Mississippi State Department of Health

2018 Mississippi Diabetes ACTION PLAN

This plan was developed in accordance with MS Code § 41-3-201 (2014), which mandates the submission of an Annual Diabetes Action Plan by the Mississippi State Department of Health.

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Frances Moody, BSN, RN; LaTonya Lott, DrPH, MS, MPH; Victor Sutton, PhD, Lei Zhang, PhD, MBA, Mississippi Diabetes Action Plan, the Office of Preventive Health and the Office of Health Data & Research. Mississippi State Department of Health, Jackson, MS, January 2017.

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- Mississippi Division of Medicaid
- Mississippi Department of Finance and Administration
- The Diabetes Coalition of Mississippi

For further information about this report please contact:
Mississippi State Department of Health
Office of Preventive Health
715 S. Pear Orchard Road
Ridgeland, MS 39157
Phone: (601) 206-1559

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Introduction to Mississippi's Diabetes Epidemic

In 2016, diabetes was the seventh leading cause of death in the United States. Each year, more than 200,000 persons with diabetes die in this country. In 2017, the Centers for Disease Control and Prevention (CDC) estimated 30.3 million Americans, or 9.4% of the population, live with diabetes. Of this number, 23.1 million are diagnosed, and 7.2 million are estimated to be undiagnosed. The following section will discuss Mississippi's diabetes burden by prevalence, mortality, and cost.

A. The Scope of Diabetes in Mississippi: Diabetes and Prediabetes

In 2016, the Mississippi State Department of Health (MSDH) estimated that 308,295, or 13.6% of Mississippi adults, live with diabetes. Mississippi has the highest diabetes prevalence in the country. Mississippi's estimated diabetes prevalence is significantly higher than the national average of 10.5%, and the state's diabetes prevalence has steadily increased over the past several years. No public health district in Mississippi has diabetes prevalence below that of the national prevalence. Diabetes prevalence by public health district is presented in Table 1:

Table 1: Mississippi Diabetes Prevalence by Public Health District, 2016

Public Health District	Diabetes Prevalence (%)
District I	12.0
District II	16.1
District III	16.1
District IV	15.7
District V	11.7
District VI	15.7
District VII	11.0
District VIII	12.3
District IX	14.2
State Total	13.6

Source: 2016 Mississippi Behavioral Risk Factor Surveillance System

In addition to an overall state diabetes epidemic, certain Mississippi sociodemographic groups suffer from diabetes at higher proportions. Figure 1 represents diabetes prevalence trends and disparities by race. In Mississippi, black adults have higher diabetes prevalence than white adults. Mississippi adults have higher diabetes prevalence than U.S. adults.

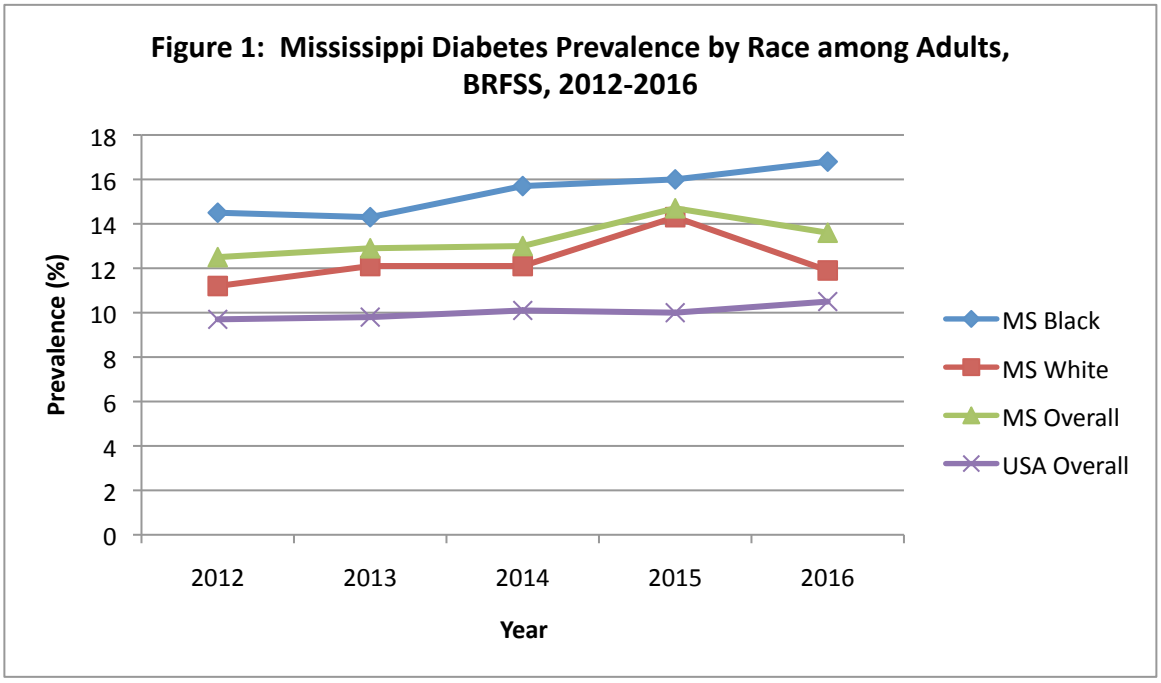


Table 2 presents differences in diabetes prevalence by sociodemographic group. Of particular note is the significant disparity in diabetes prevalence according to the level of attained education. The diabetes prevalence dramatically decreases as level of attained education increases. Among those who have not earned a high school diploma, the diabetes prevalence (20.9%) is more than double that of college graduates (8.3%). There is a similar pattern in diabetes prevalence when comparing adult Mississippians who earn $50,000 or more to those who earn $25,000 or less. As annual household income increases, diabetes prevalence decreases.

Table 2—Mississippi diabetes prevalence among adults aged 18 and over, BRFSS, 2016	
	Diabetes Prevalence (%)
Overall	13.6
Gender	
Women	14.0
Men	13.1
Race	
Black	16.8
White	11.9
Education	
Less than High School	20.9
High School Diploma Only	13.4
Some College	12.7
College Graduate or Higher	8.3
Annual Household Income	
Less than $15,000	21.0
$15,000 to less than $25,000	14.2
$25,000 to less than $35,000	13.9
$35,000 to less than $50,000	10.0
$50,000 or more	9.9

Prediabetes is also an issue of concern. CDC reports a national prediabetes estimation of 33.9% in 2015, but many physicians do not routinely diagnose prediabetes. According to CDC's national prediabetes estimate, the actual prediabetes prevalence in Mississippi could be above 30%, potentially positioning over 600,000-750,000 Mississippians on the path to develop diabetes.

Mississippi's diabetes prevalence among adults is expected to continue to increase as its obesity prevalence increases. If childhood obesity increases, it is expected that diabetes among children will also increase, making it a problem pervasive among all Mississippians with no exceptions.

The Scope of Diabetes in Mississippi: Diabetes Hospitalizations

Diabetes sends many Mississippians to the hospital every day. In 2011, the most recent year for which data are available, over one in five Mississippi hospitalizations (22.5% of all hospitalizations or 87,985 hospitalizations) were by patients with diabetes as either a primary or secondary diagnosis (co-existing condition).

Diabetes contributes to the lack of productivity and an unhealthy labor force. In 2011, Mississippi's patients with diabetes spent over half of a million days (523,736) in hospitals, which was nearly a quarter of the total patient days spent in a hospital for all causes of hospitalizations.

Furthermore, there are disparities among diabetes-associated hospitalizations in Mississippi, likely due to external contributing factors such as access to care and resources. Geography of residence, gender, and race are examples of hospitalization disparities. In 2011, 61% of Mississippi's diabetes-associated hospitalizations lived in rural counties, while 39% lived in metropolitan communities. This is despite Mississippi being defined as 50.7% rural and 49.3% metropolitan. The definition for a rural county and metropolitan county are in accordance with the Office of Management and Budget, which defines a metropolitan county as any county that contains a core urban area of 50,000 or more. Metro areas are referred to as a metropolitan statistical area or MSA. A rural county is defined as any county that is not part of a MSA.

In addition, of all diabetes-associated hospitalizations, 57% of admitted patients were women, while 43% were men, although 51.4% of Mississippians are women and 48.6% are men. Moreover, diabetes-associated hospitalization rates are higher among Mississippi's black residents in comparison to Mississippi's white residents, respectively, 32 and 25 per 1,000 population. White Mississippians represent the higher proportion (54.0%) of diabetes-associated hospitalizations, and this is statistically reasonable as white Mississippians also represent 59.7% of the state population. Table 3 describes Mississippi's diabetes-associated hospitalizations in comparison to Mississippi demographics to help better visualize the disparities.

Table 3— Mississippi Diabetes Associated Hospitalizations, 2011, Mississippi Hospital Discharge Data			
	Hospitalization Rate (per 1,000 persons)	Hospitalizations (%)	% of Mississippi Population
Residence			
Rural	30.0	61.0	50.7
Metropolitan	26.0	39.0	49.3
Gender			
Women	32.0	57.0	51.4
Men	25.0	43.0	48.6
Race			
Black	32.0	42.0	37.5
White	25.0	54.0	59.7

Diabetes Hospitalizations by County: In Mississippi, in 2011, the diabetes-associated hospitalization rate was 28 patients per 1,000 population. The counties on the following page highlighted orange in Table 4 are those with diabetes-related hospitalizations above the state's overall diabetes- associated hospitalization rate. The counties highlighted in green are those with diabetes-related hospitalizations below the state's overall diabetes-associated hospitalization rate.

*As of March 2017, 2011 Hospital Discharge Data is the most up-to-date data that is available.

Table 4- Diabetes Associated Hospitalization Rate by County – All Listed Diagnoses, 2011 Hospital Discharge Data

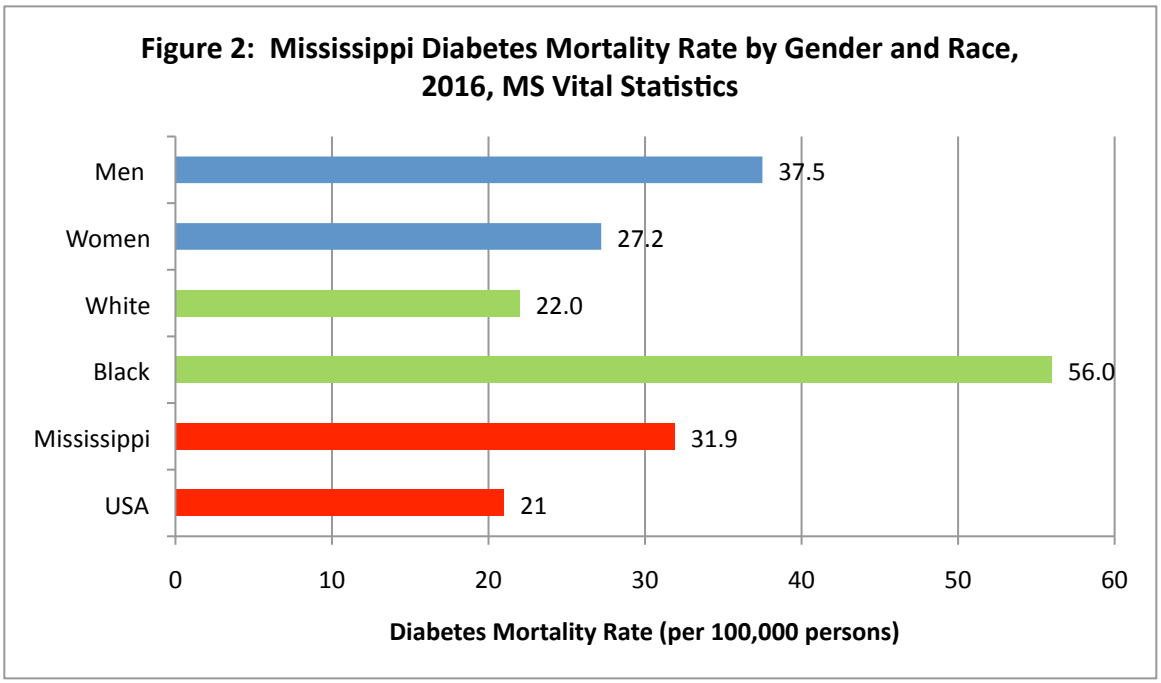
County	Number of discharges	Rate per 1,000	County	Number of discharges	Rate per 1,000
Adams	1,276	39	Leflore	1,294	41
Alcorn	1,217	33	Lincoln	909	26
Amite	338	26	Lowndes	1,291	22
Attala	566	29	Madison	1,798	19
Benton	167	19	Marion	1,027	38
Bolivar	1,336	40	Marshall	758	21
Calhoun	446	30	Monroe	1,214	33
Carroll	349	33	Montgomery	544	50
Chickasaw	608	35	Neshoba	1,494	50
Choctaw	251	30	Newton	667	31
Claiborne	316	32	Noxubee	388	34
Clarke	703	42	Oktibbeha	617	13
Clay	647	32	Panola	1,063	31
Coahoma	1,262	49	Pearl River	1,062	19
Copiah	943	32	Perry	568	46
Covington	694	36	Pike	1,567	39
DeSoto	2,253	14	Pontotoc	647	22
Forrest	3,085	41	Prentiss	778	31
Franklin	232	29	Quitman	355	44
George	554	24	Rankin	3,927	27
Greene	261	18	Scott	1,323	47
Grenada	555	26	Sharkey	103	21
Hancock	820	18	Simpson	857	31
Harrison	5,470	29	Smith	394	24
Hinds	7,356	30	Stone	657	37
Holmes	856	45	Sunflower	1,013	35
Humphreys	387	42	Tallahatchie	589	38
Issaquena	7	5	Tate	780	27
Itawamba	697	30	Tippah	724	33
Jackson	3,644	26	Tishomingo	745	38
Jasper	651	39	Tunica	419	40
Jefferson	396	52	Union	745	27
Jefferson Davis	447	37	Walthall	432	28
Jones	2,035	30	Warren	967	20
Kemper	343	33	Washington	967	19
Lafayette	618	13	Wayne	567	27
Lamar	1,213	21	Webster	497	49
Lauderdale	2,430	30	Wilkinson	220	23
Lawrence	581	46	Winston	504	26
Leake	865	37	Yalobusha	502	40
Lee	1,905	23	Yazoo	896	32
			Mississippi	**84,649**	**28**

Source: 2011 Mississippi Hospital Discharge Data

The Scope of Diabetes in Mississippi: Diabetes Mortality

Diabetes accounted for 1,083 deaths in Mississippi in 2016. For every 100,000 population, there are 31.9 deaths in Mississippi due to diabetes in comparison to the national mortality rate of 21.0 deaths per 100,000 population. In Mississippi, by gender, 37.5 males and 27.2 females die due to diabetes per 100,000 population (Figure 2).

There is also a disparity in the diabetes mortality rate, when analyzed by race. According to the Mississippi Vital Statistics, 56.0 blacks, in comparison to 22.0 whites died from diabetes per 100,000 population.



Source: 2016 Mississippi Vital Statistics

B. The Financial Burden of Diabetes in Mississippi

National Diabetes Economic Burden

Diabetes is a struggle of its own, and uncontrolled diabetes is associated with many serious complications, including heart disease, hypertension, stroke, blindness and vision difficulty, kidney disease and failure, neurological disorders, and lower-limb amputations. Treating the array of problems associated with diabetes is a huge burden to both the patient and society.

According to the CDC, diabetes is estimated to have cost the nation $245 billion in 2014. This is a 39% increase from the estimated $176 billion estimated cost of diabetes in 2007. Of the 245 billion estimate, $176 billion is attributed to direct medical costs and $69 billion is attributed to indirect costs such as reduced productivity, disability, work loss, and premature death.

When estimating the economic burden of diagnosed diabetes (Type 1 and 2), undiagnosed diabetes, gestational diabetes, and prediabetes, the American Diabetes Association (ADA) estimates costs to have exceeded $322 billion in year 2012 alone. The ADA estimates that medical expenditures are 2.3 times higher for those living with diagnosed diabetes as opposed to Americans without diabetes.

According to the ADA, the largest components of medical expenditures for diabetes are:

- Hospital inpatient care (43% of the total medical cost),
- Prescription medications to treat complications of diabetes (18%),
- Anti-diabetic agents and diabetes supplies (12%),
- Physician office visits (9%), and
- Nursing/residential facility stays (8%).

According to the ADA, indirect costs in the United States, related to diabetes treatment also include:

- Increased absenteeism ($5 billion),
- Reduced productivity while at work ($20.8 billion),
- Reduced productivity for those not in the labor force ($2.7 billion),
- Inability to work as a result of disease-related disability ($21.6 billion), and
- Lost productive capacity due to early mortality ($18.5 billion).

Mississippi Diabetes Economic Burden

- **ADA Estimate:** In Mississippi, for the year of 2012 alone, the ADA estimates the economic burden of diabetes to exceed **$2.74 billion** or **$10,402** per Mississippian with diabetes. The Centers for Medicare and Medicaid Services (CMS) project an annual average overall medical cost increase of 5.7 percent, so this $2.74 billion estimate for year 2012 is likely an underestimate.

- **Mississippi Department of Finance and Administration Estimate:** Between September 2013 and August 2014, the Department of Finance and Administration reported 13,892 Mississippi employees diagnosed with diabetes. Employees included those in any state agency, the Institutions of Higher Learning, community colleges, K-12 school systems, and all libraries. The charges with treating these employees amounted to

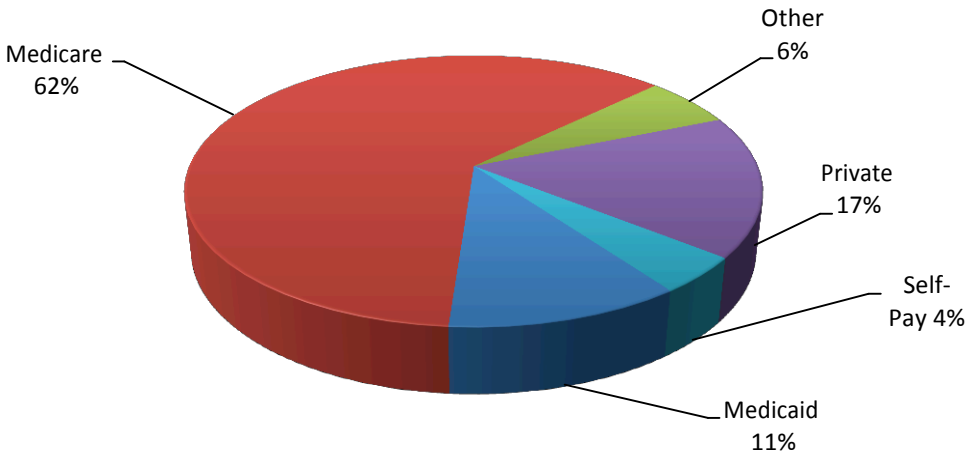
over **$28 million** ($28,819,497). These charges reflect only direct charges and do not account for indirect costs to the state, such as those discussed above.

- **Medicaid Estimate:** In 2013, total charges to the Mississippi Division of Medicaid for diabetes and diabetes-associated complications totaled almost **1 billion dollars** ($964,428,604). These charges only account for one payer, Medicaid, and do not reflect charges to Medicare, private insurance companies, self-payers, and other providers. Data for comprehensive charges by other payers were not accessible by MSDH at this time.

- **Diabetes Hospitalizations Estimation**: Diabetes-associated hospitalizations cost the state a significant amount. In 2011, 27% of all hospitalization charges were attributed to diabetes and to diabetes-associated complications. Primary diagnosis of diabetes amounted to over **$191 million** in charges. In 2011, the hospitalization charges for primary and secondary diagnosis of diabetes totaled nearly **3 billion dollars** ($2,854,658,697). Medicaid and Medicare were responsible for 73% of all diabetes-related hospital charges. Medicare accounted for 62% of the charges, while Medicaid accounted for 11% of hospitalization charges (Figure 3).

- **Induced Effect Estimation:** The 2013 Mississippi Diabetes Economic Burden Report commissioned by the MSDH estimates that lost employee wages are estimated to be over $188 million. According to the analysis, this would support 5,134 full and part-time jobs. In addition, the report estimates that a healthy, diabetes-free workforce would generate over $40 million to state and local economies.

Figure 3- Primary Expected Payer of Mississippi Residents with All-Listed Diagnoses for Diabetes



Source: 2011 Mississippi Hospital Discharge Data

Limitations

There are a few data limitations in this report. This is due to gaps in information identified during this process that, if obtained, would aid in a clearer picture of Mississippi's current diabetes economic burden. For example, none of the burden estimates reflect charges associated with anti-diabetic agents and diabetes supplies, prescription medications, physician office visits, and nursing/residential facility stays that are not covered by Medicaid. In addition, data needed to assess the diabetes economic burden in relation to comorbid illnesses are not readily available. This includes data from the state employee's health insurance program, Medicare, Medicaid, and private insurance companies. Due to such limited data, an additional proportion of the diabetes cost burden may not be reflected in this profile.

C. Benefits of Implementation

According to the Centers for Disease Control and Prevention (CDC), an estimated 86 million Americans have prediabetes, a condition that can lead to Type 2 diabetes and heart attack and stroke if not addressed. The percentage of Americans with diabetes has more than tripled in the past two decades. CDC estimates that as many as 1 of 3 American adults could have diabetes in 2050 if current trends continue.

The Mississippi State Department of Health addresses the burden of diabetes through its Diabetes Prevention and Control Program (DPCP). The DPCP is solely funded by a grant from the CDC and was established for the purpose of reducing the incidence and prevalence of Type 2 diabetes in Mississippi and increasing the quality of life for all persons diagnosed with diabetes. The DPCP is charged with preventing the number of new cases of diabetes and improving management of diabetes for those diagnosed with the condition. The DPCP does this by increasing access to diabetes education programs and diabetes primary prevention programs, and strengthening the health system implementation through community and clinical linkages.

One of the largest clinical trials of lifestyle intervention, the National Diabetes Prevention Program research trial, led by the National Institutes of Health and co-sponsored by CDC, demonstrated that individuals who participated in the lifestyle change classes were 58% less likely to develop Type 2 diabetes. Preventing a serious condition like prediabetes from progressing to Type 2 diabetes can mean a better quality of life for program participants. This is because diabetes itself is a serious and potentially fatal disease and it often leads to other health problems. Further, decreasing the number of people diagnosed with Type 2 diabetes would reduce the financial burden on both the patient and the economy.

National studies have also shown that diabetes education saves money and decreases healthcare utilization. Patient education and self-care practices are important aspects of disease management that help people with diabetes stay healthy. Diabetes Self-Management Education (DSME) helps patients improve glycolic control, which could reduce the risk for diabetes complications, hospitalizations, and health care costs. The DSME curriculum often includes the diabetes disease process and treatment options; healthy lifestyle; blood glucose monitoring; preventing, detecting and treating diabetes complications; and developing personalized strategies for decision-making.

Previously, the MSDH offered a co-management program, supported by state funds, where patients who could not afford their medications were sent to the local health department to have their prescriptions filled. That program over the years has been phased out due to program eligibility requirements and funding sources. As of November 1, 2014, that program was completely closed and the remaining clients were referred to local pharmacies for services. Clients are currently referred to other safety-net-providers (i.e. Federally Qualified Health Centers) who can more readily diagnosis and treat diabetes.

While the DPCP is appreciative of the funds it receives from CDC, it is limited to implementing only the activities outlined in the CDC approved work plan. To address other identified needs for diabetes prevention and management across the state, program staff must rely on partners who may or may not have the resources to meet these needs.

D. Coordination of Efforts

Partnerships and collaborations are crucial to building capacity and leveraging resources to improve diabetes prevention and management in Mississippi. The CDC not only encourages collaboration, but has made it a key strategy in many funding opportunity announcements. The DPCP has forged partnerships internally and at the local, regional, state and national levels to fulfill its mission.

Through a partnership with the Diabetes Coalition of Mississippi (DCM), the DPCP addresses issues that affect people with or at risk for developing diabetes, advises on policy issues related to diabetes, and maintains a quality system of education for all people with diabetes and the healthcare professionals who care for them. The DCM has grown from an informal group of 18 individuals to an organized group of 444 individuals. Membership includes representation from statewide diabetes organizations,

nonprofit organizations serving those diagnosed with diabetes, local diabetes coalitions, pharmaceutical companies, transportation, faith-based communities, colleges/universities, business communities, hospitals/medical centers, statewide quality improvement organizations, Federally Qualified Health Centers, managed care, professional diabetes associations, state government, and consumers.

Through a partnership with the ADA, the DPCP offers the Certified Diabetes Preparatory Course to licensed professionals who are interested in becoming a Certified Diabetes Educator (CDE) and to currently licensed CDEs who need to re-certify in order to maintain their certification. This has resulted in an increase in the number of CDEs in the state. According to the National Certification Board of Diabetes Educators (NCBDE), in 2016, there were 149 CDEs in Mississippi. The American Association of Diabetes Educators (AADE) collaborates with the DPCP to provide candidates with reference materials at a discounted price, conducts site audits of the applicant organizations, and provides technical assistance throughout the application process.

Through partnerships with the ADA, and the AADE, technical assistance is provided to organizations interested in becoming an ADA- recognized or an AADE-accredited Diabetes Self-Management Education and Support Program. Eight new Diabetes Self-Management Education and Support Programs have been added. Most notably, on November 7, 2014, the ADA recognized the MSDH Diabetes Self-Management Education Program (DSME) for achievement in diabetes education. The ADA cited the program for high-quality education that is an essential component of effective diabetes treatment. The MSDH's Diabetes Self-Management Program is only the fourth state program to be recognized by the ADA. This achievement will allow the MSDH to scale DSME programs to those areas within the state of Mississippi where there is a high prevalence of diagnosed diabetes but limited or no access to DSME programs. The MSDH currently offers DSME classes in all nine public health districts.

The Diabetes Foundation of Mississippi is a longstanding DPCP partner. Through their partnership, annual updates are provided to health care professionals on the standards of care for diabetes prevention and management, including understanding of quality care, diabetes prevention strategies, current topics in diabetes management and the latest recommendations for medical nutrition therapy.

The DPCP is internally collaborating with the Stanford Diabetes Self-Management Program (DSMP) to increase access to lay-led, community-based diabetes self-management education.

The DPCP co-sponsors trainings and leads DSMP participant workshops. This program teaches participants 1) techniques to deal with the symptoms of diabetes, fatigue, pain, hyper/hypoglycemia, stress, and emotional problems such as depression, anger, fear and frustration; 2) appropriate exercises for maintaining and improving strength and endurance; 3) healthy eating; 4) appropriate use of medication; and 5) how to work more effectively with health care providers.

In coordination with the MSDH Heart Disease and Stroke Prevention Program and the Comprehensive Cancer Control Program, the DPCP is conducting a Patient-Centered Medical Home Collaborative. Through this initiative, healthcare systems receive training on the use of health information technology and team-based care to better manage diabetes, hypertension, and cancer screenings in clinical settings.

Through a partnership with the Centers for Disease Control and Prevention and the National Association of Chronic Disease Directors (NACDD), the DPCP initiated actions to implement the National Diabetes Prevention Program (NDPP) in selected geographic areas of the state. NDPP is an evidence-based lifestyle change program, which has been proven to prevent or delay the onset of Type II diabetes by nearly 60%. With the assistance of the NACDD, a statewide plan was developed to scale the NDPP in Mississippi.

The DPCP is partnering with the Appalachian Regional Commission (ARC) to implement programs that improve the quality of life for persons living in the Appalachian region of Mississippi who are already diagnosed with diabetes or are at risk for developing Type 2 diabetes. The DPCP partners with the Appalachian Diabetes Control Translation Project (ADCTP) diabetes coalitions to develop evidence -based Diabetes Self-Management Education Programs and Diabetes Primary Prevention Programs, and to increase the number of Certified Diabetes Educators by 10%. The DPCP is an active member of the Advisory Board of the ADCTP, an ARC-funded project to establish and maintain diabetes coalitions throughout the entire Appalachian region. At present there are six active affiliate coalitions located in the Appalachian Region of Mississippi: Choctaw County Diabetes Coalition, Coalition for a Healthy Winston County, Noxubee County Diabetes Coalition, Marshall County Diabetes Coalition, Yalobusha County Diabetes Coalition, and Kemper County Diabetes Coalition.

E. Clinical Quality and Performance Measures for the Treatment of Patients with Diabetes

The DPCP recommends using the ADA Clinical Practice Recommendations along with the guidelines promoted by the National Diabetes Education Initiative (NDEI) as the clinical quality

performance measures for diagnosing, treating and managing forms of diabetes, including Type 1, Type 2, gestational, and prediabetes. The ADA Clinical Practice Recommendations are updated annually and subsequently published in the Association's professional journal *Diabetes Care*. A copy of these standards is located on the DPCP's webpage: http://HealthyMS.com/DiabetesCare.

The National Diabetes Education Initiative is recommended as a web-based anthology of evidence-based diabetes educational content to meet the unique learning needs and clinical challenges of healthcare professionals. Premium content offerings and innovative formats include a slide library featuring more than 1,500 downloadable slides on diabetes education topics; guideline compendia; on-demand educational programs, including case studies, expert webcasts, and newsletters; and patient education materials. Membership is free and more information can be found at http://HealthyMS.com/DiabetesCare.

The DPCP recommends that health care practitioners implement a protocol for identifying the population with undiagnosed Type 2 diabetes and those who are at risk for developing Type 2 diabetes. To do so, the DPCP recommends scaling and implementing all components of the CDC National Diabetes Prevention Program throughout Mississippi. The CDC-led National Diabetes Prevention Program (NDPP) is an evidence-based lifestyle change program for preventing Type 2 diabetes. The NDPP resulted from a research study in which 58% of the study population reduced the risk of developing Type 2 diabetes.

F. Diabetes Action Plan

Seven broad actions are recommended to improve the system of care for people with or at risk for diabetes:

1. Raise public awareness on how to prevent and manage diabetes;
2. Unify diabetes prevention and management efforts;
3. Increase access to credible diabetes self-management education;
4. Strengthen the infrastructure and overall system of diabetes clinical care;
5. Develop an infrastructure for diabetes primary prevention;
6. Expand the infrastructure and capacity of the Diabetes Prevention and Control Program.

Goal 1: Raise public awareness on how to prevent and manage diabetes.

Strategies for Goal 1:

- Develop a statewide communication and marketing plan to raise awareness on how to prevent and manage Type 2 diabetes and to drive traffic to existing programs.

- Sponsor Diabetes Month events to raise awareness on how to prevent and manage Type 2 diabetes – a "Giving Diabetes the Blues Symposium", Diabetes Exhibition, Diabetes Walk, and a World Diabetes Day event.

Goal 2: Maintain the existence of a unified voice for diabetes prevention and management

Strategies for Goal 2:

- Support the Diabetes Coalition of Mississippi (DCM) to serve as a unified voice to increase use of lifestyle intervention programs to prevent Type II diabetes and to reduce the overall impact of diabetes and its complications on Mississippi.
- Provide MSDH Public Health Districts with a community grant to address chronic disease or obesity and physical activity in their community. Only public health districts that have completed a community assessment and identified chronic disease or obesity and physical activity would be eligible to apply.

Goal 3: Increase access to credible diabetes self-management education programs

Strategies for Goal 3:

- Collaborate with Information & Quality Healthcare and Mississippi's Quality Improvement Organization to develop a healthcare provider database for recruitment and referral to existing Diabetes Self-Management Education and Support programs and/or to Diabetes Self-Management Education Recognition sites.
- Customize Centers for Medicare and Medicaid Services (CMS)/CDC marketing materials and disseminate to providers and consumers to raise awareness of DSME programs in their geographic region and to increase referrals to those programs.
- Update and submit a Diabetes Action Plan for Mississippi annually (in response to the 2014 legislative mandate) that "assesses the financial impact and reach of diabetes, assesses the benefits of implemented DPCP programs and activities, identifies actions to reduce the impact of diabetes, prediabetes and related complications, and delineates the expected outcomes of proposed actions."

Goal 4: Strengthen the infrastructure and overall system of diabetes clinical care

Strategies for Goal 4:

- Develop an electronic learning tool that will serve as a continuing education resource for diabetes and cardiovascular healthcare providers (including Information Technology staff, and pharmacists).
- Standardize and disseminate the goals for treating, preventing, and managing diabetes.

Goal 5: Develop an infrastructure for diabetes primary prevention (DPP) programs.

Strategies for Goal 5:

- Implement a DPP pilot among state employees.
- Increase the use of lifestyle intervention programs in community settings for the primary prevention of Type II diabetes by developing and implementing District Diabetes Primary Prevention Plans.
- Identify and implement strategies to promote awareness of pre-diabetes among high risk individuals, and increase/expand reimbursement for, referrals to, and expand access to CDC-recognized lifestyle change programs.
- Facilitate the establishment of one or more lifestyle change programs annually at the district level.
- Customize and disseminate the American Medical Association (AMA)/CDC tool kit to health care providers to raise awareness of pre-diabetes treatment options and resources.

Goal 6: Develop and expand capacity of the Diabetes Prevention and Control Program to effectively implement and evaluate evidence-based programs designed to reduce the incidence and prevalence of diabetes and its related complications.

Strategies for Goal 6:

- Establish infrastructure and capacity within all nine Public Health Districts to implement the goals and activities stated in this work plan.
- Facilitate the provision of qualified staff to monitor, implement and render technical assistance to each Public Health District.
- Implement activities to improve data collection, data analysis, and evaluation and surveillance capacity.
- Facilitate the provision of qualified evaluation and surveillance staff to support evaluation activities.
- Develop an evaluation plan to measure progress towards achieving goals and activities stated in this proposed work plan.

Expected Outcomes:

1. Increased awareness among Mississippians on the burden of diabetes.
2. Increased number of diabetes stakeholders engaged in coordinated effort to impact diabetes in Mississippi.
3. Increased number of health care providers aware of and applying the ADA standards of care for diagnosis and treatment of diabetes.

4. Increased number of Diabetes Primary Prevention (DPP) Programs.
5. Increased number of persons diagnosed with prediabetes that are referred to and participate in a DPP Program.
6. Increased number of Diabetes Self-Management Education Recognition (DSME) Programs.
7. Increased number of persons who are referred to and participate in a DSME Recognition Program.
8. Increased number of employers offering DPP as a covered benefit.
9. Increased number of programs and organizations partnering with the DPCP to impact diabetes in Mississippi.

Benchmarks (Healthy People 2020):

1. Reduce the annual number of new cases of diagnosed diabetes.
2. Reduce the diabetes death rate.
3. Reduce the proportion of persons with diabetes with an A1C value greater than 9.
4. Increase the proportion of the diabetic population with an A1C value less than 7.
5. Increase the proportion of persons diagnosed with diabetes who receive formal diabetes education.
6. Increase the proportion of persons with diabetes whose condition has been diagnosed.
7. Increase the proportion of persons at high risk for diabetes with prediabetes who report increasing their levels of activity.
8. Increase the proportion of persons as high risk for diabetes or prediabetes who report trying to lose weight.

G. Budget

To adequately address diabetes in Mississippi, a greater investment is required to facilitate a lasting impact. The public health continuum of Type II diabetes includes primary prevention, diagnosis, and prevention of diabetes complications through disease management, and treatment of diabetes complications such as kidney disease, foot complications, and high blood pressure. It is imperative that we increase awareness of diabetes, including risk factors and preventive measures. There is a need to increase referrals to diabetes self-management education programs and to CDC-accredited diabetes primary prevention programs. We must also continue to offer trainings on the latest guidelines for diagnosis and treatment of diabetes to healthcare providers treating Mississippians. The DPCP will also use funds requested to provide resources to local communities to aid in building synergy that will lead Mississippi towards a diabetes-free tomorrow. The funding requested will allow MSDH to close identified gaps in staff and data and build a greater capacity to define and adequately address diabetes and other chronic diseases statewide.

Goal 1 **$1, 000,000.00**

Raise public awareness on how to prevent and manage diabetes

1. Statewide Diabetes Prevention and Control Marketing Campaign to include print media, radio, television, and educational toolkits.
2. Statewide Diabetes Awareness Events

Goal 2 **$100,000.00**

Maintain the existence of a unified voice for diabetes prevention and management

1. Diabetes Coalition of Mississippi infrastructure development and capacity.
2. Diabetes Coalition of Mississippi Executive Director.
3. Public Health District Community Grants for chronic disease prevention and health promotion.

Goal 3 **$100,000.00**

Increase access to credible diabetes self-management education

1. Electronic health care provider database for DSME recruitment, referral, monitoring and tracking.
2. Customize CMS/CDC marketing materials and disseminate to providers and consumers to raise awareness of DSME programs in their geographic region and to increase referrals to those programs.
3. Hire a consultant to convene committee and develop 2016 Diabetes Healthy Action Plan.

Goal 4 **$100,000.00**

Strengthen the infrastructure and overall system of diabetes clinical care

1. Create an E-learning Institute to serve as a continuing education resource for diabetes and cardiovascular healthcare providers (including Information Technology staff, and pharmacists).
2. Standardize and disseminate the goals for treating, preventing and managing diabetes.

Goal 5 **$200,000.00**

Develop an infrastructure for diabetes primary prevention

1. Implement a DPP pilot among state employees.
2. Develop local Diabetes Primary Prevention Scalability Plans.
3. Support and establish Lifestyle Change Programs.
4. Customize and disseminate the CDC/AMA prediabetes awareness tool kit to healthcare providers in the state.

Goal 6 **$1, 000,000.00**

Develop and expand capacity of the Diabetes Prevention and Control Program to effectively implement and evaluate evidence-based programs designed to reduce the incidence and prevalence of diabetes and its related complications

1. Establish infrastructure and capacity within each nine Public Health Districts
2. Secure qualified staff to monitor, implement and render technical assistance to each Public Health District.
3. Secure qualified evaluation and surveillance staff to support evaluation activities.
4. Develop an evaluation plan to measure progress towards achieving goals and activities stated in this proposed work plan.
5. Expand data collection, data analysis, and evaluation and surveillance activities.

Total Budget **$2, 500,000.00**

[i] American Diabetes Association. op. cit. p. 1033

[ii] http://care.diabetesjournals.org/content/suppl/2013/03/05/dc12-2625.DC1/DC122625SupplementaryData.pdf

MISSISSIPPI STATE DEPARTMENT OF HEALTH