Newark has provided a great example of how to utilize federal funding for the development of urban food production to increase access to healthy food in underserved areas. The state legislature should provide some of its own funding, in the form of low-interest loans and/or grants, to these urban farming operations to help them build the necessary capital to start their urban farming operation. NJDA can also play a role in providing technical assistance to other urban farming operations across New Jersey that need assistance applying for federal grants, such as the United States Department of Housing and Urban Development's Community Development Block Grant program.<sup>1158</sup>

### **Physical Activity Initiatives**

Another critical factor in maintaining a healthy lifestyle is having the environment in which citizens live and work support healthy habits. Numerous PATHS partners have underscored the importance of focusing on healthy communities and creating a healthy built environment-including sidewalks, street lights, parks, residential density, and terrainas a critical element in combating chronic disease.<sup>1159</sup> Physical activity is essential to preventing diabetes and its complications. In order for New Jersey residents to spend the recommended number of minutes per week engaging in moderate physical activity,<sup>1160</sup> the state must work to shape the built environment to support this endeavor. According to a policy statement from the American Academy of Pediatrics,

> [n]eighborhoods and communities can provide opportunities for recreational physical activity with parks and open spaces, and policies must support this capacity.... Factors such as school location have played a significant role in the decreased rates of walking to school, and changes in policy may help to increase the number of children who are able to walk to school. Environment modification that addresses risks associated with automobile traffic is likely to be conducive to more walking and biking among children.<sup>1161</sup>

The state must evaluate the policies that shape the built environment in New Jersey and take action to make the built environment more conducive to physical activity. New Jersey has already taken some steps to accomplish this



goal; DOH is committed to facilitating and supporting projects and programs to increase physical activity.<sup>1162</sup> Although this is a good start, the state legislature and local governments must also work to improve the quality of the built environment for New Jersey residents.

#### Recommendations

# 1. Continue Evaluating and Improving State and Local Complete Streets Policies

In 2013, a report from the New Jersey Bicycle and Pedestrian Resource Center (BPRC) found that five counties and sixty-one municipalities in New Jersey have passed Complete Streets policies.<sup>1163</sup> Some communities have seen positive results from their Complete Streets policies; since Hoboken began its Complete Streets program in 2010, it has reduced bicycle-car collisions by over 60% and reduced pedestrian-car collisions by 30%.<sup>1164</sup> In 2011, the National Complete Streets Coalition evaluated state and local Complete Streets policies using ten criteria including design, jurisdiction, and implementation.<sup>1165</sup> The study found that New Jersey's statewide Complete Streets policy was the strongest overall policy when compared to all state and local policies nationally.<sup>1166</sup>

Although according to the National Complete Streets Coalition the New Jersey Complete Streets policy is strong, it is unclear how thoroughly and consistently the state is implementing its Complete Streets Policy. The New Jersey Department of Transportation (DOT) should conduct a study to discern to what extent the policy is being implemented, identify any barriers to implementation, and work to reduce them.

Further, although some municipalities, such as Hoboken, have seen positive results from their Complete Streets policies,<sup>1167</sup> more data is needed to assess whether the safety improvements are actually leading to increased walking and biking and to identify which components of the policy are most effective. New Jersey should also consider conducting a study to fully understand the link between Complete Streets and obesity prevention, highlight strengths, and identify areas for improvement.

#### 2. Allocate Funding for SRTS Programs

DOT's Safe Routes to School (SRTS) Program is making great strides to improve the infrastructure of local communities and teach residents about increasing walking and biking to school.<sup>1168</sup> Although the state is still using remaining federal funds from the Safe Accountable Flexible Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU), those funds will eventually be spent, which will require DOT to seek funding elsewhere.<sup>1169</sup> Currently, the state does not provide any funding for SRTS efforts. The Christie Administration has money it can allocate for road infrastructure repairs, for on going maintenance as well as for repairs due to emergency situations (e.g., the Local Aid grants<sup>1170</sup> awarded in January 2013 to help communities repair their roads after Hurricane Irene). Once the original federal funding is spent, the state legislature should allocate state funding to help SRTS programs continue. The money the state would allocate for infrastructure improvements can be used to meet many goals.

#### 3. Provide State Funding for Physical Activity Infrastructure Improvements

In addition to initiatives such as joint use, Complete Streets, and SRTS, various municipalities are pushing forward their own efforts to improve the built environment to facilitate more physical activity and healthy living. For example, municipalities across the state are developing walking paths and walking clubs; installing bike racks and park trail signs, and installing new playground equipment to promote fitness opportunities.

The New Jersey legislature should provide grants or low-interest loans to municipalities seeking to increase healthy living by improving their built environments. Some municipalities are already taking initiative to improve the health of their residents; other municipalities could benefit from receiving state funding to encourage them to follow these great models.

# 4. Provide Technical Assistance to New Jersey Municipalities for Physical Activity Infrastructure Initiatives

In addition to, or instead of, providing funding to municipalities to improve the built environment within their jurisdiction, the state, through DOT and/or NJDA, could provide more technical assistance to municipalities seeking to improve their built environment. Municipalities that have not yet made efforts



to add walking or biking trails, or to add bike racks, may need help identifying ways they can improve the health of their residents through such initiatives. DOT and/or NJDA are in a good position to identify and disseminate information about best practices, and to help municipalities move forward on physical activity infrastructure initiatives.

# NUTRITION, HEALTH, AND PHYSICAL EDUCATION

Access to food and environments that encourage healthy living are both essential to leading healthy lives. However, if individuals and families lack education about healthy eating and physical activity, these important policies increasing access and opportunities for fitness may not be utilized to their highest potential. This section addresses policies that provide education about healthy living, including nutrition, health, and physical education initiatives.

# Nutrition Assistance Program Education

#### Recommendations

#### 1. Increase SNAP-Ed Funding by Increasing New Jersey SNAP Participation

States are not required to provide nutrition education for SNAP participants. However, the federal government provides funding for states that choose to provide nutrition education programs.<sup>1171</sup> In fiscal year 2013, New Jersey received \$7,226,589 for its Nutrition Education and Obesity Prevention Grant Program (SNAP-Ed).<sup>1172</sup> In fiscal year 2013, SNAP-Ed funds were distributed based on the state's percentage of national SNAP-Ed expenditures from 2009; after 2013, the state will receive an amount of SNAP-Ed funding that is partly based on the state's percentage of national SNAP-Ed expenditures and partly based on the state's percentage of national SNAP participation.<sup>1173</sup> With the new SNAP-Ed funding formula, it is clear that New Jersey has an incentive to increase its SNAP participation.

Because the new SNAP-Ed funding allocation formula will be based partly on the state's percentage of national SNAP participation, New Jersey has an added incentive to increase its participation rate in SNAP. Not only will enrolling more eligible individuals in New Jersey SNAP benefit those individuals, it will also help bring in more funding for nutrition education, which is an important part of improving the well-being of those on SNAP.

#### 2. Ensure All Local Agencies Have Internet

Under federal law, states are required to provide nutrition education to WIC participants.<sup>1174</sup> As of 2009, WIC participants can get their nutrition education online at NJWIConline.org.<sup>1175</sup> New Jersey's WIC education website can provide nutrition education to a wide range of people. Although more than 85% of local WIC administrative agencies have internet access that participants can use,<sup>1176</sup> there is still room for improvement to help WIC participants receive their nutrition education in this way. Because not all local agencies providing WIC education have internet access, this resource is being underutilized. The state should provide funds to assist local agencies in acquiring internet in their offices. New Jersey could also require that local agencies have internet capabilities before they can become WIC partner agencies.

# Nutrition, Health, and Fitness Education In School

Beyond the physical education and fitness standards mandated by the state, New Jersey does not maintain physical activity standards or guidelines. That is, the state does not require students to engage in a minimum number of minutes of moderate to vigorous physical activity per school week. The only policy that seems to address unstructured physical activity is the recommendation contained in the model wellness policy recommending that school recess periods take place before the school lunch period.<sup>1177</sup>

#### Recommendations

# 1. Increase Standards for Physical Activity in Schools

While no New Jersey law or regulation currently requires physical activity or recess, the State Senate passed a bill in May 2013 that would require all K-5 public elementary schools to provide at least twenty minutes of recess every day.<sup>1178</sup> This bill was first filed in 2009, but this year's committee endorsement and Senate passage is the furthest progress the measure has made.<sup>1179</sup> The bill was sent to the Assembly and then referred to the Assembly Education Committee.<sup>1180</sup> If the bill passes the New Jersey



Legislature and is signed into law, New Jersey would be among only three states in the nation that have a mandate for school recess.<sup>1181</sup> Advocates in New Jersey should encourage the legislature to pass this bill. By requiring recess, students will have more opportunity to build physical activity into their daily lives and will have better health outcomes. Advocates could also encourage schools to have recess before lunch, as studies have shown that children eat healthier food items if recess is held prior to lunch.<sup>1182</sup>

#### 2. Provide Support for Non-Governmental Initiatives Increasing Physical Activity Among Students

A number of non-profits in New Jersey run programs that are working to increase physical activity among New Jersey's younger residents. These programs include the New Jersey Partnership for Healthy Kids,<sup>1183</sup> Campbell's Soup Company,<sup>1184</sup> the YMCA's programs to provide recess activities and after school activities (like Soccer for Success),<sup>1185</sup> and SRTS. Because many of these programs are run by non-governmental organizations, they are only sustainable as long as they are funded. The state has a huge opportunity to use these non-profit models as a jumping off point for supporting physical activity in the state's public school curriculum. For example, the state could incorporate these models into the state sanctioned curriculum or the state could provide funding to establish permanent positions within the school districts for people to teach physical activity exercises.

# Community Nutrition, Health, and Physical Education

Consumers that are not participating in federal nutrition programs and/or those that are not in public school can also benefit from policies that improve access to useful information.

#### Recommendations

#### 1. Continue to Support Municipal Initiatives Through Funding and Technical Assistance

New Jersey has taken a few steps toward encouraging its residents to lead healthy, active lifestyles. The New Jersey Council on Physical Fitness and Sports<sup>1186</sup> as well as many local government initiatives, funded in part by DOH grants, are a great start to encouraging New Jersey residents to incorporate physical activity into their daily lives. The grants provided to municipalities through the New Jersey Council on Physical Fitness and Sports are enabling those communities to implement programs that are tailored to their needs.<sup>1187</sup> The state should continue to support those initiatives and should encourage more municipalities to apply for funding.

Municipalities and communities are making strides to increase access to physical activity opportunities, through grants from the federal or state government and through partnership with private foundations and companies. Newark's Mayor, Cory Booker, has made improving the health of residents a top priority for the city and has created innovative programs to engage residents of all ages.<sup>1188</sup> In 2010, Newark launched a "Let's Move!" campaign operated by the Newark Youth Policy Board and a council of community partners.<sup>1189</sup> In 2011, Let's Move! Newark introduced students to "Our Power." a fitness program that tracks movement throughout the day.<sup>1190</sup> Using Our Power, students from five high schools competed against each other to be the most active school; winning students received fitness-oriented prizes.<sup>1191</sup> Newark also created an online fitness game that uses Facebook to track the time that participants exercise.<sup>1192</sup> General Mills provides periodic cash prizes as an incentive to use the game; the more minutes logged participating in physical activity the more likely a participant is to win a prize.<sup>1193</sup> The state should provide funding to these efforts to ensure their longevity and to show the state's support for healthy lifestyles.

# 2. Study the Effectiveness of the New Jersey Ambassadors in Motion Program

The BPRC conducts research, raises awareness, and advocates for biker and walker-friendly public policy in an effort to promote bicycle and walking accessible streets in New Jersey.<sup>1194</sup> The BPRC Advisory Council consists of representatives from advocacy organizations, state agencies, and community members, as well as experts in transportation, public health, and the environment.<sup>1195</sup> BPRC is part of the Rutgers University Voorhees Transportation Center, and is funded by the Federal Highway Administration and DOT.<sup>1196</sup>

BPRC operates the New Jersey Ambassadors in Motion (NJAIM) program.<sup>1197</sup> In order to improve walker and biker safety, NJAIM Ambassadors teach traffic skills, perform safety





checks, and remind motorists to practice safe driving behavior, among other activities. NJAIM operates in Jersey City, Edison, Lakewood, Woodbridge, Elizabeth, Toms River, Newark, Hamilton, Paterson, and Trenton. These ten municipalities have the highest number of accidents involving pedestrians. New Jersey should move forward with plans to evaluate NJAIM's impact on pedestrian and biker safety. If the report shows that the program is successful, New Jersey should introduce NJAIM to more communities throughout the state.

# IMPROVING NEW JERSEY'S HEALTHCARE SYSTEM

People living with type 2 diabetes need access to the right services and assistance to manage the condition and prevent complications. People at risk of developing type 2 diabetes need access to the key services that can help prevent the disease in the first place. As discussed in the Background on Type 2 Diabetes section of the report, these types of care have been identified through rigorous studies, so there is little question what patients need; rather, it is a matter of ensuring that these services are available.

Patients should have the opportunity to work with primary care provider-led teams to develop care plans specific to the individual. The care plan should include diabetes selfmanagement education, participation in a lifestyle intervention program, and selfmonitoring of blood glucose levels. The lifestyle intervention program should include medical nutrition therapy as well as disease education and exercise. Those with more complex medical or psychosocial challenges may need more care coordination and case management services.

Access to these services is usually predicated on having health insurance to pay for them. For this reason, we begin with a discussion of opportunities to enhance access to health insurance in New Jersey. We then go on to identify improvements to coverage of diabetes prevention and management services, glucose meters and test strips, and case management services. Finally, the report analyzes ways to move the state toward a care delivery system that is more coordinated and delivers highguality care to people living with diabetes. This includes an assessment of how the state can ensure an adequate healthcare workforce, support new primary care models and new payment models, and include new types of healthcare providers in new systems of care.

### **HEALTH INSURANCE**

Insurance is a crucial part of accessing health care, both for the general population and for people living with diabetes. Routine costs of diabetes management can reach hundreds of dollars per month. People without insurance are less likely to receive necessary care and have more difficulty managing their condition. For example, in one study comparing people with Medicaid and those without insurance. diabetics with Medicaid were more likely to have a regular source of care, while those without insurance were over three times more likely to report not being able to get needed care and more than five times more likely to delay needed care.<sup>1198</sup> Those without insurance were also more likely to have trouble getting necessary prescriptions.<sup>1199</sup>

### Health Insurance Outreach and Enrollment

Implementation of the ACA presents an opportunity to dramatically increase insurance access in New Jersey. Nearly 1 million New Jerseyans could receive free or low-cost coverage through Medicaid or Marketplace subsidies.<sup>1200</sup> In order for this to come to pass, people must actually sign up. A major outreach and enrollment effort will be necessary to achieve this.

One state success is the creation of a web portal that will help people apply for Medicaid.<sup>1201</sup> Applicants will be able to use computers at local welfare agencies and also at public libraries to complete the online forms. The web portal will use federal databases to match applicant information so that people do not need to provide as much documentation; for example, Department of Homeland Security databases can confirm citizenship information.<sup>1202</sup> The state will train healthcare providers and nonprofits on how to use the portal, using both in-person and web-based training.<sup>1203</sup>



In addition, hospitals will be able to enroll people based on a quick screening, a process called "presumptive eligibility." Applicants will complete a full application later, but in the meantime will be covered instead of having to wait.<sup>1204</sup>

The uninsured are a diverse group. Some are uninsured only because they cannot afford coverage, and for this group, alerting them to new affordable plans may be sufficient. Even in this group, however, getting the message out may be challenging; there are 150 languages spoken in New Jersey, and many people do not speak English well enough to receive insurance information in English only.<sup>1205</sup> Further, some uninsured residents do not view insurance as a necessity, in part because they do not expect to have high healthcare costs and in part because they may assume that public or free clinics can provide any care they do need. A survey of New Jerseyans in 2009 showed that of uninsured people with income under 139% of the federal poverty level (FPL) (those eligible for Medicaid under the expansion), 43% felt that insurance was not necessary and 53% were comfortable receiving care at a free clinic.<sup>1206</sup> This group will need information to help them assess the value of insurance and appreciate that it makes sense to take advantage of new options that help pay for it.<sup>1207</sup>

Some of the outreach work will be done by the federal government. Because New Jersey has decided to have the United States Department of Health and Human Services operate the state Marketplace, the Marketplace outreach work is a federal responsibility. Accordingly, the federal government will provide grants for "Navigators," community organizations that will help people complete applications and choose health plans. In New Jersey, the Center for Family Services, Inc., Wendy Sykes - Orange ACA Navigator Project, the Urban League of Hudson County, Public Health Solutions, and the Food Bank of Monmouth and Ocean Counties, Inc. all received Navigator grants.<sup>1208</sup> Unfortunately, the level of resources is not sufficient—only about \$1.5 million will be available for the state Navigator program.<sup>1209</sup> The federal government will provide an additional \$3.3 million to New Jersey Federally Qualified Health Centers (FQHCs) to help enroll state residents.<sup>1210</sup> This is expected to allow health centers to hire one staff person full-time, while some larger health centers may be able to hire more new workers.<sup>1211</sup> This

additional staff is a crucial element of outreach and enrollment, but is not enough on its own.

According to New Jersey Policy Perspectives, the state should spend about \$18 million to reach people with information about health insurance options.<sup>1212</sup> This estimate is based on what Massachusetts spent to reach residents in 2006, following state healthcare reform that dramatically expanded coverage options.<sup>1213</sup> The roughly \$5 million from the federal government is clearly inadequate in comparison, and the state will probably need to utilize additional resources to reach the uninsured.

Unfortunately, the state has not demonstrated much willingness to invest financially in outreach efforts. The legislature did pass a bill to require the state to conduct a public awareness campaign, but Governor Christie vetoed the bill at the end of June 2013.1214 The federal government awarded New Jersey \$7.6 million to plan a state Health Insurance Marketplace, but the state decided to allow the federal government to run the Marketplace instead. This \$7.6 million might become available for outreach and enrollment work, on the theory that such work is sufficiently similar to the originally intended purpose of the funding. It is not clear if the Centers for Medicare and Medicaid Services (CMS) would allow that use of the funds, however.<sup>1215</sup> As of August 2013, the Christie administration and CMS were in negotiations about possible uses for the funds, and it appeared that outreach work was still an option.<sup>1216</sup>

#### Recommendations

# 1. Increase State Resources for Outreach and Enrollment

The state government should add resources to the outreach and enrollment effort. This may take several forms.

The state could work with television and radio stations to obtain free or reduced cost airtime for advertisements about the new insurance options. It might make sense to work with neighboring states Pennsylvania, New York, Delaware, and Connecticut on this effort; if the states shared the cost it would be less expensive even in the costly regional media market.<sup>1217</sup>

New Jersey can also consider providing small grants to community groups to help with





enrollment—this would be especially important for communities that might otherwise be difficult to reach due to language barriers, for example. PATHS partners observed that door-to-door outreach is likely to be the most effective approach for many vulnerable groups, and this is an effort the state should support.<sup>1218</sup>

The state should continue to pursue the option of re-purposing for outreach work the \$7.6 million the state received from CMS for Marketplace planning. If CMS does not permit this use of the funds, the legislature should appropriate state funds for this work and Governor Christie should support the appropriation.

#### 2. Leverage Existing State Resources

New Jersey public health offices are located in each county. These offices could host community information sessions and distribute brochures from the federal government and existing information sheets about Medicaid.

Other state agencies can assist as well, by sending an informational letter or brochure to all residents enrolled in other state public assistance programs. For example, the state Department of Human Services (DHS) can send a letter to recipients of cash assistance and the Supplemental Nutrition Assistance Program (SNAP, previously known as food stamps) so as to alert them to their new insurance enrollment options. County welfare offices can also simply be sure to have many Marketplace brochures - provided by the federal government - on hand so that if people come to the office for non-insurance assistance, staff can easily communicate with them about the new insurance options as well.

#### 3. Leverage Community Resources

In the absence of any state coordination, local government, community organizations, and healthcare providers will bear a greater burden in the outreach effort.

One helpful step would be to create robust referral procedures so that when an individual encounters any part of her local community support system, she can learn where to get help with insurance enrollment. All community organizations should be aware of the closest Navigator grantee to their site, as well as the community health centers receiving resources to assist with enrollment. When referring a

client to an enrollment assister, organizations should let the client know to bring with her information about her current income and family composition, as well as a list of her healthcare providers, the services she uses regularly, and any medications she already takes. This information will help enrollment counselors work with the client to apply for benefits and select an appropriate health plan in the Marketplace. In cases where a client may have special needs, it will be important for the referring organization to place a call to the enrollment assistance organization to inform staff that the client will be seeking assistance and alert them to any specific issues that the client may not be able to articulate independently.

In addition, recall that New Jersey enjoys significant philanthropic resources. For example, the Robert Wood Johnson Foundation (RWJF) has a longstanding commitment to insurance outreach and enrollment and has developed a set of brochures to help explain the new insurance options to consumers.<sup>1219</sup> The foundation has also recently funded a project to employ military veterans to conduct enrollment work in New Jersey.<sup>1220</sup> Community organizations seeking more knowledge about how to help with outreach and enrollment can take advantage of the materials prepared by RWJF in addition to those available from the federal government at www.healthcare.gov.

# Coverage of Necessary Services in Public And Private Insurance

Diabetes management is complex and can be difficult for patients. It can require major changes in lifestyle, and nearly always requires adherence to medication and blood glucose testing regimes. Medicare, New Jersey Medicaid, and private health plans in New Jersey's individual and small group insurance markets all cover diabetes supplies and medication, including oral medication and insulin. Unfortunately, cost-sharing and quantity limitations can make accessing supplies a challenge for patients.

In addition to these basics, there are some healthcare services that can help patients better cope with the major life changes diabetes entails. It is important that providers receive reimbursement for these other services in addition to medicine and supplies. These



services include diabetes self-management education, ongoing self-management support, and lifestyle interventions, including medical nutrition therapy. In some cases, case management services are necessary to help patients manage their diabetes.

The limits on access to diabetes supplies and services mean that fewer patients are using these services. This is probably causing a number of unnecessary deaths and significant morbidity in the state, given that sustained reductions in A1C are associated with a 21% lower risk of death.<sup>1221</sup> It is also probably costing New Jersey millions of dollars.

A 2012 study by Milliman, Inc. investigated the likely cost savings in Medicare, commercial insurance, and Medicaid if people living with type 2 diabetes had better control of their blood glucose levels, blood pressure, and cholesterol.<sup>1222</sup> The study examined seven diabetes complications that are associated with 20% of the medical costs of the disease: ischemic heart disease, congestive heart failure, heart attack, amputation, blindness, renal impairment, and stroke.<sup>1223</sup> Milliman considered what would happen to diabetes costs from these conditions if patients with A1C levels above 7% reduced their A1C by 1.5%; if patients with high blood pressure reduced their blood pressure by 30mm/Hg; if patients with high cholesterol reduced their total cholesterol by 50%; and if patients with low HDL ("good" cholesterol) increased their HDL by 50%.<sup>1224</sup> They found that per patient per month savings would be \$158 in Medicare, \$126 in commercial insurance, and \$55 in Medicaid.<sup>1225</sup> However, by focusing resources on the 50% of the patient population with uncontrolled A1C levels, per patient per month savings increase to \$247 in Medicare, \$178 in commercial insurance, and \$94 in Medicaid.<sup>1226</sup>

If New Jersey did commit to helping patients reach better control of A1C, blood pressure, and cholesterol, the state could save up to \$94 per patient per month, or \$1,128 per patient per year. In 2010, there were 1,055,940 people enrolled in New Jersey Medicaid.<sup>1227</sup> If, as noted above, an estimated 6% of these enrollees have diabetes (assuming that the state and national figures are similar), this is about 63,356 people with diabetes in New Jersey Medicaid. If the state saved \$1,128 per year for these patients, that would yield approximately \$71,466,019 in savings for the state, in the Medicaid program alone. This estimate is not precise, but it gives a sense of the scale of savings the state can expect to reap if it invests in strong diabetes management programs. Note that this estimate does not take into account the increased revenue from greater productivity.

The following sections of the report discuss improvements to the reimbursement rules for these important services in New Jersey under Medicare, Medicaid, and private insurance plans.

#### INVEST IN PREVENTING AND MANAGING TYPE 2 DIABETES

Medicare and Medicaid are the nation's and New Jersey's primary public insurance programs, and between them cover thousands of New Jerseyans living with pre-diabetes and type 2 diabetes. They have a significant role to play in ensuring access to healthcare services that can prevent the disease and help enrollees living with type 2 diabetes to successfully manage it.

Medicare coverage is crucial for the 16.7% of New Jerseyans over age 65 with diabetes.<sup>1228</sup> While most necessary services are covered, there are gaps that CMS should work to close. The state of New Jersey cannot singlehandedly change Medicare rules, of course. However, the state can advocate for changes with CMS and consider increasing access to key services through state programs where Medicare fails to cover them.

As explained above, the Medicaid program is governed by both federal and state law, and is implemented in New Jersey through Managed Care Organizations (MCOs). Medicaid in New Jersey is an essential source of healthcare access for low-income individuals and families, and it will become even more important following eligibility expansion under the Affordable Care Act (ACA). The state has a great deal of flexibility in its coverage decisions, and has the ability to provide truly comprehensive diabetes services.

#### Coverage for the Diabetes Prevention Program

One important area where both Medicare and New Jersey Medicaid fall short is in their failure to pay for the Diabetes Prevention Program (DPP).



Nationally, an estimated 35% of adults over age twenty had pre-diabetes during the period of 2005-2008.<sup>1229</sup> While the Centers for Disease Control and Prevention (CDC) do not have state-specific data for New Jersey, it is likely that the prevalence of the condition is similar to the national prevalence. For purposes of this analysis, we will estimate that 30% of New Jersey adults over age twenty have pre-diabetes; this is a conservative estimate, given that overall rates of type 2 diabetes and obesity have increased since the 2005-2008 period. Thirty percent of New Jersey's population of adults over age twenty (6,608,939 in 2012<sup>1230</sup>) equals 1,982,682 New Jersey adults over age twenty living with pre-diabetes.

Without lifestyle changes, about 25% of people with pre-diabetes go on to develop diabetes within three to five years.<sup>1231</sup> For New Jersey, then, roughly a quarter of the 1,982,682 adults with pre-diabetes can be expected to develop diabetes in the next three to five years.<sup>1232</sup> This would add approximately 495,670 more cases of type 2 diabetes in the state by 2018.

Evidence strongly suggests that the DPP, described above, can reduce the chances that a person with pre-diabetes will go on to develop type 2 diabetes by approximately 58%.<sup>1233</sup> If all New Jersey adults with pre-diabetes had access to the DPP, over half of these new cases of diabetes could be prevented, yielding an estimated 287,489 fewer cases of diabetes by 2018.

The average per-patient healthcare expenditures for people diagnosed with diabetes are estimated at \$13,700 annually, of which \$7,900 is attributed to diabetes.<sup>1234</sup> If 287,489 fewer New Jerseyans developed type 2 diabetes, this would reduce costs by \$2,271,163,100 in a single year.

The cost of the DPP is approximately \$250 per person.<sup>1235</sup> To provide the program to all New Jerseyans over age twenty with pre-diabetes would cost an estimated \$495,670,500. The savings for a single year would therefore equal \$1,775,492,600. This amount would accrue to Medicare and Medicaid, in proportion to the reduction in new diabetes cases in the two populations of beneficiaries.

This program is a financial winner for both Medicare and the state of New Jersey, in addition to enhancing quality of life and reducing suffering for hundreds of thousands of New Jerseyans.

#### Coverage for Diabetes Self-Management Education and Medical Nutrition Therapy

Diabetes Self-Management Education (DSME) and Medical Nutrition Therapy (MNT) are only covered for Medicare patients who have received a diagnosis of diabetes.<sup>1236</sup> A diagnosis of pre-diabetes is not sufficient to allow coverage, even though the same services have been shown to be effective for this broader population. As it stands, the Medicare policy requires patients to become sicker and more expensive before it pays for the services needed to mitigate the effects of elevated blood glucose levels.

Further, as noted above, the Medicare program requires patients to cover roughly 20% of the costs to the DSME service. PATHS partners expressed that for many patients, this is a major barrier to care.<sup>1237</sup> Because DSME is typically delivered in several short visits instead of fewer longer visits, patients are expected to pay their cost-sharing obligations several times, which discourages attendance.<sup>1238</sup>

In addition, the service limitations Medicare imposes for these services are not realistic. The ten hours of DSME available in the first year following diagnosis,<sup>1239</sup> for example, may not be enough for many patients. One certified diabetes educator explained that her Medicare patients were typically in denial about their diagnosis or extremely overwhelmed by it for the first several classes, during which time they struggled to learn how to manage the condition.<sup>1240</sup> She expressed that it would be good if the classes were there for people at whatever point they became capable of engaging with the lessons.<sup>1241</sup>

Another reason for concern about limits on the number of classes offered through Medicare is that patients may need ongoing reinforcement to retain the benefits of the intervention. Researchers at the CDC have found that the benefits of initial DSME tend to fade after about 6 months.<sup>1242</sup> The American Association of Diabetes Educators (AADE) suggests that this result demonstrates that patients often require ongoing support such as continuing



education and help with goal-setting as well as connections to community resources and psychosocial support.<sup>1243</sup>

Further, management of diabetes changes over time. In the third year following diagnosis, a person may be put on insulin and will need substantially more hours to learn to use the insulin delivery device, understand how insulin works, and practice problem-solving with the new medication.

A final challenge with limited Medicare DSME coverage is that there is no easy way to determine if the patient has used up the benefit, and patients are often not sure of how many hours they have had. Some patients may be reluctant to sign up for DSME for fear it will result in unreimbursed medical costs.

New Jersey Medicaid, meanwhile, does not require MCOs to cover either DSME or MNT. Available information on MCO covered benefits indicate that no MCO covers either of these services.

#### Recommendations

Note that although New Jersey does not control the Medicare program and cannot make changes to the program, the state can raise these issues with CMS and Congress to improve diabetes care in the state.

## 1. Participate in the Diabetes Prevention Program

As noted above, Senator Al Franken introduced the Medicare Diabetes Prevention Act of 2013, which would authorize Medicare to pay for the Diabetes Prevention Program. The bill reached the Senate Finance Committee in March 2013, where it has since been stalled.<sup>1244</sup> Congress should take up and debate this legislation. New Jersey can advocate for this with the state Congressional delegation.

In addition, New Jersey MCOs should cover the program. The state Division of Medical Assistance and Health Services (DMAHS) could require MCOs to cover the program through its contract with each company. Alternatively, MCOs could add coverage of the service to their plans even without a state requirement. Given that the program is likely to generate significant savings, MCOs can expect their spending on healthcare services to decrease compared with how high that spending would be in the absence of the program.

## 2. Cover DSME and MNT, Including for People with Pre-Diabetes

New Jersey Medicaid should require that MCOs cover DSME and MNT for people living with diabetes, and both Medicare and New Jersey Medicaid should cover DSME and MNT for people with pre-diabetes. Evidence shows that these services can prevent or delay the onset of diabetes. If fewer people with prediabetes advance to full diabetes, both human and financial costs will be much lower.

#### 3. Design Flexible Hour Allowances For DSME

If Medicare increases the number of allowed hours for DSME, patients who require more assistance to learn to manage their condition are more likely to receive it. In order to reap the full benefit of investing in DSME and to help patients maintain their learning, it makes sense to cover more hours rather than continuing the current one-size-fits-all approach. One reform could be to allow a primary care provider to prescribe more hours if in his or her judgment, the patient needs more than ten hours to learn to manage diabetes and maintain this knowledge and practice.

When Medicaid considers adding DSME as a required service, it should require MCOs to allow a flexible number of hours, based on patient need as determined by the treating provider.

#### 4. Consider Whether DSME Should Qualify as a Cost-Effective Preventive Service for Which Patients Will Not Have Cost-Sharing Obligations

As noted above, the United States Preventive Services Task Force (USPSTF) rates healthcare services on cost-effectiveness as prevention tools, providing "A" or "B" grades to the most cost-effective services. Those services with "A" or "B" ratings are then available without cost-sharing in Medicare and private insurance, and states are encouraged to provide them without cost-sharing in Medicaid as well.

The USPSTF has not given a rating to DSME.<sup>1245</sup> However, there is a process for nominating services for consideration as a preventive service.<sup>1246</sup> New Jersey's Department of Health (DOH), in partnership with non-governmental partners, can develop a nomination for DSME to be considered a preventive service. In this case, cost-sharing would likely cease to be a barrier for patients.





#### 5. Collaborate with Non-Profit Organizations and Foundations To Enhance Access to Diabetes Self-Management Support

As discussed above, evidence suggests that Diabetes Self-Management Support is critically important when it comes to helping patients maintain the health and behavior gains from DSME. Ultimately, this type of service should be incorporated into disease management programs and reimbursed under public and private insurance models – ideally through a bundled payment mechanism (discussed below).

It may be difficult to quickly integrate selfmanagement support into existing payment models. However, DOH can collaborate with the Department of Human Services (DHS) and statewide stakeholders to provide grant funding to make this service available, and study its outcomes. Positive results over time can help make the case for a regular reimbursement structure of some kind.

#### ENHANCE COVERAGE FOR DIABETES EQUIPMENT AND SUPPLIES

#### Medicaid Coverage

New Jersey Medicaid requires that MCOs cover diabetes equipment and supplies, as well as prescription drugs including metformin and insulin.<sup>1247</sup> However, PATHS partners noted that MCOs tend to frequently switch which brands of glucose meters and test strips they cover, as well as which brands of insulin they include on their drug formularies.<sup>1248</sup> The reason for this is that the MCOs are looking for the lowest rates for this equipment and medicine. However, the changes create confusion among patients. PATHS partners described patients coming to primary care appointments with grocery bags filled with glucose monitors and test strips, completely unsure which strips go with which monitor and functionally left without any testing supplies as a result.<sup>1249</sup> Monitors vary in how they are operated, and patients often do not know how to use their new monitors.<sup>1250</sup> Unless their primary care provider notices this and helps the patient learn to use the new machine, the patients end up not using any monitor at all.<sup>1251</sup> To the extent that these changes impair patients' ability to maintain their management regimens, this is a case of being penny-wise and pound-foolish.

Another test strip challenge is that MCOs will offer coverage for a certain number of strips

per month, based on their view of how many times the patient needs to test their glucose each day.<sup>1252</sup> Sometimes this differs from the recommendation from the healthcare provider; one PATHS partner described long battles with insurance plans to convince them that a patient with uncontrolled diabetes needed to test more often than the plan allowed.<sup>1253</sup> This is another instance of restricting costs on the front end of care but risking increased costs later when patients fail to control their blood glucose levels.

#### Private Insurance Coverage

As explained above, New Jersey law mandates that health insurance plans sold on the individual and small group insurance markets offer certain diabetes-related benefits, including diabetes equipment and supplies.<sup>1254</sup> These benefits will be provided in the new insurance plans offered through the Marketplace, as well.

Unfortunately, the law does not say anything about quantitative limitations on the benefits or cost-sharing. According to PATHS participants, it is common for patients with private insurance to struggle to buy enough glucose testing strips, not because the insurance does not cover them but because the co-pays are too high.<sup>1255</sup> PATHS partners describe the need to send patients to pharmacies with discount supplies to ensure access, and in some cases even this action does not make the strips affordable for some patients.<sup>1256</sup>

In addition, just as in the Medicaid MCO context, private insurance companies in the individual and small group insurance markets also frequently change which brands of glucose meters, test strips, and insulin they cover.<sup>1257</sup> Just as in the Medicaid context, this is counterproductive here as well, leading to confusion and problems with adherence.

#### Recommendations

#### 1. Limit Test Strip, Glucose Monitor, and Insulin Changes and Ensure Access to Sufficient Test Strips in Medicaid

Contracts with MCOs should require these plans to ensure that patients have access to an adequate number of strips, based on the prescribing provider's recommendation for testing frequency. The contracts should also



require that when plans change their covered monitor and strips, a mechanism be in place to protect patients from confusion. One step would be to limit the frequency of coverage changes to once per year. In addition, plans should communicate the change to the treating provider and send any new supplies to the provider. The provider can then schedule an appointment with the beneficiary to educate him or her about the new monitor, strips, and/or medication and thus avoid the confusion of receiving new and different supplies without warning through the mail, as currently happens.

#### 2. Limit Test Strip, Glucose Monitor, and Insulin Changes in Private Insurance Plans

New Jersey should explore ways to reduce the frequency of changes in private coverage for test strips and glucose monitors. While the state does not have as much control over private insurance plans as it does over Medicaid MCOs, it does have some leverage. For example, the state could require the plans it buys for state employees to limit changes to once per year. The state also has regulatory authority over most private insurance plans, and could require this change as a matter of law.

## CASE MANAGEMENT REFORM IN MEDICAID

New Jersey Medicaid beneficiaries may have access to both *care management* and *case* management. New Jersey DMAHS defines care management as "a set of enrollee-centered, goal-oriented, culturally relevant and logical steps to ensure that an enrollee receives needed services in a supportive, effective, efficient, timely and cost-effective manner."1258 This service focuses on prevention and continuity of care, as well as care coordination designed to connect enrollees to needed services across providers and settings.<sup>1259</sup> DMAHS emphasizes that care management is driven by "quality-based outcomes," including improved/maintained clinical status, enhanced quality of life, improved enrollee safety, cost savings, and enrollee autonomy.<sup>1260</sup>

DMAHS requires that care management include the following, at a minimum:

- 1. Early identification of enrollees who have or may have special needs;
- 2. Assessment of an enrollee's risk factors;

3. Development of a plan of care;

4. Referrals and assistance to ensure timely access to providers;

5. Coordination of care actively linking the enrollee to providers, medical services, residential, social, behavioral, and other support services where needed;

- 6. Monitoring;
- 7. Continuity of care; and,
- 8. Follow-up and documentation.<sup>1261</sup>

DMAHS defines case management as a component of care management that encompasses a set of activities tailored to a member's "situational health-related needs."1262 DMAHS goes on to define "situational healthrelated needs" as time-limited episodes of instability.<sup>1263</sup> Case managers are supposed to facilitate access to services.<sup>1264</sup> As with care management, case management activities are driven by quality based outcomes, but are more focused on a particular health issue for a beneficiary in a given period, whereas care management is more focused on chronic and long-term health issues.<sup>1265</sup> Because type 2 diabetes is a chronic disease, diabetes management programs generally operate under the care management framework.<sup>1266</sup>

As explained above, New Jersey Medicaid is primarily operated through private MCOs. Under the contract between the state and MCOs, DMAHS requires that MCOs have effective systems, policies and procedures in place to identify beneficiaries in need of care management, as well as screening procedures for new beneficiaries.<sup>1267</sup>

DMAHS describes the steps that MCOs must take to implement a care management program.<sup>1268</sup> First, the MCO must identify that a beneficiary may need care management.<sup>1269</sup> Then, the MCO must conduct a Comprehensive Needs Assessment (CNA).<sup>1270</sup> After the CNA, the MCO care manager is supposed to assign beneficiaries to a care level, develop a plan, and coordinate the care according to the beneficiary's needs.<sup>1271</sup> With input from the beneficiary and his or her primary care provider (PCP), the care manager must create a care plan with short and long-term care management goals, objectives and quality outcomes.<sup>1272</sup> DMAHS also requires that the care plan work within the beneficiary's needs





and circumstances as they may change—that is, the plan must be adaptable.  $^{\rm 1273}$ 

DMAHS further defines the role of the care manager, explaining that this person is responsible for connecting and linking the beneficiary to different healthcare treatment and professionals as well as monitoring the provision of needed services identified in the Care Management Plan.<sup>1274</sup> This includes making referrals, coordinating care, promoting communication, ensuring continuity of care and conducting follow-ups.<sup>1275</sup>

All of the MCOs that contract with DMAHS have care management systems. Under all the MCOs' programs, beneficiaries are assigned a care manager who assists them with scheduling appointments and managing treatments.<sup>1276</sup> Each plan conducts a CNA upon enrollment and uses it to determine what level of care management is necessary for each beneficiary.<sup>1277</sup> In so doing, these plans appear to follow the DMAHS care management requirements.

Here, we describe each MCO's approach to case and care management.

## 1. Horizon Blue Cross Blue Shield of New Jersey

When beneficiaries first sign up for Horizon Blue Cross Blue Shield (Horizon) they are required to answer questions on their enrollment applications in order to determine their healthcare needs and conditions.<sup>1278</sup> Horizon also obtains access to beneficiaries' medical records through their signature on the enrollment application.<sup>1279</sup> After gathering this information, a Health Benefits Coordinator shares the answers to the enrollment questions with Horizon, and the health plan conducts an evaluation of a beneficiary's health care needs.<sup>1280</sup> If after the initial evaluation it is determined that a member has special health care needs, they are enrolled in Horizon's Care Coordination Unit (CCU).<sup>1281</sup>

The CCU is designed for beneficiaries with a complex or chronic medical condition (including type 2 diabetes), physical or developmental disability or a catastrophic illness.<sup>1282</sup> Alternatively, if it is not determined from the initial evaluation that a beneficiary qualifies for CCU, the beneficiary can ask for a separate evaluation from Horizon to see if they qualify.<sup>1283</sup> The beneficiary can also have their PCP, specialist, social worker, community-based case manager or any other concerned agency or provider conduct an evaluation for them.<sup>1284</sup>

After Horizon determines that a beneficiary qualifies for the CCU program, a Horizon Health Care Coordinator nurse or social worker (referred to in the Member Handbook as "Care Coordination team" members) familiar with the area where the beneficiary lives will complete the screening assessment.<sup>1285</sup> A member of the beneficiary's care coordination team will then let the beneficiary know what level of care management they qualify for or need.<sup>1286</sup> The beneficiary is then expected to work with the care coordination team and their PCP or specialist to create a plan of care that addresses their physical and psychological needs.<sup>1287</sup> For adults, care plans must be created within 180 days of enrollment.<sup>1288</sup>

Horizon has a specific program for members who have been diagnosed with diabetes. The "Diabetes Disease Management" program is meant to help members learn to better manage their disease.<sup>1289</sup> Diabetes educators provide material on meal planning, insulin and medication use and will help members find a diabetic specialist and or nutritionist.<sup>1290</sup> Provision of these materials is distinct from providing DSME classes or MNT services, neither of which is mentioned in the Handbook.<sup>1291</sup>

For both the CCU and the Diabetes Management programs, the Horizon Member Handbook simply says that beneficiaries will be given "community resources," and that Care Coordination team members will help beneficiaries connect with them. The Member Handbook and the Horizon website provide little information on care plan implementation, although the Handbook suggests that a lot of responsibility is placed on the beneficiary to contact their care coordinator with questions and to schedule appointments, rather than on the coordinator to check in on the beneficiary.

#### 2. UnitedHealthcare

UnitedHealthcare (United) calls their care management system the "Personal Care Model" (PCM).<sup>1292</sup> The PCM is for beneficiaries with complex needs and chronic conditions.<sup>1293</sup> As required by DMAHS, United conducts a CNA, which they call a Comprehensive Health Screening Assessment (CHSA), to alert care managers to the health needs of specific



beneficiaries.<sup>1294</sup> Following the CHSA, United designs an Individual Health Plan within 180 days for adults.<sup>1295</sup> Individual Health Plans are supposed to help providers and case/care managers make sure beneficiaries get the services they need.<sup>1296</sup>

PCM services include:

- Education, including mailings of materials and outreach to members who may have illnesses such as congestive heart failure, asthma, or diabetes;
- Helping members improve their selfmanagement skills; and,
- Working with members to reduce the need for emergency treatment and multiple admissions to the hospital.<sup>1297</sup>

The PCM program also helps facilitate appointments.<sup>1298</sup> The Member Handbook mentions outreach to members who have been found to have chronic diseases and it specifically mentions diabetes as an example. <sup>1299</sup> However, the Handbook does not specify how care management is actually implemented.

#### 3. Amerigroup New Jersey, Inc.

Amerigroup uses two systems of care management: basic care management services for enrollees with special needs and the Disease Management Centralized Care Unit (DMCCU).<sup>1300</sup>

Amerigroup's care management program for enrollees with special needs is designed to help beneficiaries get medical services and make medical and dental appointments.<sup>1301</sup> In order to qualify for this program, the beneficiary must first complete a CNA, which the beneficiary, a state representative, or the beneficiary's doctor can request.<sup>1302</sup> Alternatively, the health plan itself can decide to conduct a CNA based on the information in a beneficiary's enrollment forms and materials received from doctors and the state.<sup>1303</sup> Amerigroup may also require a CNA based on the services a beneficiary is already receiving, if the fact that the beneficiary needs the services indicates that he or she in fact has special needs that can be served through this program.<sup>1304</sup> Amerigroup contacts members within forty-five days of plan enrollment to complete the CNA and coordinate needed services.<sup>1305</sup> Amerigroup policy is to create an

individual healthcare plan no later than thirty days after a CNA indicates eligibility for the case management program.<sup>1306</sup> The beneficiary and his or her primary care provider must agree to the plan in order for it to take effect.<sup>1307</sup> Beneficiaries can also include others in the plan.<sup>1308</sup>

Amerigroup also has a DMCCU program for support for beneficiaries with chronic diseases.<sup>1309</sup> The DMCCU is staffed by a team of licensed nurses and social workers, called "care managers."<sup>1310</sup> According to Amerigroup, care managers work to give beneficiaries the tools and community resources to help them improve their quality of life, provide health information, and assist in care coordination with providers.<sup>1311</sup> Care managers provide telephonic support to beneficiaries with chronic disease, such as diabetes.<sup>1312</sup>

An Amerigroup representative provided a more detailed picture of the case management programs offered to beneficiaries living with diabetes.<sup>1313</sup> The representative explained that the plan offers complex case management for people living with difficult health situations or multiple conditions/co-morbidities.<sup>1314</sup> According to the representative, care management is conducted through telephonic outreach, although in some cases a case manager will go to hospitals to see beneficiaries recently hospitalized, and "face-to-face" meetings can be arranged for homebound individuals.<sup>1315</sup> There are also different outreach strategies for beneficiaries that do not respond to outreach: care managers will sometimes call on different days of the week, at different times, will send letters, and depending on the acuity of the beneficiary's situation, may conduct a home visit.1316

Amerigroup notes that beneficiaries have a right to refuse to take part in or disenroll from the programs and services described here.<sup>1317</sup>

#### 4. Healthfirst New Jersey

Following enrollment in Healthfirst, beneficiaries are required to make an appointment with their PCPs and have a "baseline" exam.<sup>1318</sup> For adults, this exam must take place within 180 days of enrollment in the plan.<sup>1319</sup> Healthfirst may then conduct a CNA to determine if members have special needs making them eligible for care management services.<sup>1320</sup>





Healthfirst offers general care and disease management programs for those identified as having special needs.<sup>1321</sup> The Healthfirst Care Management Department is charged with monitoring the healthcare services beneficiaries receive to ensure that they receive the right care.<sup>1322</sup> Healthfirst care managers are charged with speaking with beneficiaries about prevention and disease management, and arrange for follow up care with PCPs.<sup>1323</sup> According to the Member Handbook, a beneficiary's care manager will call and speak with the hospital staff involved in the beneficiary's care in the event of an emergent hospital stay, as well as reviewing the beneficiary's hospital records.<sup>1324</sup> Care managers do have clinical backgrounds, although the Handbook does not specify the required training.<sup>1325</sup>

Healthfirst also offers a diabetes specific program called Diabetes Control for Life, which is characterized as a "clinical performance management program."1326 This includes "diabetic education," although Healthfirst does not provide enough information to determine whether this is comparable to a DSME program.<sup>1327</sup> Beneficiaries in Diabetes Control for Life receive reminder mailings for check-ups and tests, tips on diabetes care and healthy living, and rewards for achieving goals for diabetes management.<sup>1328</sup> In addition, beneficiaries are provided with information about management and community programs and are assisted with scheduling appointments.1329

#### 5. Plans for Dual-Eligibles

Some people are eligible for both Medicare and Medicaid, typically due to a combination of age, disability, and poverty.<sup>1330</sup> These individuals are known as "dual-eligibles."<sup>1331</sup> Medicaid fills in the gaps in Medicare's benefit package for many low-income Medicare enrollees.<sup>1332</sup> This coverage ranges from help paying for Medicare's premiums and cost-sharing to coverage of benefits not offered under Medicare such as long-term care and, at state option, hearing, vision and dental benefits.<sup>1333</sup>

Most private insurers in New Jersey offer a variety of Medicare plans, including Dual-Special Needs Plans (D-SNPs) designed for dual-eligibles.<sup>1334</sup> The plans combine all Medicare and Medicaid health and drug benefits to be covered by one network of doctors, specialists, hospitals and dentists.<sup>1335</sup> While in regular Medicare a beneficiary can choose to be treated by any provider who accepts Medicare, under D-SNPs they must use a provider in the D-SNP network.<sup>1336</sup> D-SNP enrollment is not mandatory but most Medicaid beneficiaries in New Jersey are required to be enrolled in a Medicaid health plan, and once enrolled it is easy to enroll in a D-SNP.<sup>1337</sup>

Case management is provided under this program and all services are covered by one managed care plan.<sup>1338</sup> This is meant to provide services in a way that ensures care management and coordination among each member of the interdisciplinary care team.<sup>1339</sup>

Amerigroup, HealthFirst, Horizon-BlueCross and UnitedHealthCare all offer D-SNPs.<sup>1340</sup> In these plans, there are \$0 copays for all Medicare-covered services, which includes DSME and diabetes monitoring supplies.<sup>1341</sup>

#### *Opportunities to Improve New Jersey Medicaid Case Management*

PATHS participants have found that Medicaid beneficiaries primarily receive telephonic case management rather than more "high-touch" or "hands-on" forms of the service.<sup>1342</sup> According to PATHS partners, this is not sufficient for many patients, whether because more handson support is needed to provide motivation and teach skills or because the patient simply lacks a reliable telephone.<sup>1343</sup> In general, PATHS participants have found the telephonic approach to be ineffective for higher-risk patients.<sup>1344</sup> This includes patients living with type 2 diabetes, and especially those who also experience one or more co-morbidities.<sup>1345</sup> Challenges in this model include circumstances where patients do not have telephones, have telephones but change phone numbers, and where patients need a high level of assistance and follow up in order to make necessary lifestyle changes.<sup>1346</sup>

New Jersey Medicaid can learn from Medicare, which has run a number of experiments over the past decade to test different care coordination and disease management interventions, most of which focused on telephonic case management.<sup>1347</sup> Lessons learned included a few key themes:

• Deep institutional support and extensive planning are essential;

- Physician/provider buy-in was necessary to recruit and retain patients in programs;
- Functioning relationships between care managers and medical providers are essential;
- In-person contact providing education and information to beneficiaries is better than telephone-based utilization;
- Information sharing across providers and practice setting is essential; and,
- More intensive interventions should be targeted to the most expensive patients in order to be cost-effective. A continuum of intensity that increases with case complexity and severity might make sense.<sup>1348</sup>

Overall, it was difficult to show cost-savings to Medicare greater than the case management fees that Medicare paid.<sup>1349</sup> Out of twenty-nine programs tested, twelve showed non-statistically significant cost savings before subtracting fees, four showed non-statistically significant savings after subtracting fees, and only one showed statistically significant savings after subtracting fees.<sup>1350</sup> It should not be surprising that telephonic case management programs did not yield cost savings; they do not include any of the key themes found to be important for success, including deep institutional support and planning, physician buy-in, relationships with medical providers, in-person contact, information sharing, and a continuum of intensity.

Evidence from other state Medicaid programs further confirms that telephonic case management is not effective for reducing healthcare costs. For example, a recent study that examined telephonic case management in Colorado's Medicaid program found no difference in primary care or specialist visits, hospitalization, or use of the emergency department between blind and disabled beneficiaries randomly assigned to a case management program or a control group.<sup>1351</sup> The only difference was that beneficiaries in the case management group were more likely to have a visit to non-physician providers such as optometrists.<sup>1352</sup> The authors of the study hypothesize that the program would have been more effective had it incorporated features of programs found to be more effective (programs that were not yet in existence when this program began). The key features identified were:

- Targeting patients at a high risk of hospitalization;
- Average of one in-person contact per month;
- Timely access to information on hospital admissions and emergency department use;
- Close cooperation between care managers and providers;
- Providing care plans, self-management coaching, and social support to patients; and,
- Relying on nurses as case managers.<sup>1353</sup>

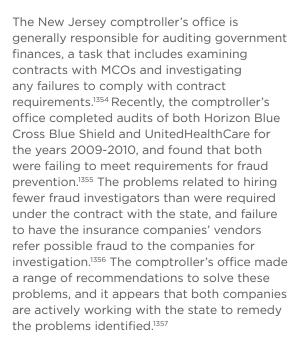
These findings match the Medicare study's key themes very well. Frequent in-person contacts, cooperation between case managers and providers, excellent information-sharing across providers, and focusing on the highest-risk patients are the keys to effective case management.

This evidence strongly suggests that the telephonic case management approach used by New Jersey's MCOs is unlikely to save the state money and unlikely to significantly improve health outcomes for complex patients. In order to enhance the system, DMAHS should work with MCOs to design programs that take into account the lessons learned in the Medicare context as well as in other Medicaid programs.

#### Recommendations

New Jersey is using a Medicaid case management system that is likely not meeting the needs of its members. Recall that New Jersey's authority to require beneficiaries to enroll in MCOs is based on a demonstration waiver. This means that the state needs to continue to monitor the progress, including the successes and failures, of the MCOs. As described in the health system background section of this report, New Jersey has developed a contract with the state's MCOs, the details of which outline how the MCOs are obligated to report on various performance measures relating to beneficiaries' care. These reports can provide valuable information to advocates as well as state agents to make informed arguments concerning the existing system, particularly with respect to the MCOs' diabetes case management programs.





The issue of fraud is not connected to the adequacy and quality of Medicaid services for beneficiaries living with diabetes. However, the fact that the comptroller's office took on this monitoring function and is working so actively with the companies to address their areas of weakness suggests that the state is quite wellpositioned to extend their work to areas of real quality monitoring.

#### 1. Conduct an Analysis of the Existing Case Management System

New Jersey should take advantage of the monitoring infrastructure that exists under its MCO contracts, as well as the reporting requirements of the 1115 waiver, to truly assess how the MCOs are doing at managing care. There is reason to believe that the model used by MCOs is not effective for complex patients. If the state is not able to launch reform based on the information already available, the comptroller's office may be able to work with DMAHS to produce a New Jersey-specific analysis that can spur all parties toward system improvements.

In the likely event that an analysis of the existing system shows that it is not adequate, DMAHS should work with all four MCOs to redesign their case management programs to align with best practices. There are three main areas for reform:

## 2. For Complex Patients, Shift the Focus to In-Person Visits

MCOs must shift to increase their focus on face-to-face and home visits for complex patients. As Medicare found, there is truly a continuum of need among patients. Some people living with type 2 diabetes are wellresourced and able to quickly understand the lifestyle changes required by the disease. Others, especially low-income patients who experience multiple co-morbidities including mental illnesses like depression, need much more help to make changes and manage the disease.

DMAHS should work with MCOs to design programs wherein the MCO uses the CNA process not only to identify beneficiaries eligible for case management services, but also to discern what level of help the patient will need. In the case of more vulnerable patients, MCOs should not rely on telephonic case management as the basis for care. Instead, home visits by local nurses and community health workers would be more useful.

MCOs can, of course, develop programs to provide this higher-touch case management service. It is also possible that it will be more efficient for them to carve out the most complex cases and pay communitybased organizations or Accountable Care Organizations (ACOs) to take on this task. This might be more efficient because a number of New Jersev organizations, such as the Camden Coalition of Healthcare Providers and the Trenton Health Team are already seeing great success in high-touch case management models for patients, including those with type 2 diabetes, who tend to be higher utilizers of healthcare services. This report discusses the possible link with ACOs in more detail below.

## 3. Increase Case Manager Contact with Providers

Case managers and medical providers must have ongoing and functional relationships characterized by PCP buy-in. This probably means occasional face-to-face meetings at the very least, or ideally having the case manager stationed in the same building as the physicians/ PCP, such as in a community health center. MCOs should increase the number of case managers who work in clinic settings or have regularly scheduled in-person visits to care sites.



Information-sharing across providers is very important, especially for patients with a number of co-morbidities. This is an element of care coordination described in more detail below in the section of the report discussing patient-centered medical homes. For MCOs, this could mean having a case manager serve as a "hub" of information across different medical practices, touching base with different providers to make sure they are aware of actions taken in other practices for a patient. Of course, a functional health information exchange, as discussed below, is a necessary part of any information-sharing system.

## IMPROVING NEW JERSEY'S CARE DELIVERY SYSTEM

Prevention and management of type 2 diabetes both require a great deal of effort from patients as well as the delivery of appropriate treatment and supportive services. The treatment plans and disease management can be quite complex and confusing for patients, requiring more support from providers than might be needed for other conditions.

For example, one PATHS partner who works as a health coach described arriving at a patient's home only to discover that the patient, who had a very high A1C level, had no idea that she had to refrigerate her insulin in order for it to remain effective.<sup>1359</sup> The patient also was unsure about when to take it and where on her body to inject it.<sup>1359</sup> Only by visiting the patient did this problem become apparent, and when it did, the coach was able to work with the patient to increase her knowledge and skills, which led to improved health outcomes.<sup>1360</sup>

In addition, many people living with type 2 diabetes have other co-morbid health conditions that require more support.<sup>1361</sup> For example, mental illnesses like depression and cognitive deficits, such as dementia (particularly in older patients) can prevent patients from managing on their own and require more intensive assistance.

These factors mean that an effective diabetes healthcare delivery system needs to emphasize coordination of care across different providers. In addition, it is crucial for the system to incentivize provision of the support services, such as intensive case management, that matter most for patients at the highest risk for serious diabetes complications. In this section of the report, we describe how New Jersey's existing healthcare delivery system is falling short on these goals, exciting new efforts to improve the system, and ways the state can take full advantage of these new efforts.

Because people living with diabetes often experience a range of co-morbidities, especially around mental health, it is crucial that providers serving this population work with one another to coordinate and manage care for their patients. There are a number of models that emphasize this type of teambased care, and New Jersey can help to promote them in the ways discussed below.

### Availability of Healthcare Providers

Access to healthcare professionals is, of course, essential to diabetes care. Many different providers help patients understand the disease and develop the skills to manage it, as well as crafting treatment plans to reduce the risk of complications. For people at risk for type 2 diabetes, a strong care team can perform these same functions—increasing knowledge and skills as well as healthy behaviors—in order to prevent the onset of the disease.

For patients living with type 2 diabetes or at risk for developing it, primary care providers can play a crucial role in care coordination and management, identifying dangerous trends in their patients' health and working to solve these problems. The deficit of primary care providers risks leaving more patients with pre-diabetes and diabetes without regular contact with a provider able to track their progress and help them to manage the disease.

Unfortunately, New Jersey faces shortages of both primary care physicians and advanced practice nurses (APNs),<sup>1362</sup> which present significant challenges to the state's ability to ensure access to key services – even in a context of expanded access to health insurance following ACA implementation.



#### PRIMARY CARE PHYSICIANS

#### Inadequate Primary Care Physician Workforce

As described in the state profile, New Jersey does not have an adequate primary care physician workforce. While in comparison to other states New Jersey has a less severe overall shortage, there are four significant challenges in the state.

First, New Jersey lacks sufficient family care physicians.<sup>1363</sup> There is a statewide deficit of about 480 family physicians, and only Hunterdon County has enough to meet the recommended ratio.<sup>1364</sup> By 2020, the New Jersey Physician Workforce Task Force estimates that the deficit will reach 1,816 physicians across the state.<sup>1365</sup>

Second, primary care physicians are not evenly distributed across the state. Twelve out of New Jersey's twenty counties fall below the national average of primary care physicians per 100,000 people.<sup>1366</sup>

Third, the trend is for fewer primary care physicians to practice in the state. In 2010, the New Jersey Council of Teaching Hospitals projected a deficit of 2,800 primary care physicians by 2020, but recently released a report suggesting that the situation is worse than this, because while the 2010 projections assumed that most residents in internal medicine would go into primary care, in recent years only about 20% are choosing this field.1367

Finally, the ratio of specialists to primary care physicians in the state is probably too high, driving healthcare costs higher than necessary. PATHS community partners described the tendency of many primary care providers to refer to specialists rather than taking on certain services themselves.<sup>1368</sup> Partners suggested that this may be due to the large number of small practices that depend on such referrals for their patient volume.<sup>1369</sup> The prevalence of specialists compared with primary care physicians likely also contributes; where there are many specialists available, it may not seem to be a good use of primary care time to address issues that fall within a given specialty.<sup>1370</sup>

#### Loan Repayment Programs

New Jersey has taken some steps to increase access to primary care physicians. The

most important is the Primary Care Loan Redemption Program, which allows primary care physicians, physician assistants, nurse practitioners, certified nurse midwives, and dentists to redeem up to \$120,000 over four years in exchange for a minimum of two years of full-time work in medically-underserved communities in New Jersey.1371

Eligible communities with a population between 5.000 and 29.999 include:1372

 Asbury Park City • Long Branch City

Lower Township

• Middle Township

Mount Holly

Township

Township

• Mullica Township

Ocean Township

Paulsboro Borough

Pine Hill Borough

• Phillipsburg Town

• Pleasantville City

• Riverside Township

- Bridgeton City
- Buena Vista Township
   Maurice River Township
- Burlington City
- Millville City • City or Orange Township
- Clayton Borough
- Clementon Borough
- Egg Harbor City and North Hanover Township
- Fairfield Township
- Fairview Borough
- Franklin Borough
- Garfield City
- Glassboro Borough
- Gloucester City
- Hammonton Town
- Harrison Town Union Beach Borough
- Keansburg Borough • Upper Deerfield Township
- Lodi Borough

Eligible communities with populations over 30,000 include:1373

- Atlantic City
- Camden City
- East Orange City
- Elizabeth City
- Irvington Township
- Jersey City

- Passaic City
- Paterson Citv
- Perth Amboy City
- Plainfield City
- Trenton City
- Union City



Salem City

- Woodbury City



- Lakewood Township
- Vineland City
- Newark City
- West New York Town
- New Brunswick City

The federal government operates a similar program, the National Health Services Corps Loan Repayment Program (NHSC).<sup>1374</sup> In this program, PCPs who work in Health Professional Shortage Areas (HPSAs) can receive loan repayment assistance.<sup>1375</sup> For two years of full-time work, providers can receive up to \$60,000 toward their loan repayment <sup>1376</sup>—the same rate of payment as the New Jersey program. The ACA increases the funding available for the NHSC<sup>1377</sup> as well as primary care residency programs.<sup>1378</sup> However, because New Jersey has relatively few HPSAs, and thus few areas where providers can reap the benefits of the federal program, it is helpful that the state program has more state-specific criteria for identifying eligible communities.

PATHS partners have noted that both programs are very helpful, and that a significant share of current community health center physicians did utilize the programs upon beginning medical practice.<sup>1379</sup>

However, New Jersey, and the southern part of the state in particular, cannot take full advantage of the federal program because of how HPSAs are "scored."<sup>1380</sup> Each HPSA receives a "score" that is intended to identify those HPSAs that face the greatest primary care shortages.<sup>1381</sup> The scores are based on several factors: the ratio of population to full-time equivalent primary care physicians; percent of population with income below the federal poverty level; an infant health index; and travel distance/time to nearest source of accessible care outside the HPSA. Higher scores yield loans and scholarships for more primary care physicians.<sup>1382</sup>

PATHS partners have observed that the state is not sufficiently rural by federal standards to have "high" HPSA scores,<sup>1383</sup> likely because compared to other states, residents of New Jersey HPSAs needn't travel as far to reach care outside the HPSA. Fortunately, the federal Health Services and Resources Administration (HRSA) and NHSC do collaborate with providers in HPSAs to provide local data to revise HPSA scores.<sup>1384</sup> A PATHS partner noted that one NHSC scholar was able begin serving in southern Jersey as a result of this type of score adjustment.<sup>1385</sup> Still, HRSA emphasizes that in general, major score adjustments are not likely.<sup>1386</sup> This means that New Jersey will probably continue to have fewer HPSAs than it might with more score adjustments, reducing the opportunity to attract NHSC-funded providers.

#### Medicaid Shortages are Particularly Significant

As noted above, in 2011 and 2012, 54% of New Jersey primary care physicians did *not* take new Medicaid patients, compared with 33% nationally.<sup>1387</sup>

The most important reason for this reduction in primary care physicians taking on Medicaid patients is that reimbursement rates are simply too low.<sup>1388</sup> In 2012, New Jersey Medicaid rates were 77% of the national average for all services, 92% of the national average for primary care, and 53% for obstetric care.<sup>1389</sup> While current rates are 1.1% higher since 2008,<sup>1390</sup> the state still has much ground to make up. The low reimbursement rate means that primary care practices cannot afford to expand to treat new Medicaid patients and they cannot afford to hire new physicians.<sup>1391</sup>

As noted by one PATHS community partner, the fact that private insurance, in particular, pays so much more than Medicaid means that there is a very high opportunity cost of seeing a Medicaid patient.<sup>1392</sup> That is, the amount a physician gives up in the form of higher payments from private coverage when an appointment slot is taken by a Medicaid patient can be very high. Given that a significant portion of the state population has private insurance, most physicians can build a successful practice by focusing on this group and have no need to see Medicaid patients, especially with such a high opportunity cost of doing so.<sup>1393</sup>

The consequence of this is that Medicaid patients are concentrated in practices like FQHCs, which specialize in serving Medicaid clients and providing charity care in exchange for the ability to apply for certain federal grants. These health centers can have a very difficult time maintaining adequate staffing. A PATHS participant noted that this leads to very short visits in these settings, because a small number of providers must see a large number



of patients – as many as sixty to one hundred per day.<sup>1394</sup> This makes it difficult to provide the kind of high-touch case management and diabetes education that can make the biggest difference for people living with type 2 diabetes.

#### ADVANCED PRACTICE NURSES

#### Advanced Practice Nurse Scope of Practice

As described above, while APNs can practice independently in all other aspects of patient care, New Jersey requires that APNs have a joint protocol in place with physicians in order to prescribe drugs or medical devices. While this is a less restrictive policy than is present in other states, in that it only requires APNs to have a joint protocol for medication/medical devices, New Jersey is still behind in achieving full practice authority for APNs. As of 2013, eighteen states and Washington, D.C. had fully independent practice and prescribing authority for nurse practitioners (NPs), the most common type of advanced practice registered nurse.<sup>1395</sup> The 2010 Institute of Medicine report, The Future of Nursing, identified allowing advanced practice registered nurses to practice to the full extent of their licenses, including prescribing medications and devices without supervision, as a major recommendation for the entire nation.<sup>1396</sup>

The basis for independent prescriptive authority is found in the quality of care produced by APNs. NPs demonstrate outcomes as good as or better than physicians on many important metrics, including mortality, improvement in disease, symptom reduction, health status, and functional status.<sup>1397</sup> There is some evidence that primary care APNs' education uniquely prepares them to improve outcomes for patients with diabetes; one study found that family medicine practices employing nurse practitioners were more likely than physician-only practices to assess patients' A1C and cholesterol levels.1398 In general, patients treated by APNs report high levels of satisfaction and in some studies, APN patients report being more satisfied with their care than patients of physicians. <sup>1399</sup> Physicians and NPs handle primary care cases of similar complexity levels as well.<sup>1400</sup> Finally, fully independent practice authority for NPs is associated with improved health outcomes in states in which it is allowed.1401

In addition, New Jersey Medicaid currently allows MCOs to include APNs as eligible

PCPs in their provider networks, but does not require them to do so.<sup>1402</sup> Because APNs are so well-qualified to provide primary care, and given the increasing demand for such services, it makes sense to maximize their role.

#### Advanced Practice Nurse Availability

As discussed above, New Jersey's APN supply is limited by the fact that there are not enough nurse faculty in nursing schools. In 2011, 12,000 students applied to college nursing programs in New Jersey and only 1,000 were able to enroll; this mirrors the national trend, which saw over 75,000 nursing school applicants turned away in 2011.<sup>1403</sup> The nurse faculty vacancy rate in New Jersey is currently 10.5%.<sup>1404</sup>

New Jersey has made a strong commitment to ensuring adequate nursing faculty, which in turn is the key to an adequate nursing workforce. The New Jersey Nursing Initiative is working to address the nurse shortage challenge. Launched in 2009 by RWJF and the New Jersey Chamber of Commerce Foundation, the Initiative supports scholarships for individuals pursuing masters and doctoral degrees that qualify them for nursing faculty positions.<sup>1405</sup> So far, sixty-one Nursing Scholars have received support, and in 2013 the first ten nurses graduated from the program, enough to fill about a third of the faculty vacancies.<sup>1406</sup>

In addition, in 2010 New Jersey passed the Nursing Faculty Loan Redemption Program Act, which can repay up to \$50,000 in student loans for nurses who undertake fulltime nursing faculty positions in the state.<sup>1407</sup>

By adding the Nursing Faculty Loan Redemption Program to the New Jersey Nursing Initiative's Nurse Faculty Scholars Program, the state has developed a multi-faceted approach to ensuring sufficient nurse faculty.<sup>1408</sup> The Nurse Faculty Scholars Program provides scholarships for a relatively small number of highly qualified candidates to pursue doctorates allowing them to teach in nursing school, while the Loan Redemption Program reduces the financial burdens for a much wider group of nurses who become faculty.<sup>1409</sup>

This excellent start must be continued. Yet, the difference in salary between teaching jobs and, for example, private hospital jobs, is still very significant and is likely to impede efforts to recruit more nurses to teaching roles. For



example, according to the Bureau of Labor Statistics, across the nation registered nurses can earn from \$62,000 to \$71,000 per year, while nurse practitioners can earn from \$82,000 to over \$100,000.<sup>1410</sup> Yet nurse faculty earn only from \$61,000 to \$80,000, even after their extensive education.<sup>1411</sup> In addition, of course, taking time to earn a masters and doctoral degree removes a nurse from the workforce for several years. Investing in education that yields a lower-paying faculty position is, naturally, a tough sell for many nurses.<sup>1412</sup>

The Loan Redemption and Nurse Faculty Scholars programs reduce the financial burden of choosing to spend time in school to obtain the advanced degrees needed to become a faculty member. Reducing the barriers, however, is only part of the equation: New Jersey nurses must see benefits in becoming nurse faculty in order to pursue the option, even with help to reduce the financial disincentives that are otherwise present.

RWJF is in the process of considering ways to emphasize the non-monetary benefits of working in academia, such as flexible and family-friendly schedules and the range of interesting research opportunities that come with academic freedom.<sup>1413</sup> In addition, options to help nurse faculty supplement their income through consulting and joint appointments can make academic careers more attractive for more young nurses.<sup>1414</sup>

#### Recommendations

In order to ensure an adequate supply of primary and family care physicians for people in underserved areas and those relying on Medicaid, New Jersey must take steps to strengthen the pipeline of these professionals and make the state more attractive to new doctors. In order to ensure an adequate supply of APNs, the state must allow for fully independent prescriptive authority, require insurance plans to include APNs in primary care panels, and continue efforts to recruit nurse faculty.

## 1. Enhance the Role of Primary Care Within State Medical Schools

There is a great deal of variation in New Jersey medical schools' approach to supporting primary care. For example, the Robert Wood Johnson Medical School has a very strong program in family medicine.<sup>1415</sup> With seventy faculty, an active research program, and a clinical program as well, there is a great deal of enthusiasm for primary care.<sup>1416</sup> This, in turn, directly benefits the local New Brunswick community. By contrast, the New Jersey Medical School lacks this level of programing, although it does possess a formal department of family medicine upon which it can build.<sup>1417</sup> Both institutions are now part of Rutgers University, which creates an enormous opportunity for the state. Rutgers can employ some of the best practices developed at Robert Wood Johnson Medical School and work to bring them to New Jersey Medical School as well. Both institutions can work together to consider, develop, and implement new ideas going forward, under the leadership of Rutgers.

One area of innovation of particular interest is the Robert Wood Johnson Medical School's work on developing an integrated healthcare delivery system within Rutgers Biomedical and Health Sciences.<sup>1418</sup> This plan would place primary care at the center of a system that links today's disparate systems. The new system will operate as an ACO (see below for more information on this model).<sup>1419</sup> The family practice affiliated with Robert Wood Johnson Medical School, The Robert Wood Johnson Medical Group, will serve as the central medical home for patients enrolled in the ACO.<sup>1420</sup> This will serve to highlight the role of family medicine in providing cost-effective patient-centered care. In addition, the plan involves a subsidy from the academic health center's hospital and sub-specialty departments towards family medicine.<sup>1421</sup> By promoting the centrality of primary care and prioritizing it financially, the Robert Wood Johnson Medical School is creating a model that other New Jersey schools can follow. Rutgers, which has strongly supported this plan following the merger,<sup>1422</sup> is a crucial partner, and should plan to take the lessons learned from the experience over time to the rest of the university system.

## 2. Maintain and Enhance Financial Incentives to Practice in Underserved Areas

Financial assistance in general is helpful to encourage physicians to practice in New Jersey. Student debt from medical school is an increasing burden for new doctors: while in 2012, 38% of New Jersey medical residents had debt over \$200,000, by 2013 44% of residents carried this much debt.<sup>1423</sup> Further,



48% of residents planning to specialize in primary care had over \$200,000 in debt.<sup>1424</sup>

For this reason, loan repayment programs are a key part of any effort to address health workforce shortages. As described above, both the state of New Jersey and the federal government have loan forgiveness programs tied to practicing in underserved areas. The state should continue its investment in its loan redemption program, and can also consider enhancing it. As a PATHS participant explained, "until the economic reward system changes, we will not see a significant renaissance in primary care."<sup>1425</sup>

In fall 2013, New Jersey State Senator Robert Singer introduced a bill to forgive medical school loans for doctors who work in New Jersey for 10 years.<sup>1426</sup> This bill does not include the geographic limits present in the existing state and federal programs that focus on underserved areas; doctors serving anywhere in the state would be eligible.<sup>1427</sup> This approach has the benefit of additional flexibility for physicians, and removes the difficulty of trying to make New Jersey fit into the federal HPSA program.

While this legislation will be very important for New Jersey as a whole, it does not directly address the provider shortage in the most underserved areas. This is because absent the financial incentive to specifically go to those areas to obtain loan redemption, the same factors that already lead physicians away from these regions will remain in place and likely continue the same disparities we see today.

To direct more attention to the most underserved areas of the state. New Jersev should consider increasing the incentive within the existing Primary Care Loan Redemption Program. Given that half the residents planning to specialize in primary care had over \$200,000 in debt, it makes sense to consider increasing the redemption amount from \$120,000 to \$200,000. One approach could be to make this additional funding contingent upon spending additional time in the underserved area, so that the state reaps an additional benefit from the funding increase. In addition, New Jersey can consider adding practice subsidy funds or mortgage assistance programs, again targeting these to underserved parts of the state and making the assistance contingent on accepting Medicaid.

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## 3. Increase Primary Care Reimbursement in Medicaid

Reimbursement rates for primary care must keep pace with rates for other specialties in order to ensure that enough medical students and residents choose this path. In particular, New Jersey Medicaid must close the gap with Medicare, and begin to approach private payer levels of reimbursement—a state with one of the highest costs of living cannot expect physicians to accept Medicaid if doing so would undermine practice viability.

Under the ACA, Medicaid rates for primary care physicians increase to Medicare levels for 2013 and 2014.<sup>1428</sup> The law does not provide for this increase to continue past 2014, but Congress should authorize a continuation. Absent this, New Jersey should fund an ongoing increase itself. Without assurance that this increase will be permanent, physicians may not want to take on new patients whom they will have to stop seeing when the reimbursement rate goes back down.<sup>1429</sup>

#### 4. Eliminate Joint Protocol Requirement for APN Prescriptive Authority

Although New Jersey has taken important steps to full practice authority for APNs, more progress is needed for APNs to practice at the top of their license.<sup>1430</sup> As of 2011, nineteen states did not require joint protocols or any physician supervision for NPs to prescribe medication.<sup>1431</sup> In New Jersey, the joint protocol requirement can be a barrier to full utilization of APNs, and efforts are underway to eliminate the requirement.<sup>1432</sup> In 2012, state Senator Joseph Vitale and Assemblywoman Nancy Muñoz introduced companion bills to remove the joint protocol requirement. At this time, neither bill has advanced beyond the committee level.<sup>1433</sup>

New Jersey can take advantage of the Consensus Model for Advanced Practice Registered Nurse Regulation, which sets forth licensure, certification, and education provisions for NPs and other advanced practice registered nurses.<sup>1434</sup> The Consensus Model imposes no requirements for physician collaboration, direction, or supervision.<sup>1435</sup> While the state would not need to adopt the Model in its entirety, portions may be helpful in drafting language to eliminate the joint protocol for prescribing.



## 5. Include APNs in Primary Care Provider Panels

In most insurance plans, enrollees need to choose a PCP, a person who is supposed to coordinate patient care and make all specialist referrals. Plans have "panels," or lists, of primary care providers from which enrollees can pick a provider. New Jersey does not currently require third-party payers to count APNs as PCPs. If APNs were always included in primary care panels, patients would have more providers to choose from, which could reduce the number of patients assigned to each provider. In turn, this could lead to more time being used for each person. This would be very helpful for diabetic patients, who often need more assistance with disease management. Therefore, New Jersey should require insurance plans, both within and outside the Medicaid program, to include APNs in their PCP panels.

#### 6. Maintain and Enhance Investment in Future Nurse Faculty

New Jersey should continue its investment in the Nurse Faculty Loan Redemption Program. The state should collaborate closely with the RWJF to encourage nurses to pursue teaching careers. A significant number of nurses are trained in schools over which the state has some authority, notably Rutgers University. This can create an important ongoing partnership between the policy work being done at RWJF and the ability of the state to launch innovative pilot programs and new ideas to attract more masters and doctoral students. For example, schools might start a program to actively connect nurse faculty to consulting opportunities, such as by maintaining a list of available speakers and promoting it through the school website. The state and RWJF policy analysts can collaborate to identify and resolve any barriers to joint appointments and consulting arrangements.

# Coordinated Care and Effective Case Management

PATHS partners emphasized that fragmentation of health care is a major barrier to providing quality care for chronic conditions like diabetes.<sup>1436</sup> Both the federal government, through CMS, and the state of New Jersey have a number of programs and projects designed to help move the healthcare system away from high-volume, fragmented, and expensive care and towards coordinated care that yields better outcomes and lower cost. These programs are geared toward rewarding coordination activities instead of focusing on acute care. As PATHS partners observed, "if you had the reimbursement, you could bring in staff to do care coordination,"<sup>1437</sup> and "if you have a team and can work with the patient it solves so many problems down the road."<sup>1438</sup> The programs described below seek to do exactly this.

Programs designed to provide better care include Patient-Centered Medical Homes (PCMHs), Medicaid Health Homes, and the Comprehensive Primary Care (CPC) initiative.

The overarching philosophy behind these programs is often called the "Triple Aim," which refers to the three goals all programs share: improving the quality and patient experience of care, improving population health outcomes, and reducing costs.<sup>1439</sup> The central idea of the Triple Aim is for all members of a health system to share responsibility for these three goals, rather than having responsibility diffused across multiple individuals and organizations. The projects discussed here strive to improve in all three areas at the same time by changing the healthcare delivery system in which they operate.

The resources required to implement these initiatives cannot be obtained through the traditional fee-for-service financing model. Below, we review alternative payment methodologies that can be applied to the new care coordination models.

#### ALTERNATIVE PAYMENT METHODOLOGY

In a fee-for-service system, the typical payment approach found in New Jersey and nationally, the provider is paid for each service he or she provides. This tends to reward providers for higher volumes of services because each one is paid separately. As one PATHS partner observed, the focus in the New Jersey hospital market is on "filling beds with patients needing expensive procedures."<sup>1440</sup> That is, because hospitals are paid for each procedure, the business strategy is to maximize the number of those procedures, especially the expensive ones.

The existing fee-for-service system also usually does not expressly pay for or otherwise reward efforts to coordinate care between providers and





healthcare organizations.<sup>1441</sup> For example, as one PATHS partner explained, pediatricians would like to provide nutritional counseling and strong referrals to community resources with which they have ongoing relationships.<sup>1442</sup> However, the "acute payment system" currently dominant in New Jersey does not reward this practice.<sup>1443</sup>

Fortunately, the changes in the healthcare system wrought by the Affordable Care Act have created new opportunities for New Jersey to reform the fee-for-service payment model.

#### Case Management Fees

Case management fees are probably the simplest alternative payment method. Here, the payer gives a fixed amount of money to a provider or provider organization to cover the costs of case management and care coordination. Typically, these fees are provided on a monthly basis and are calculated on a per-patient basis. They are often referred to as "per-member-per-month" payments.

#### **Bundled Payments**

Another alternative payment approach is a bundled payment system, where the insurance plan pays a fixed amount, usually adjusted for the expected costs of a particular patient, for all the care the person will get either for a given period of time or for the duration of a particular treatment plan. These payments are intended to cover all care for a given period of time or episode of care, not only case management and care coordination services. The payments bundled for a given period of time, such as one year, are called global bundled payments, while those designated for a particular treatment plan are called episodic bundled payments. Both types of bundled payment can help incentivize providers to coordinate care and invest time in case management activities that improve outcomes and prevent unnecessary utilization, such as hospitalizations.

The details of bundled payments can vary considerably, particularly regarding how the payment amount should be determined. Risk adjustment is a crucial element of this because if providers do not receive sufficient payment for more expensive patients, there will be a real incentive to avoid taking on such patients. This would be very damaging for patients living with type 2 diabetes. At the same time, payments that far exceed the real cost of caring for patients will fail to prevent unnecessary utilization. For patients with diabetes, "preventing unnecessary utilization" means keeping patients out of the hospital by managing care effectively to control blood glucose levels. Risk adjustment is a very technical matter that this report does not address in detail. However, payers and providers should work together to design payment models that are designed to accurately reflect patient costs.

In the following sections of the report, we flag opportunities to take advantage of these new payment models to incentivize and make possible the care coordination models best designed to help people living with type 2 diabetes.

#### HEALTH INFORMATION TECHNOLOGY

New Jersey, like the entire United States, is experiencing a major shift in health information systems. While in the past a patient's medical records were kept in paper form, it is increasingly common for this information to exist in electronic form. Usually an electronic health record (EHR) will include all clinical and administrative data relating to a patient and can help clinicians keep track of patient progress and health challenges, as well as supporting efforts to measure outcomes.<sup>1444</sup> Ideally, electronic records will be more accurate and clearer than paper records, reducing medical errors as well as helping to make health information more available so that clinicians do not duplicate tests and treatments that have already been done.1445

In 2009, Congress passed the Health Information Technology for Economic and Clinical Health Act (HITECH Act), which created financial incentives for use of EHR: Medicare and Medicaid providers (including hospitals) can earn up to an extra \$44,000 and \$64,750, respectively, for using EHR to record certain patient data (i.e., make meaningful use of EHR).<sup>1446</sup> After 2015, failure to reach the "meaningful use" standards will result in financial penalties—lower reimbursement rates—in Medicare only.<sup>1447</sup> What qualifies as meaningful use is defined in three stages, with increased requirements for what must be included in EHR in each stage.<sup>1448</sup>

An EHR is most helpful if it can be easily shared among a patient's providers who may not work in the same office. Health Information Exchanges (HIEs) are systems to help move



patient records between providers authorized by the patient to see them.<sup>1449</sup> In stages two and three of meaningful use, Medicare and Medicaid require that providers use HIEs to share information.<sup>1450</sup>

In 2011, New Jersey developed an Operational Health Information Technology (HIT) Plan.<sup>1451</sup> The New Jersey HIT Coordinator's Office (under the state Department of Health and Human Services) oversees the Plan, as well as the overall state HIT program.<sup>1452</sup> The program has three main parts.

First, the program works to help physicians adopt EHR. The New Jersey Health Information Technology Extension Center (NJ-HITEC) received \$23 million from the federal government to do this, which it uses to consult with physicians about choosing an EHR vendor, training staff, and addressing ongoing maintenance issues.<sup>1453</sup> In New Jersey, 53.8% of office-based physicians use an EHR system, compared with 71.8% nationally.<sup>1454</sup> This indicates that this effort still has work ahead.<sup>1455</sup>

Second, the program is developing Health Information Organizations (HIOs). These are essentially a type of data hub, collecting patient health information from all of a patient's providers and then sharing it back out to the patient's providers as needed, for the patient's benefit and while observing significant privacy protections.<sup>1456</sup> Federal funds from the HITECH Act are used to establish the HIOs.<sup>1457</sup> The state currently has five HIOs, each operating in a region of the state.<sup>1458</sup>

Finally, the program is working to eventually connect the HIOs across the state through the New Jersey Health Information Network. This will let HIOs access state data, such as immunization records.<sup>1459</sup> It is also intended to eventually link to a National Health Information Network, so that patient data can move across state lines, which will be very helpful when patients move from one state to another.<sup>1460</sup>

In general, patients with diabetes can benefit significantly from the increased use of EHRs, especially within the context of a more integrated, coordinated system of care. The patients with the most difficulty managing their condition and those with complex health issues, including multiple co-morbidities, often have several healthcare providers. Making it easier for these providers to communicate with one another and keep accurate track of a patient's status and healthcare utilization can, in turn, help providers to deliver the right care at the right time. For example, if a patient is hospitalized due to a diabetic emergency, it will be helpful for her primary care physician to receive an alert through an HIE, and then be able to retrieve all the relevant hospital records. Then the primary care physician can call to schedule an appointment upon discharge and work with the patient to address the disease management issues she has, as well as reviewing new medications or therapies prescribed in the hospital setting.

This report identifies a number of new healthcare delivery models. In all cases, improved health information technology is a crucial component of developing these models and ensuring their success.

#### SUCCESS STORIES: NEW JERSEY PROVIDER GROUPS INNOVATING FOR BETTER CARE

New Jersey boasts three groups of healthcare providers developing innovative models for health care aimed at addressing chronic illness among low-income populations. Here, we highlight their work and achievements.

#### The Camden Coalition of Healthcare Providers

The Camden Coalition of Healthcare Providers (CCHP) is a ten-year-old non-profit organization located in Camden, New Jersey. CCHP is a national model of how to move toward an integrated healthcare delivery system, providing an example of how to deliver quality care at lower cost by achieving full coordination across providers and taking the time to listen to patients. The fact that CCHP's Executive Director, Dr. Jeffrey Brenner, won a MacArthur Fellow ("genius") award in October 2013 serves to highlight its national profile and impact.<sup>1461</sup>

Launched through the efforts of local providers who experienced many of the same challenges in their practices, CCHP has developed a number of initiatives to address these common issues.<sup>1462</sup> All projects are based on local healthcare utilization data, gathered from the three local hospitals: Cooper University, Our Lady of Lourdes, and Virtua Health. These three hospitals have developed the Camden Health Information Exchange, which is used by over 100 local providers to access



real-time information about their patients and to facilitate sharing of clinical information among a patient's different providers.<sup>1463</sup>

The Care Management Program targets patients who tend to use more expensive health care, providing them with care coordination services upon discharge from hospitals.<sup>1464</sup> An outreach team (a social worker, community health worker, and nurse) works to stabilize patients and help them find a medical home.<sup>1465</sup> The companion Care Transition Program works with patients when they enter the hospital, helping to coordinate patient care in cooperation with patients' existing medical homes, typically the local FQHCs CAMcare and Project Hope.<sup>1466</sup> Both projects utilize the data in the Camden Health Information Exchange.<sup>1467</sup>

CCHP also boasts a Citywide Diabetes Collaborative and an Integrated Diabetes Care Program.<sup>1468</sup> These projects work to increase access to DSME, enhance the capacity of primary care practices to deliver patient-centered care, and improve care coordination.<sup>1469</sup> CCHP works with practices to add health information technology, nurse care coordination, more social supports for patients, and ongoing staff training and organizational development towards a patient-centered model.<sup>1470</sup> CCHP trains staff to use EHR, create diabetes registries, and add diabetes-specific services to their practices.<sup>1471</sup> Self-management and nutrition classes include activities such as learning to read nutrition labels and increasing awareness of what nutrients are in which foods.<sup>1472</sup> This has, in the experience of the participating staff, led to some improved health behaviors among patients.<sup>1473</sup>

CCHP's "health coaches" visit patients in their homes.<sup>1474</sup> For patients who lack working telephones, this means appearing at someone's door, or the place they stay on the street, without any set appointment.<sup>1475</sup> Health coaches have explained that patients typically appreciate this level of attention, rather than expressing reservations about the unannounced visits.<sup>1476</sup>

A major element of the Care Management Program is "motivational interviewing," a technique that focuses on having patients identify their own goals and the barriers to achieving them, in order to help them move towards being ready to take action to improve their health.<sup>1477</sup> Many patients have expressed that this is the first time a healthcare provider cared so much about them.<sup>1478</sup>

CCHP has been the model for two New Jersey programs, the Trenton Health Team and the Greater Newark Healthcare Coalition. Both are aimed at the same type of transformative work, reducing costs by delivering the right care to the right patients in the right settings. These three groups worked together to advocate for the New Jersey Medicaid ACO Demonstration Project, discussed in more detail below.

#### The Trenton Health Team

The Trenton Health Team (THT) is an alliance of the Henry J. Austin Health Center, Capital Health, St. Francis Medical Center, and the Trenton Department of Health and Human Services.<sup>1479</sup>

THT has five strategic goals:<sup>1480</sup>

- 1. Expanded Access to Primary Care;
- 2. Community-wide Clinical Care Coordination;
- 3. Engagement of Residents;
- 4. Health Information Exchange; and,
- 5. Development of a Medicaid Accountable Care Organization.

Ensuring that patients can see their PCP as soon as possible after requesting an appointment is a major goal for improving access to care. By working to identify how many patients each provider could reasonably see in a day and leaving space for walk-ins in the schedule, the Henry J. Austin Health Center was able to bring average appointment wait times from thirty-seven days down to two days.<sup>1481</sup> This model also prioritized making sure that patients see the same provider at each visit.<sup>1482</sup> This makes visits both more efficient, as there is less need for the provider to re-learn information about the patient, and more effective for building a trust-based relationship with the patient.

The Clinical Care Coordination Team conducts outreach to frequent users of the city's emergency departments, providing social services as well as assistance to navigate the healthcare system.<sup>1483</sup> By re-connecting these patients to primary care, the Team is able to





reduce unnecessary use of high-cost care and improve the outcomes for these patients.<sup>1484</sup> Cooperation among the THT members is crucial to the success of this venture.

THT has worked with community groups to conduct a needs assessment to inform its work in Trenton. This effort included ongoing focus groups at Kingsbury Tower, an apartment building that houses 600 people enrolled in both Medicare and Medicaid.<sup>1485</sup> Finding that many residents struggled with out-ofcontrol diabetes, depression, poor nutrition knowledge and practice, low knowledge of how and why to take different medications, as well as trouble with transportation, THT worked to remedy these issues.<sup>1486</sup> THT hosts weekly meetings to work with residents, many of whom have now learned to use their glucose monitors.<sup>1487</sup>

THT has contracted with a company called Covisint to build a health information exchange.<sup>1488</sup> This is one of the state's regional HIOs. Providers can see the services their patients receive from all local providers; if a patient has a test performed in an emergency department, her primary care physician can see the results when she comes in for another appointment.<sup>1489</sup>

Like CCHP, THT expects to participate in the state's new Medicaid ACO demonstration program, described below.

#### Greater Newark Healthcare Coalition

The Greater Newark Healthcare Coalition (GNHC) launched in 2008, when DOH brought together a group of hospital CEOs to plan a coordinated response to Newark-area hospital closures.<sup>1490</sup> The group found that it was good at the planning and policy activities, and eventually formed as an independent non-profit.<sup>1491</sup> GNHC does not provide health care as a distinct entity, but rather works to develop plans and policies that each participating hospital can implement within its own organization.<sup>1492</sup>

GNHC has hosted seminars for Newarkarea physicians to help increase awareness and understanding of topics like EHRs.<sup>1493</sup> In addition, the Coalition is working to develop plans to further integrate services across its members and other local providers, so as to better coordinate care.<sup>1494</sup> The Coalition supported the development of the state's Medicaid ACO demonstration project and continues to work on related policy issues.<sup>1495</sup>

#### PATIENT-CENTERED MEDICAL HOMES

The federal Agency for Healthcare Research and Quality (AHRQ) has defined a PCMH as having five main domains:  $^{\rm 1496}$ 

1. **Comprehensive Care:** Using a team-based approach to meet the majority of a patient's healthcare needs (physical and mental).

2. **Patient-Centered Care:** Delivering care that is oriented toward the whole person, including through partnerships with families and an emphasis on cultural competence.

3. **Coordinated Care:** Coordinating care across the healthcare system, especially focusing on transitions between providers, such as when a patient moves from a hospital setting back to the community.

4. Accessible Services: Minimizing wait times, and enhancing office hours and after-hours access via telephone and/or email.

5. Quality and Safety: Using decisionsupport tools, evidence-based care, shared decision-making, performance measurement, and population health management approaches to ensure safe, high-quality care.

These five domains are the core of a new care model that is fundamentally different from the traditional fragmented approach. Providers must communicate with one another, both within and across practices, to deliver care that meets patients' individual needs. For example, if a patient with diabetes is hospitalized and then stabilized and released from the hospital, the care team may call or visit the patient to schedule a primary care appointment immediately afterwards. Providers must also work with the patient to manage his/her health within the patient's own life. For example, a member of the medical home team, such as a community health worker, may visit a diabetes patient at home and meet with the whole family to discuss how to incorporate healthier foods into the family diet, taking into account culturally-based food preferences. It is this capacity for preventive care and true coordination that led one PATHS partner to say that medical homes are the best thing to happen to health care in twenty years.<sup>1497</sup>



The National Committee for Quality Assurance (NCQA) is the primary entity that certifies that a medical practice qualifies as a PCMH. There are nine standards that practices must meet in order to become certified by NCQA. These nine standards map onto the five domains identified by AHRQ:<sup>1498</sup>

- (1) Care Management and (2) Self-Management Support—map onto AHRQ's Patient-Centered and Comprehensive Care domains;
- (3) Patient Tracking and Registry Functions; (4) Electronic Prescribing; (5) Test Tracking; and (6) Referral Tracking map onto AHRQ's Coordinated Care domains;
- (7) Access and Communication—maps onto AHRQ's Accessible Services domain; and,
- (8) Performance Reporting and Improvement; and (9) Advanced Electronic Communications—map onto AHRQ's Quality and Safety domain.

To meet the NCQA standards and succeed in AHRQ's five domains, practices require health information technology, a strong primary care workforce, and funding mechanisms to finance the extra services that come with the PCMH model.<sup>1499</sup>

The PCMH requirements track recommendations from PATHS partners who are healthcare professionals. They noted that time constraints on patients are a major barrier to attending appointments; it is difficult for patients to take time off from work and to find childcare.<sup>1500</sup> The usual hours of non-emergency health care are really not conducive to helping people attend their appointments because they are usually during the same hours that people have to work.<sup>1501</sup> Open access scheduling and 24/7 access to advice is a major advance in this regard. Similarly, making the environment patient-centered, including through having a welcoming site and sending reminder emails, are strategies that PATHS partners use to increase patient attendance.<sup>1502</sup>

New Jersey's FQHCs are moving towards becoming certified PCMHs. Under the leadership of the New Jersey Primary Care Association, fourteen of New Jersey's twenty FQHCs have agreed to pursue certification as PCMHs, and five have achieved this certification already.<sup>1503</sup> The most significant challenges in becoming a PCMH are the development of EHRs and ensuring adequate staffing, including both healthcare professionals and administrative staff.<sup>1504</sup>

#### Recommendations

In order to maximize adoption of this model, New Jersey should focus on ensuring provision of HIT, a strong primary care workforce, and adequate funding mechanisms.

## 1. Expand the Reach of Health Information Technology

HIT is both confusing and expensive. Provider training and education from New Jersey HITEC and the New Jersey Primary Care Association are helping to reduce the confusion, and it helps that the "meaningful use" provisions line up quite well with health information requirements under the NCQA standards for being a certified PCMH. The state should continue its strong commitment to building HIT capacity through helping practices adopt EHRs, developing the HIOs further, and ensuring adequate connectivity across HIOs.

In addition, the state should expand its HIT training and support efforts to include more community health centers. One PATHS partner was concerned that the focus on individual providers and hospitals risks overlooking community clinics.<sup>1505</sup> The New Jersey Primary Care Association is specifically focused on clinics, but more support for this from New Jersey HITEC would be very helpful as well.

#### 2. Primary Care Workforce

A lack of adequate staffing to support care coordination and accessibility of services is a major barrier to PCMH development.<sup>1506</sup> This report addressed the state's primary care workforce needs above. Enhancing Medicaid reimbursement for primary care services and continuing and enhancing nurse faculty recruitment are the two most important steps the state can take in this regard.

#### 3. Ensure Adequate Funding Mechanisms

The state should pay FQHCs and similar facilities a per-member-per-month fee to support services provided to Medicaid beneficiaries. This would be easier than



creating new billing codes to pay for care coordination tasks and would be far less of an administrative burden for practices. One example of a care coordination activity is reviewing hospital discharge records to identify which PCMH patients have left the hospital in a given day. Another might be calling and/ or visiting the newly-released patient to schedule their next primary care appointment, or speaking with the hospital's treating physician or social worker to learn about the patient's newly diagnosed health condition or psychosocial issue. Each activity on its own may not be terribly time-consuming, and it might not be worth sending a bill to an insurance company to pay for it even if a code did exist. Yet doing this type of work for all patients, day in and day out, is a full-time job. Depending on the number of patients, it might be several full-time jobs. Practices need to have enough staff to perform these essential activities, and that means having a consistent and predictable cash-flow to pay salary and benefits for staff that conduct these tasks.

For these reasons, it is important that New Jersey provide a per-member-per-month fee to practices that achieve PCMH status. This can serve to facilitate PCMH development and ongoing success, as well as adding incentives for FQHCs to work toward PCMH status. Because Medicaid runs almost entirely through MCOs, the state will need to change its contracts with MCOs to require this type of payment. MCO contracts run on a nine-month schedule, which creates ample opportunity to make this kind of change when contracts come up for renewal.

#### MEDICAID HEALTH HOME PROGRAM

The ACA created a new option for states to create a Health Home program within state Medicaid programs. The ACA provides for enhanced federal matching funds for a limited time for the provision of coordinated care for people living with chronic conditions.<sup>1507</sup> Note that unlike the PCMH model, Medicaid Health Home programs are targeted at patients living with chronic illness. In the first two years, the federal government will pay 90% of the program's costs.<sup>1508</sup> States can implement this new Medicaid option by adding a program description to their state Medicaid plans – these are known as State Plan Amendments and asking CMS to approve the plan.<sup>1509</sup> States are also able to apply for planning grants to help them develop Medicaid Health Home programs. New Jersey applied for and received such a planning grant.<sup>1510</sup>

The Medicaid Health Home model requires that health homes provide six core services geared towards improving care for people with chronic illnesses.<sup>1511</sup> These services are: comprehensive case management; care coordination; health promotion; comprehensive transitional care and follow-up; patient and family support; and referrals to community and social support services.<sup>1512</sup>

The ACA allows states to include Medicaid beneficiaries in their Health Home models if they a) have two or more chronic conditions, b) have one chronic disease and are at risk of developing a second, or c) have a serious or persistent mental illness.<sup>1513</sup> Having diabetes or being overweight are both qualifying conditions under the ACA, so states can choose to include patients with these conditions in their state Health Home models.<sup>1514</sup>

States can have a Health Home model that applies statewide, or select a specific geographic area for the project.<sup>1515</sup> States are also allowed to design more than one type of Health Home. For example, a state could have one model focused on people with serious mental illness and have a second model focused on people with diabetes and heart disease.<sup>1516</sup> In this case, the state would simply write two State Plan Amendments for CMS approval.<sup>1517</sup> Similarly, the state could write one State Plan Amendment for one region and later write a new one for a different area of the state.<sup>1518</sup>

In the 2012 Comprehensive Medicaid Waiver, New Jersey Medicaid stated its intention to develop a Health Home focused on behavioral health.<sup>1519</sup> The state produced a brief concept paper that describes the state's intended approach to the behavioral health home.<sup>1520</sup> Medicaid beneficiaries will be eligible if they have: 1) a severe mental illness; 2) a substance use disorder and a chronic medical condition; or 3) a substance use disorder and risk of a chronic medical condition.<sup>1521</sup> Eligible providers will be those behavioral health agencies licensed as mental health or addiction treatment agencies, and these agencies will need to become NCQA-certified as PCMH within one year of Health Home



participation.<sup>1522</sup> The state intends to start the program in counties or regions with especially high need and "strong readiness of local providers" to participate.<sup>1523</sup> It is not clear as of this writing what progress towards Health Home development, if any, has been made since the fall of 2012.

New Jersey can take advantage of the enhanced federal funding to develop a Health Home model that focuses on diabetes and being overweight, in addition to the model focused on behavioral health. In order for this to happen, DMAHS needs to develop a plan and submit it as a State Plan Amendment for CMS approval. DMAHS may have been delayed in this process due to the extensive work it is already having to put forth to plan for the ACA's Medicaid expansion. Ideally, DMAHS will have capacity to address the Health Home opportunities once the Medicaid expansion has taken place and is operating smoothly.

Once DMAHS can turn its attention to the issue, there are a few important decisions it will need to make. These include (1) which chronic conditions will allow patients to be eligible for Health Home services; (2) the geographic reach of the program; (3) what types of providers will be eligible to serve as Health Homes; and (4) the payment methodology.

## *Which chronic conditions will allow patients to be eligible?*

The state can choose to include in its Medicaid Health Home all those who are eligible under the federal program or a subset of this group. Different states have taken different approaches so far.<sup>1524</sup>

New York and Oregon include all Medicaid beneficiaries with eligible conditions, while Rhode Island and Missouri have more narrowly-targeted models.<sup>1525</sup> Rhode Island has two models, one for children with special healthcare needs and one for adults with serious and persistent mental illness.1526 Missouri also has two models. One is for people with either a serious and persistent mental illness or a behavioral condition and another chronic condition. <sup>1527</sup> This group is for people who had \$10,000 in health costs from the previous year.<sup>1528</sup> The other model is for people with either two or more chronic conditions or one and the risk of developing another. This group is for people who had \$2,600 in health costs the previous year.<sup>1529</sup>

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## Will the whole state be eligible, or will the program roll out in a specific region first?

The state has shown a preference toward starting Health Homes in high-need regions and evaluating the results before expanding to the whole state.<sup>1530</sup> This approach is also reasonable and appropriate for a diabetes-focused health home. For example, New York started its program in a few counties and was able to expand to all counties within one year.<sup>1531</sup>

## Which kinds of provider settings will be eligible to be health homes?

New Jersey can open the Health Home model to any and all providers who meet state guidelines, or restrict eligibility to certain types of providers.

New York took the former approach, which necessitated drafting of high standards for provider organizations.

Under these standards, New York Health Home organizations must be Medicaid providers willing to follow the state's Medicaid rules.<sup>1532</sup> Organizations must be able to show the capacity to provide or contract with others to provide the six health home services.<sup>1533</sup> Organizations must provide care coordination and service integration using an interdisciplinary care team under the direction of a care manager who is accountable for ensuring the beneficiary's access to care.<sup>1534</sup> They must demonstrate their ability to perform core functional components.<sup>1535</sup> These include:<sup>1536</sup>

- Providing person and family centered services in a manner that is quality-driven, cost-effective, and culturally appropriate;
- Coordinating and providing access to: evidence-based services; preventive and health promotion services; mental health and substance use disorder services; comprehensive case management, care coordination, and transitional care across settings; chronic disease management and self-management support; long-term care and supports and services;
- Developing individual care plans that coordinate and integrate all clinical and non-clinical needs;
- Demonstrating an ability to use health information technology; and,

 Establishing a continuous quality improvement program involving collecting and reporting on care and outcome data.

Organizations must provide information on the processes used to perform these functions and assure that they are performed properly.<sup>1537</sup>

The scope of work encompassed here would be difficult for a single organization to perform. Essentially, New York is using this model to incentivize the creation of healthcare networks, with the Health Home lead agencies serving as the central point of care coordination.<sup>1538</sup>

In Rhode Island, Missouri, and Oregon, Health Home models build on existing structures. Rhode Island had a network of family care centers that required little adjustment in order to begin providing Health Home services to children with special healthcare needs as well as community mental health centers that, similarly, required little change to their work to provide Health Home services to adults with serious and persistent mental illness.<sup>1539</sup>

Missouri also uses existing community mental health centers for the behavioral health part of its model. The state uses FQHCs, public health clinics, and a rural health clinic to provide Health Home services to those with other chronic illnesses. This did not necessitate a new structure either.<sup>1540</sup>

Oregon, meanwhile, had already invested in a patient-centered primary care home model, which was easily adapted to serve the Medicaid Health Home purpose.<sup>1541</sup>

On the physical health side, New Jersey does not already have a network like Oregon's or Rhode Island's that can stay about the same while meeting Health Home standards. The state does have a strong FQHC system, much of which is already working to qualify as PCMHs. The state could reasonably decide to start a model using FQHCs as the central point of contact—though it would be a good idea to engage FQHC leadership in a stakeholder process to assess how this would fit their existing plans.

Because New Jersey generally needs to be thinking about enhancing care coordination and reducing fragmentation across its healthcare system, it might be more rewarding to follow New York's approach. The state can adopt New York's basic structure, identifying the qualifications for Health Home organizations without prescribing the type of organization. If New Jersey did this, the state should require providers to ensure a strong focus on person- and family-centered care and to develop individual care plans under the direction of accountable, dedicated care managers. HIT, as discussed above, is an increasingly significant part of the healthcare system, and New Jersey should require that Health Home provider organizations either demonstrate a minimum level of HIT capacity or a plan to reach a minimum level quickly.

As several PATHS participants observed, patients have a very high need for social services, a need that, left unmet, can dramatically increase healthcare costs as patients lack safe housing and nutrition while experiencing very high levels of stress that can interfere with treatment adherence and exacerbate many conditions.<sup>1542</sup> The New York model, like most Health Home models, requires that Health Homes connect patients with social services. If New Jersey chooses to follow New York's approach, the state should emphasize this element in the standards it develops for provider organizations. One approach is to encourage health homes to contract with social service entities in order to formalize relationships and ease the referral and coordination process.

New York has faced challenges commensurate with the scope of its effort. Building new provider networks is administratively complex, and different organizations were at different levels of readiness for the tasks involved in Health Home implementation. For example, HIT is financially and technically challenging and smaller organizations were less prepared to utilize such systems.<sup>1543</sup> The fact that New Jersey's FQHCs are already striving to build these systems would reduce the start-up costs for them.

New Jersey should consult with healthcare stakeholders to determine which type of approach best fits the state's needs and capacity at this time. FQHCs, hospitals, and all participants in the new Medicaid ACOs (discussed below) must all be included, at the very least.



#### What will be the payment methodology?

As discussed throughout this section of the report, a per-member-per-month care management payment best fits with a quality rather than volume-focused approach to care delivery. This payment type is also standard in Medicaid Health Home programs nationally, including in New York, Missouri, Rhode Island, and Oregon's programs.<sup>1544</sup> New Jersey should adopt this model of payment.

MCOs will likely play an important role in the payment model. This is true in New York's model as well. There, the state identifies a monthly payment for each enrolled beneficiary, based on the person's risk (essentially, how sick the person is). MCOs receive the payments for their members, and then pass it through to the Health Home caring for the enrollee. The MCO is allowed to keep a maximum of 3% of the total care management fee.<sup>1545</sup>

#### **Recommendations**

New Jersey should commit to planning a Medicaid Health Home model that includes physical chronic health conditions in addition to its plans for a behavioral health home. DMAHS will need to develop a state plan amendment for federal approval, and must consider four main questions.

#### 1. Include Overweight and Diabetes as Eligible Conditions

In creating a Health Home that addresses physical health, New Jersey should create a model that includes beneficiaries who have two or more chronic diseases or have one condition and are at risk for another. This encompasses the full range of eligibility when added to the behavioral health home program the state is already pursuing. The state can consider past health costs the way that Missouri does, although doing so might add to administrative complexity. The state can choose to include all or some of the qualifying conditions listed under federal rules. In doing so, the state should be sure to include people who are overweight or have diabetes.

## 2. Design Geographic Reach to Cover the Whole State

New Jersey should commit to a program that eventually covers the whole state. As part of its plan, however, the state can launch the program in particularly high-need regions before expanding.

#### 3. Consult Stakeholders to Decide on Eligible Providers

New Jersey must decide whether to base its Health Home program within an existing system, such as FQHCs, or to allow all Medicaid-eligible providers to participate as long as they meet specific state standards. DMAHS should consult a range of stakeholders, including FQHCs, hospitals, and participants in Medicaid ACOs, in order to arrive at the best answer to this question.

## 4. Choose a Bundled Payment Design as the Payment Methodology

New Jersey should provide per-memberper-month care management fees to Health Home providers. New Jersey will need to plan for the relationship between its MCOs and the provider organizations serving as Health Homes. Like New York, New Jersey should ensure that the providers actually receive the vast majority of the per-member-per-month care management fee. MCOs can receive the funds and pass them through to the Health Homes caring for their members. MCOs should not be permitted to retain more than a nominal amount of these fees.

## THE COMPREHENSIVE PRIMARY CARE INITIATIVE

The ACA authorized the CMS to launch the CPC initiative, a four-year demonstration project to learn more about how to improve primary care across the country.<sup>1546</sup> CMS designed the program to provide extra funding to support primary care practices in developing more coordinated care.<sup>1547</sup>

Primary care practices are supposed to improve care coordination in a number of ways. First, practices will work to deliver intensive case management to high-risk patients, including an individualized care plan. Second, the practices will be accessible twenty-four hours a day and seven days per week, and be able to provide patients with access to their own healthcare information as needed. Third, the practices will focus on assessing patient needs for preventive care and providing this care in a timely manner. Fourth, the practices will work to engage patients and their families to participate in their care. Finally, the practices

will develop healthcare teams across the "medical neighborhood," taking the lead to coordinate care among a patient's many different providers. <sup>1548</sup>

The extra funding from CMS comes through monthly care management fees. Medicare will pay practices a per-member-per-month fee that is intended to help support the care coordination activities described above, just as we recommend New Jersey implement for PCMHs and Medicaid Health Homes.<sup>1549</sup> After two years in the program, primary care practices will be eligible to share in any savings they generate. <sup>1550</sup> Specifically, practices will share in a portion of the total savings Medicare achieves in their regional market.<sup>1551</sup> This will allow CMS to test whether these payment methods will help primary care practices perform the tasks explained above, and whether, in turn, those care coordination tasks reduce healthcare costs.<sup>1552</sup>

CMS is also exploring a "multi-payer" approach. This means that CMS will collaborate with other insurance plans, including state Medicaid programs as well as private plans, to expand the CPC model.<sup>1553</sup> CMS has invited other payers to also provide care management fees, shared savings, or other ways to incentivize coordinated care in the markets where CPC is active.<sup>1554</sup>

CMS launched the CPC initiative in 2012 in seven regions across the country, including in New Jersey.<sup>1555</sup> New Jersey has seventy primary care practices participating in the CPC initiative.<sup>1556</sup> These practices include 252 individual healthcare providers and serve an estimated 41,799 Medicare beneficiaries.<sup>1557</sup> A number of private insurance companies are also participating in CPC in New Jersey, including AmeriGroup, AmeriHealth New Jersey, Horizon Blue Cross Blue Shield of New Jersey, UnitedHealthCare, and the Teamsters Multi-Employer Taft-Hartley Funds.<sup>1558</sup>

#### Recommendations

## 1. Monitor Outcomes from the Comprehensive Primary Care Initiative

New Jersey should monitor the successes and challenges of the CPC initiative over the course of the demonstration. This can be easily accomplished through the CMS Innovation Center, which makes public the results from all CMS demonstration projects.

#### 2. Consider Opportunities to Implement All or Part of the Comprehensive Primary Care Initiative for Medicaid in New Jersey

If this initiative is able to save money for Medicare while improving quality of care, the state should consider importing the model into Medicaid.

Three of the four Medicaid MCOs (Amerigroup, Horizon Blue Cross, and UnitedHealthCare) are already participating in the CPC initiative, albeit not with their Medicaid plans, so it might make sense to add elements of the CPC initiative to future contracts between DMAHS and the MCOs. If these companies find that costs for the most expensive beneficiaries go down when they pay per-member-per-month fees for care coordination, they may be willing to do the same for Medicaid plans.

At the very least, success in CPC should lead the state to write contracts that explicitly encourage MCOs to take this approach.

#### ACCOUNTABLE CARE ORGANIZATIONS: MEDICARE SHARED SAVINGS PROGRAM

An ACO is a group of healthcare providers who receive payment based on patient outcomes and cost-savings rather than the usual feefor-service model.<sup>1559</sup> The model has become more common and can be found in Medicare, Medicaid, and the private insurance market.

The ACA provides for an ACO program within Medicare. Known as the Shared Savings Program, this new model is designed to reward groups of providers for reducing healthcare costs by splitting those savings between the organization and Medicare.<sup>1560</sup> Medicare ACOs must be incorporated entities that are initiated by providers (e.g., hospitals or physician groups), and must include healthcare professionals.<sup>1561</sup>

To participate, provider groups must agree to be accountable for the care—including quality and cost—of any Medicare fee-forservice beneficiaries assigned to them. The patient assignment system is based on where a beneficiary receives most of his or her primary care.<sup>1562</sup> ACOs also must agree to participate for at least three years and have enough PCPs to accommodate at least 5,000 beneficiaries.<sup>1563</sup> They must have a mechanism for shared governance and a legal structure to allow them to receive and distribute payments.<sup>1564</sup> Importantly, ACOs must also meet a set of criteria relating to





"patient-centeredness."<sup>1565</sup> These criteria include having a survey to evaluate beneficiary experience of care, mechanisms to coordinate care, individualized care plans, and population health needs assessments, as well as an infrastructure to report on cost and quality within the ACO.<sup>1566</sup>

ACOs can choose to only have a chance to gain savings, or to also share in the risk if costs go up instead of down.<sup>1567</sup> If an ACO agrees to share in the risk, it is eligible for a higher share of any savings.<sup>1568</sup> The determination of whether costs have gone up or down will be based on the actual costs for the beneficiaries assigned for the ACO compared with the expected costs.<sup>1569</sup> There are thirty-three quality measures for which ACOs will need to report measures.<sup>1570</sup> ACOs that perform better on these measures will be rewarded with a higher percentage of the savings they achieve.<sup>1571</sup>

In New Jersey, six Medicare ACOs have organized, with service areas covering nearly all of the state.<sup>1572</sup> Many are led by hospitals rather than groups of physicians, which is interesting because to reduce costs for patients, ACOs will have to reduce use of services that tend to generate more revenue for hospitals, such as specialist physicians and procedures. As Joel Cantor of the Rutgers Center for State Health Policy has noted, it is not clear whether Medicare ACOs will succeed in reducing costs given this conflicting pair of incentives.<sup>1573</sup>

#### Recommendations

#### Monitor the Shared Savings Program

As with the CPC initiative, this federal experiment can inform New Jersey policy. The state can monitor the outcomes of the Shared Savings program and determine which elements, if any, may be beneficial for the state to embrace independently.

As described below, New Jersey Medicaid is already engaged in a new ACO program of its own. The fact that two ACO models are operating within the state can provide an excellent opportunity for New Jersey to compare the two and develop a better model by retaining the successful elements of each.

#### ACCOUNTABLE CARE ORGANIZATIONS: NEW JERSEY MEDICAID ACO DEMONSTRATION PROJECT

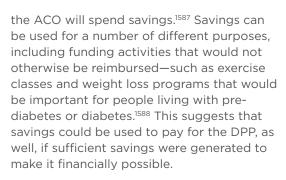
In 2011, New Jersey passed An Act Establishing a Medicaid Accountable Care Organization Demonstration Project.<sup>1574</sup> In April 2013, DHS, which houses DMAHS, issued a proposed rule to implement the law.<sup>1575</sup> The demonstration project is authorized for three years from the start of the program.<sup>1576</sup>

The proposed rule defines an ACO as a "legal entity...comprised of an eligible group of ACO participants that work together to manage and coordinate care for Medicaid beneficiaries and have established a mechanism for shared governance that provides all ACO participants with an appropriate proportional control over the ACO's decision-making process."1577 Medicaid ACOs must be non-profit corporations that include as participants all the hospitals in the service area, all safety net clinics (such as FQHCs), and at least 75% of the primary care providers who accept Medicaid.<sup>1578</sup> The governing board must include at least two consumer organizations able to advocate for the residents of the service area.<sup>1579</sup> The state will certify entities that meet the governance and operational standards set forth in the regulation.<sup>1580</sup>

DMAHS will be required to contract with ACOs to share savings achieved for beneficiaries in the fee-for-service part of Medicaid.<sup>1581</sup> However, this is a small percentage of the total Medicaid population; nearly all beneficiaries are in managed care plans. MCOs may contract with ACOs, but are not required to do so.<sup>1582</sup>

ACOs will receive funding based on achieving reductions in Medicaid spending while improving healthcare quality and outcomes for beneficiaries.<sup>1583</sup> Savings will be shared between the state, the ACO, and any managed care organization that contracts with the ACO.<sup>1584</sup> Unlike in Medicare ACOs, no ACO will bear any risk in the case that costs go up instead of down.<sup>1585</sup>

ACOs must submit a "gainsharing plan" within one year of certification.<sup>1586</sup> The plan will include an explanation of how shared savings will be calculated, how savings will be allocated among ACO members as well as between the ACO and the state/MCO, and how



The gainsharing plan must describe the ACO's plan to: use multidisciplinary teams to coordinate patient care and generally to improve service coordination; expand the medical home model; improve access to primary care, including through open access scheduling; encourage health education and promotion, home-based services, and linguistically and culturally appropriate care; increase patient medication adherence, including through medication therapy management; use health information technology; and promote healthy lifestyles and wellness.<sup>1589</sup>

Gainsharing plans will also include at least five specific healthcare quality measures.<sup>1590</sup> These must include preventive measures, at-risk population measures, and measures relating to appropriate use of providers and access to care. <sup>1591</sup> The ACO will identify the performance standards it plans to reach for both participating practices and the ACO as a whole.<sup>1592</sup> These standards must be set for each year of the project.<sup>1593</sup> This will require extensive data collection in order to determine if the ACO meets the goals set forth in the gainsharing plan.<sup>1594</sup>

By holding ACOs accountable for reducing costs across the whole Medicaid population in a given geographic area, this program creates strong incentives to focus on the most expensive patients, whose costs can be brought down the most through better case management and care coordination. It is possible that savings can be used to increase flexibility to provide a range of cost-effective services not otherwise covered in Medicaid, such as medical nutrition therapy or even cooking classes to help people prevent and control diabetes.

A 2013 study of hospital inpatient and emergency department data from 2008-2010 in thirteen New Jersey communities illustrates the potential for savings.<sup>1595</sup> The communities in the study were:

- Atlantic City Pleasantville City;
- Newark East Orange Irvington -City of Orange;
- Trenton;
- Camden;
- Asbury Park Neptune;
- Perth Amboy Hopelawn;
- Jersey City Bayonne;
- Vineland Millville;
- Paterson Passaic City Clifton;
- Elizabeth Linden Winfield;
- Plainfield North Plainfield;
- Union City West New York Town -Guttenberg - North Bergen; and,
- New Brunswick Franklin.<sup>1596</sup>

The study examined five categories of preventable hospital utilization, including: share of hospital patients classified as high users of emergency departments; share of hospital patients classified as high users of inpatient care; share of emergency department visits that are potentially preventable through community-based care; share of hospital stays that are potentially preventable through community-based care; and number of hospital patients admitted again within thirty days.<sup>1597</sup>

There was significant variation across the thirteen communities in these measures. and overall, these communities performed significantly worse than the New Jersey state averages.<sup>1598</sup> If all thirteen achieved the performance of the community that performed best on each measure, hundreds of millions of dollars could be saved. For example, reducing costs from inpatient high utilizers could yield \$284 million in savings, while reducing costs from emergency department high utilizers could save \$70 million.<sup>1599</sup> Avoiding inpatient and emergency visits could save \$155 million, and reduced readmissions could save \$94 million.<sup>1600</sup> These amounts should not be added together because there is overlap in visits across the measures (for example, a potentially avoidable emergency visit could become a potentially avoidable inpatient stay if the patient is admitted to the hospital).<sup>1601</sup>





It is clear that there is potential for significant cost savings if ACOs can provide communitybased care that prevents emergency visits and hospital stays, helps people transition out of the hospital to avoid readmissions, and reduces the number of high utilizers of emergency and hospital care. At the same time, it is not yet clear if these savings will cause Medicaid costs to go down overall, and especially if costs will go down enough to pay for the proposed increase in community-based care. This is because, as a PATHS partner described it, there is "a huge reservoir of unmet need" among existing Medicaid beneficiaries.<sup>1602</sup> Many beneficiaries are simply not getting any care at all, and when they begin to receive services, their costs will necessarily increase.<sup>1603</sup> Eliminating overutilization by providing better case management and care coordination may or may not save enough to compensate for the increase in costs from people finally getting some healthcare services. In addition, ACOs will have to cover start-up costs and take on the initial expenses of service provision long before the savings appear.

As of August 2013, UnitedHealthCare is the only MCO to begin talks with a prospective ACO about developing a gainsharing arrangement.<sup>1604</sup> United and the CCHP have already completed a 2012 project where United gave the CCHP information about its enrollees (such as visits to providers outside Camden, that otherwise would not be known to the CCHP) and paid for the CCHP's face-to-face care coordination model.<sup>1605</sup> The project yielded lower costs and more primary care visits, compared to patients' utilization patterns the year before.<sup>1606</sup> The positive and promising results have motivated United to work with the CCHP in a more long-term capacity, and the two are working to develop a contract that will fit under the ACO regulations.<sup>1607</sup>

#### Recommendations

#### 1. Work to Increase Managed Care Organization Participation

The strength of the demonstration will depend on the participation of MCOs. Given that over 97% of beneficiaries are in managed care plans,<sup>1608</sup> their participation is vital. If MCOs do not agree to share savings with ACOs, the ACOs will not receive very much in shared savings at all. This will make it hard to finance the system improvements contemplated in the law and regulations. As of August 2013, only UnitedHealthCare has agreed to participate.

It is likely that the ACO focus on high utilizers will be beneficial for the MCO business model. If MCOs' enrolled beneficiaries receive ACO services that reduce cost, it will significantly reduce MCO expenditures on, for example, hospitalization for people with poorlymanaged chronic illnesses like type 2 diabetes.

As discussed above, while the MCO case management approach might be reasonable for lower-cost patients, for the very expensive individuals for whom intensive case management is cost-effective, the MCO approach is inadequate. Accordingly, contracting with an ACO to provide the "boots-on-the-ground" services for such patients will reduce costs compared with a situation where the patients receive only telephonic case management. Sharing the resulting savings with the ACO, in turn, is a necessary investment in the sustainability of the system.

The Rutgers Center for State Health Policy will be measuring the savings that ACOs achieve as well as tracking to which entities those saving accrue. This will maximize transparency, and show if MCOs do indeed reap major savings from the work of ACOs. If MCO costs go down because expensive patients spend less time in the hospital, the state will give the MCOs lower per-member-per-month fees the following year. This will save money for the state Medicaid program. The fact that this will happen is also probably a disincentive for MCOs to participate in ACOs.

While the intensive case management approach pioneered by the CCHP has proven to work well, the ACO model is still new. For MCOs for whom New Jersey is the sole or primary place of business, investing fully in the new model may appear too risky. For MCOs like this, it probably makes sense for the MCO and one or more ACOs to discuss the basis for MCO concern and how it could be assuaged. For example, a pilot program representing a relatively small portion of the MCO's enrolled population might allow the ACO to develop and grow while limiting the risk perceived by the MCO.

DMAHS should broker talks between new ACOs and the three MCOs not yet working with ACOs to develop gainsharing plans.



DMAHS has a strong interest in the ACO plan working and reducing costs for the agency and state. A plan to allow all MCOs to begin working with ACOs on at least a limited basis will set up circumstances to develop the model further and facilitate cost-savings for the state.

#### 2. Share Case Management Fees

As explained above, MCOs receive per-memberper-month fees from the state Medicaid agency, but pay providers on a fee-for-service basis. This may need to change, at least within the ACO model. MCOs should consider paying case management fees to the ACOs who, increasingly, will do the actual care management.

As described above, all MCOs focus on telephonic case management as their primary approach to this service. The state pays for this as part of the per-member-per-month fees paid to MCOs. Given the need for reform to the MCO case management programs, DMAHS should consider the possibility that MCOs should pass on part of the case management portion of their monthly payments to ACOs able to do more effective work for high-risk beneficiaries.

#### COMMUNITY HEALTH WORKERS: ROLE IN DIABETES CARE TEAMS THROUGH ALTERNATIVE PAYMENT METHODOLOGY

In addition to primary care physicians and advanced practice nurses, other healthcare professionals can contribute enormously to the care of people living with, or at risk for, type 2 diabetes. Community health workers (CHWs) have the capacity to join healthcare teams and assist in type 2 diabetes prevention and management. The alternative payment models of bundled payments or per-memberper-month case management fees likely provide the best route to sustainable funding for the services CHWs provide.

CHWs are known by a variety of names. These include community health advisor, outreach worker, community health representative, promotora/promotor de salud, patient navigator, peer counselor, lay health advisor, peer health advisor, peer supporter, and peer leader.

The ACA defines a CHW as:

an individual who promotes health or nutrition within the

community in which the individual resides: a) by serving as a liaison between communities and health care agencies; b) by providing guidance and social assistance to community residents; c) by enhancing community residents' ability to effectively communicate with health care providers; d) by providing culturally and linguistically appropriate health and nutrition education; e) by advocating for individual and community health; f) by providing referral and follow-up services or otherwise coordinating; and g) by proactively identifying and enrolling eligible individuals in Federal, State, and local private or nonprofit health and human services programs.<sup>1609</sup>

CHWs can be an integral part of a patient care team for chronic disease management including for diabetes. In a meta-analysis of eighteen studies, involvement of CHWs was associated with greater improvements in diabetes knowledge, positive lifestyle changes, increased self-management behaviors, and decreased use of the emergency department.<sup>1610</sup> In a two-year study of black diabetes patients, those working with teams of nurse case managers and CHWs had greater decreases in A1C levels, cholesterol, and blood pressure compared with patients in routine care as well as those managed by a nurse case manager or CHW alone.<sup>1611</sup>

The United States Bureau of Labor Statistics estimates that there were 470 CHWs working in New Jersey in 2012.<sup>1612</sup> The prevalence of CHWs in New Jersey is lower than the national average, but New Jersey CHWs are relatively well-compensated, earning a mean hourly wage of \$24.21, the second-highest in the country (following Nevada, at \$24.62).<sup>1613</sup> However, given the state's high cost of living, this wage is unlikely to be enough to support a family without other income sources. One consequence of this, according to PATHS community partners, is that working CHWs typically need more than one job, and do not have any time left over to work on professional development or to participate in a professional association.<sup>1614</sup> This is one reason that New Jersey does not have any CHW-controlled professional group.<sup>1615</sup>





New Jersey's Department of Labor has officially recognized CHWs as a profession. The state defines a CHW's job as follows:

> Assist individuals and communities to adopt healthy behaviors. Conduct outreach for medical personnel or health organizations to implement programs in the community that promote, maintain, and improve individual and community health. [P]rovide information on available resources, provide social support and informal counseling, advocate for individuals and community health needs, and provide services such as first aid and blood pressure screening. May collect data to help identify community health needs.<sup>1616</sup>

This definition is in line with the federal definition, and is a very good start to developing the profession. The state needs to follow this up with steps to develop a comprehensive approach to build the CHW workforce. As noted by PATHS partners, this means building a career ladder and providing ongoing professional development.<sup>1617</sup> The state's Community Health Worker Institute is working to develop professional development tools for CHWs,<sup>1618</sup> which will be very helpful in this ongoing work.

#### Recommendations

New Jersey can do much more to integrate CHWs into care teams. In order for the CHW workforce to fully contribute to the prevention and management of type 2 diabetes, the state must work to develop the profession and create pathways to sustainable reimbursement.

## 1. Build a Stakeholder Group Able to Identify and Pursue Policy Improvements

A centralized effort is needed to form a true policymaking body for CHW issues. DOH, and particularly the Chronic Disease Prevention and Control Unit (CDPC), is probably best-situated to coordinate this group, in partnership with the Community Health Worker Institute. To do this, DOH needs support from the executive and legislative branches of government to fund adequate staffing to do the work. Without such support, it would not be possible to staff these recommendations. DOH can work closely with the Community Health Worker Institute<sup>1619</sup> to build a CHW coalition. Ideally, such a group can work to implement other recommendations here as well as serving as an ongoing site for addressing challenges and opportunities in the field. An example of one such coalition in another state is the Minnesota Community Health Worker Alliance, which includes state agencies and officials, academic institutions, nonprofit organizations, healthcare providers, and CHWs.<sup>1620</sup>

#### 2. Develop a Statewide CHW Training Curriculum Standard

The Community Health Worker Institute currently provides CHW training and has developed a core curriculum that could serve as the basis for a statewide standardized curriculum.<sup>1621</sup> DOH should work with the Community Health Worker Institute to develop a statewide curriculum that reflects the core competencies and any disease-specific training needed for particular jobs a CHW might seek. It must be developed jointly with CHWs and other healthcare professional groups that will supervise and work with CHWs.

#### 3. Consider Formal Credentialing Rules

New Jersey does not currently have a formal CHW credentialing system, and developing one is probably a necessary precursor to further professional development, career ladders, and standard reimbursement. One challenge is to ensure that the credentialing system does not exclude traditional CHWs by setting up unreasonable barriers, such as strict regulations and costs. One approach that may help with this concern is to create alternative paths that can yield a credential. For example, in Texas, a person can obtain a credential either by completing a 160-hour training program or by having at least 1,000 hours of experience doing community health work in the past six years.<sup>1622</sup> This would protect the existing workforce from having to obtain new training to keep working. At the same time, the existing workforce would be subject to continuing education requirements, so that they can continue to grow professionally and keep up with new developments in the field. In the Texas system, there is no cost to getting a credential; this is another important barrier to avoid, since most CHWs do not have significant disposable income.<sup>1623</sup>



## 4. Ensure Appropriate Training and Education for CHW Employers and Supervisors

While CHWs need training in order to participate effectively in the healthcare system, it is equally important for employers to understand the competencies of the CHW. For example, sometimes supervisors are not comfortable with a CHW spending most of his or her time outside the clinical setting, not appreciating that the role requires going into the community to reach people who are not coming to the clinic. Employers will need advice on how to supervise a worker who is often in the field rather than in the same space as the supervisor. The Community Health Worker Institute provides employer training already, and can be an excellent resource in expanding such training to more provider settings.

## 5. Require Reimbursement in Public and Private Insurance Systems

Currently, CHWs are not reimbursable providers in the state Medicaid program. If a community health center or primary care office wants to hire a CHW, the funding for his or her salary must come out of general operating expenses or a grant. This is not sustainable because grant funding is almost always temporary.

In Minnesota, after the CHW Alliance developed credentialing and training standards, in 2008 the state authorized hourly reimbursement for certified CHWs in the Medicaid program.<sup>1624</sup> New Jersey could also follow this approach, after the development of state credentialing and training standards. An hourly reimbursement model is reasonable in that CHW services tend to take significant time and are usually not easily broken into a set of discrete tasks that can be reimbursed individually.

At the same time, because CHWs will, ideally, practice within new coordinated care models, reimbursement should not be handled as an addition to the fee-for-service system. This risks encouraging CHWs and their supervisors to prioritize volume of service, just as the feefor-service system encourages volume in other parts of the healthcare system today. Instead, providers and payers should negotiate permember-per-month fees or bundled payments that include the cost of providing CHW services to the patients enrolled in the payers' health plans. This approach is recommended for Medicaid MCOs as well as in the private insurance market.

#### PHARMACISTS: ROLE IN DIABETES CARE TEAMS THROUGH ALTERNATIVE PAYMENT METHODOLOGY

The integration of pharmacists into primary care teams can be an asset for people living with diabetes. Pharmacists are readily accessible and have high rates of patient interaction.<sup>1625</sup> In fact, the most common healthcare interaction is with a pharmacist.<sup>1626</sup> Amidst growing shortages of PCPs, there is a clear need for patient access to high-quality care from other healthcare providers.<sup>1627</sup>

New Jersey has recently made important progress in expanding the role of pharmacists in providing more patient care by adopting regulations for collaborative practice agreements between physicians and pharmacists. The new regulations went into effect February 4, 2013, and allow physicians to work with pharmacists on collaborative drug therapy management.<sup>1628</sup> Pharmacists participating in collaborative drug therapy management may collect, analyze and monitor patient data; order or perform lab or clinical tests, if based on physician standing orders; modify, continue, or discontinue drug or device therapy; and modify dose, dosage regimen, dosage forms, or route of drug administration.<sup>1629</sup> This does not include providing a chemically different drug at the time of dispensing, unless the patient and physician previously consented to this.<sup>1630</sup> Participation is voluntary on the part of pharmacists, physicians, and the individual patients.<sup>1631</sup>

The physicians and pharmacists must jointly develop a written collaborative practice agreement that identifies each physician and pharmacist involved, the pharmacists' functions and responsibilities, any restrictions on the use of specific drugs, any specifically included or excluded diagnoses or diseases, and a copy of the written protocols identifying the management actions that the pharmacist is authorized to perform.<sup>1632</sup> The protocols apply to specific patients of the physician, who must give their informed consent.<sup>1633</sup>

In order to be eligible to participate in a collaborative practice agreement, pharmacists must meet certain requirements, as regulated by the State Board of Pharmacy.<sup>1634</sup> The Board pre-approves pharmacists for eligibility, based



on a collaborative practice application the pharmacist files, together with documentation that he or she has completed the necessary training.<sup>1635</sup> Options for training include certificate programs offered by the Board or Pharmacy Specialties or a provider approved by the American Council of Pharmaceutical Education; or a post-graduate residency program accredited by the American Society of Health-System Pharmacists.<sup>1636</sup> In addition, pharmacists must complete at least ten credits of continuing education to obtain renewed approval every two years.<sup>1637</sup> The continuing education must relate to each disease or condition covered by the collaborative practice agreements in which the pharmacist participates.<sup>1638</sup> Notably, a physician can decide that in order to join a collaborative practice agreement, he or she will require pharmacists to undergo disease-specific training.<sup>1639</sup> This means that physicians have a great deal of discretion to ensure that pharmacists have the capacity to provide the services identified in the protocols for the patients in question.

New Jersey was behind many other states in developing collaborative practice agreement rules, so these new regulations are a very positive step in the right direction and open the door to more extensive use of pharmacists in managing care for diabetic patients.

Pharmacists play multiple roles in addressing diabetes and other chronic conditions. Pharmacists can help manage chronic conditions by counseling patients directly and via the phone; checking for drug interactions in a patient's medication regime; and coordinating with physicians to determine when a cheaper generic or better medication may be available.<sup>1640</sup>

For diabetes care specifically, pharmacists can help identify high-risk patients, educate patients about proper self-management, address adherence to medications, refer patients to other needed health services, and monitor a patient's condition for complications.<sup>1641</sup> Pharmacists can also be certified as diabetes care educators and provide additional specialized education, including formal courses on diabetes selfmanagement.<sup>1642</sup>

#### Addressing Medication Non-Adherence

One challenge for type 2 diabetes management is that patients sometimes struggle to fill and re-fill prescriptions and take their prescriptions properly. A 2012 study found that the national cost of non-adherence to diabetes drug regimens is approximately \$24.6 billion per year.<sup>1643</sup> This is driven by the fact that an estimated 32% of type 2 diabetes patients fail to re-fill their prescriptions or to take their medications as prescribed.<sup>1644</sup>

There have been some improvements in this area in recent years, as adherence increased approximately 7% between 2009 and 2012.<sup>1645</sup> Availability of lower cost generic medications has helped, as has improved use of health information technology to track whether patients have in fact filled prescriptions.<sup>1646</sup>

Given the high rates of co-morbid conditions for those at risk for and living with diabetes, the complex medication regimes of this population, and the challenges patients face in adhering to drug regimens, pharmacists are a particularly appropriate group to provide treatment and education while also ensuring that a medication regimen is safe and affordable.

#### Medication Therapy Management

One specific service that pharmacists can provide is medication therapy management (MTM). MTM is "a service or group of services that optimize therapeutic outcomes for an individual patient."<sup>1647</sup> Services include assessing and evaluating the patient's complete medication therapy regimen in order to identify, prevent, and resolve medication-related problems.<sup>1648</sup>

The American Pharmacists Association and National Association of Chain Drug Stores Foundation identified five core elements of MTM services:

- 1. Medication Therapy Review
- 2. Personal Medication Record
- 3. Medication-related Action Plan
- 4. Intervention and/or Referral
- 5. Documentation and Follow-up.<sup>1649</sup>

Note that medication therapy review includes counseling patients about their medications,<sup>1650</sup> which allows pharmacists to evaluate patient



experiences with medication<sup>1651</sup> These services help prevent the numerous problems that arise when people have diabetes and a co-morbid condition with possibly confusing or contradictory medication plans; require a complex medication regime; and/or experience problems adhering to their treatment regime. Medicare requires its Part D benefit plans to reimburse pharmacists for MTM for certain beneficiaries. <sup>1652</sup> Part D plans set their own eligibility criteria, but Medicare requires them to exclude beneficiaries with fewer than two medications, and to include all beneficiaries with eight or more medications.<sup>1653</sup> Similarly, the Part D plans must let in beneficiaries with three or more chronic conditions, but are permitted to include those with only two.1654

#### The Patient Self-Management Program

Another model especially important to diabetes care is known as the Patient Self-Management Program for Diabetes (PSMP). The PSMP was first used in Asheville, North Carolina for city employees, and when it met with clinical and cost-control success, expanded to employers in Greensboro and Wilson, NC, Dublin, GA, Manitowoc County, WI, and Columbus, OH in a program known as the Ten Cities Challenge.<sup>1655</sup> Pharmacists held scheduled consultations, used clinical goal setting, monitoring, collaborative drug therapy management with physicians, and referrals to diabetes educators. Pharmacists also used an assessment tool to learn about patient knowledge and skills relating to diabetes in order to target their counseling to areas of need.<sup>1656</sup> Pharmacists completed accredited diabetes certification programs so as to be able to provide the relevant assistance.<sup>1657</sup>

Like the Asheville program, the employerbased iteration of the PSMP showed very promising results. The patients' mean A1C level decreased from 7.9% to 7.1%, and mean LDL-C (bad cholesterol) and blood pressure also decreased significantly.<sup>1658</sup> Influenza vaccination rates increased from 52% to 77%, the eye examination rate increased from 46% to 82%, and the foot examination rate increased from 38% to 80%.<sup>1659</sup> The total mean healthcare costs decreased by \$918 per patient in the first year, compared to the cost projections.<sup>1660</sup> The reduction in overall costs is especially interesting because it happened while the patients were consuming more healthcare services in the form of their diabetes medication and the various screenings they underwent. However, the improvements in diabetes management led to improved health and lower costs, because expensive interventions such as hospitalizations were averted.

This type of program, where pharmacists work directly with diabetic patients to provide education and counseling on disease management as well as lifestyle factors, has been effective in many different settings across the United States. The improvements in clinical indicators combined with reduced cost make it a natural fit for a state ready to invest in the physical and fiscal health of its population.

#### Recommendations

#### 1. Authorize Reimbursement for Medication Therapy Management

New Jersey should follow Medicare's lead and reimburse pharmacists for MTM in the Medicaid program. A bill to add MTM as a Medicaid benefit has been introduced in the state Senate and Assembly (S2568/A3716).<sup>1661</sup> The bill would be more expansive than the Medicare rules, allowing MTM for beneficiaries with at least three medications and two chronic conditions.<sup>1662</sup> The bill has been reported to the appropriations committees of both legislative houses.<sup>1663</sup> We recommend passage of this legislation.

#### 2. Develop a Pilot Program to Reimburse Pharmacists for PSMP Services within Medicaid

New Jersey's DMAHS should use existing successes as a launching pad to expand the role of pharmacists in diabetes management, building on the successful PSMP model. The new collaborative practice agreement requirements will make it much easier for pharmacists, physicians, and other healthcare providers to work together in care teams, jointly managing patient treatment and education. The work done at the Zufall Health Center is a model that other FQHCs can apply as well. Zufall was able to implement Project IMPACT only because the organization applied for grant money to reimburse pharmacists for their time. This is, by its nature, not a sustainable model. New Jersey should work to develop sustainable systems to support these services.



#### ZUFALL HEALTH CENTER

Zufall Health Center in Dover, New Jersey, launched Project IMPACT in June 2011 to add a diabetes curriculum to their existing Clinical Pharmacy Services program. Zufall staff began by identifying patients with diabetes who were at high risk for health complications, including those with A1C levels above 7%, co-morbid chronic conditions, and socioeconomic, educational, and language barriers. Staff worked with patients to assess their selfmanagement knowledge and skills to determine a baseline from which to grow.

The ongoing intervention included regular one-on-one encounters between the clinical pharmacist and the patients enrolled in the program. The staff pharmacist became a Certified Diabetes Instructor in order to deliver DSME to the patients, and used the AADE Core Curriculum to help patients engage in seven crucial Self Care Behaviors. The pharmacist provided medication therapy management and healthy lifestyle education, including diet and nutritional counseling according to American Diabetes Association guidelines, as well as insulin management to avoid serious diabetic emergencies.

From 2011 to 2012, eighty-four patients enrolled in the program. During the year, mean A1C levels decreased by .9%, and although the average remained high at 8.4%, this is a highly statistically significant drop from the initial average of 9.2%. Blood pressure and LDL cholesterol measures also improved. Diabetes management improved dramatically, with a 25% reduction in adverse events and a 30% reduction in potential adverse events—this means many fewer trips to the hospital to cope with diabetic emergencies.<sup>1</sup>

Zufall has demonstrated the capacity to implement an excellent variation on the PSMP. In this respect, the Zufall Health Center has a model that other New Jersey community health centers can employ. This is more likely to occur with more stable funding, as discussed in recommendations below.

## Source: Rina Ramirez & Teresita Lawson, *The IMPACT of Clinical Pharmacy Services on the Health and Safety of High-Risk Patients with Diabetes,* AM. DIABETES ASS'N 5<sup>TH</sup> DISPARITIES P'SHIP FORUM (2012) (on file with authors).

The first challenge in developing a sustainable funding stream for PSMP-like programs is that the reimbursement must be adequate to compensate for the initial cost of the program for pharmacist employers. The training necessary to provide clinical pharmacy services in the PSMP model is significant. Employers of pharmacists, whether retail pharmacies, hospitals, or FQHCs, would need to pay for it, as well as absorbing the cost of having staff unavailable for regular work for some time. A PATHS participant estimated that all told, it would cost approximately \$1,000 per pharmacist to train in this model.<sup>1664</sup> To make it a reasonable return on investment, employers would need to know that this cost would be recouped. Whether this is possible would be a function of the level of reimbursement and the volume of patients receiving the service. At the same time, of course, higher levels of compensation do not help reduce healthcare costs, which creates a point of tension between payers, like Medicaid MCOs, and the pharmacist employers who might consider investing in this training for their staff.

The next challenge is to decide on a payment methodology. Like community health workers, pharmacists can be excellent additions to care teams, especially in a setting where a significant amount of care includes pharmaceutical treatments. Like CHWs, however, adding pharmacists to care teams should not mean adding yet another provider to the list of fee-for-service recipients. The care team and coordinated care approach lends itself much better to holistic payment approaches, especially bundled payments.

In order to address both the payment level and the payment methodology challenges, New Jersey's DMAHS should discuss opportunities for a PSMP pilot program with all four Medicaid MCOs. DMAHS should also seek stakeholder involvement from the payer, physician/APN, pharmacist, and FQHC communities throughout the process of designing a system that accounts for the financial and structural needs of all players. A pilot would most naturally be located within one or more FQHC sites, because FQHCs across the state are actively developing

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PCMH models that lend themselves to the coordinated care management inherent in a successful PSMP approach. In addition, not all pharmacists would be interested in this type of work; some, as one PATHS partner noted, want to focus on dispensing prescriptions.<sup>1665</sup> Those more interested in clinical work with patients may be more likely to be found in an FQHC setting. Further, FQHCs serve a high proportion of Medicaid beneficiaries, which will help ensure adequate patient volume.

One payment approach that could work well would be a pass-through per-patient-permonth payment from the state, similar to the plan explained above in the Medicaid Health Home context. MCOs could retain a small percentage of the fee, but the risk—and the reward—of the pilot would lie with the state Medicaid program. If the program were as successful as the Ten Cities Challenge, Medicaid could find its costs decreasing by \$900 per patient per year.

By bringing together Medicaid providers and payers—and using the leverage that comes from being the ultimate Medicaid payer— DMAHS can help launch an exciting program that, if successful, can spread throughout the healthcare delivery system.





# CONCLUSION

Many factors affect New Jerseyans' ability to prevent and control type 2 diabetes. Policies shaping the food system-such as food assistance programs, school food, consumer access to healthy food, the built environment and physical activity, and the infrastructure that supports New Jersey's food system-play an integral role in preventing and mitigating the impacts of type 2 diabetes. Access to health insurance, funding for key services, and availability of healthcare providers, along with the structure of the healthcare system all contribute to whether individuals with type 2 diabetes in New Jersey can stay healthy and manage the condition. New Jersey is at a critical place in its fight to reduce the incidence of diabetes and help those living with the condition prevent complications.

Outlined in this report are numerous recommendations that the state can consider and adopt to accomplish this goal.

Residents of New Jersey who are living with type 2 diabetes and those at risk for the condition, along with advocates and healthcare providers, have demonstrated their commitment to stopping the epidemic in its tracks. Their tireless efforts to transform their communities and leverage resources bode well for the state. As New Jersey looks to a future of new opportunities in both the healthcare and food systems, the dedication of these constituencies will be the state's most important asset.

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1649. AM. PHARMACISTS ASSOC. & NAT'L ASS'N OF CHAIN DRUG STORES FOUND., MEDICATION THERAPY MANAGEMENT IN PHARMACY PRACTICE: CORE ELEMENTS OF AN MTM SERVICE MODEL 5 (2d ed., 2008), available at http://www.pharmacist.com/sites/default/files/ files/core\_elements\_of\_an\_mtm\_practice.pdf (last visited Nov. 20, 2013). Note that seven pharmacist organizations (Academy of Managed Care Pharmacy, American Association of Colleges of Pharmacy, American College of Apothecaries, American College of Clinical Pharmacy, American Society of Consultant Pharmacists, American Society of Health-System Pharmacists and National Community Pharmacists Association) support this definition.

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1651. Thomas Reinke, *Medication Therapy Management Program in N.C. Saves \$13 Million, MEDICATION MGMT., http://* www.managedcaremag.com/content/medication-therapymanagement-program-nc-saves-13-million (last visited Nov. 20, 2013). 1652. Center for Medicare Memorandum, CTR. FOR MEDICARE & MEDICAID SERVS., http://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/Downloads/ Memo-Contract-Year-2013-Medication-Therapy-Management-MTM-Program-Submission-v041012.pdf (last visited Nov. 20, 2013).

1653. *Id.* 

1654. *Id.* 

1655. Daniel G. Garrett & Benjamin M. Bluml, *Patient Self-Management Program for Diabetes: First-Year Clinical, Humanistic, and Economic Outcomes,* 45 J. Am. PHARMACISTS Ass'N 130, 131-32 (Mar./Apr. 2005).

1656. *Id*.

1657. *Id.* 

1658. *Id.* 

1659. *Id.* 

1660. *Id.* at 131.

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1662. Andrew Kitchenman, *Bill Seeks to Help Medicaid Recipients Manage Their Medications*, NJ SPOTLIGHT, June 6, 2013, http://www.njspotlight.com/stories/13/06/04/ bill-seeks-to-help-medicaid-recipients-manage-their-medications/ (last visited Nov. 20, 2013).

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1664. Telephone Interview with anonymous PATHS partners (Oct. 11, 2013) (on file with authors).

1665. *Id.* 





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