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Implementing the National Diabetes Prevention Program in Mason County, Kentucky

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The document mentioned above has been reviewed and accepted by the student's advisor, on behalf of the advisory committee, and by the Director of Graduate Studies (DGS), on behalf of the program; we verify that this is the final, approved version of the student's dissertation including all changes required by the advisory committee. The undersigned agree to abide by the statements above.

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Implementing the National Diabetes Prevention Program in Mason County, Kentucky

CAPSTONE PROJECT PAPER

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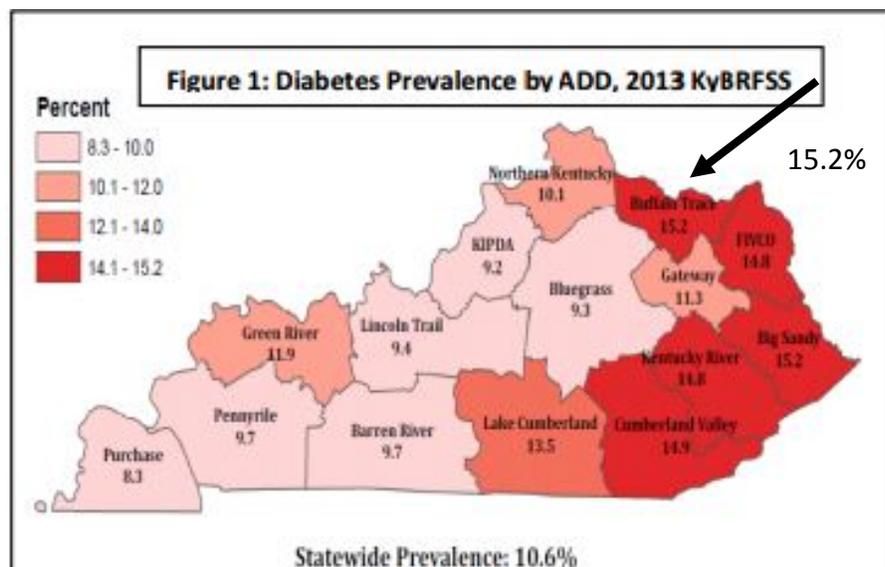
Abstract

The National Diabetes Prevention Program (DPP) is sponsored by the Centers for Disease Control and Prevention (CDC). The program's goal is to reduce the incidence of diabetes through dietary modification and physical activity. On one hand, the DPP is currently offered by various organizations through the country. On the other hand, the DPP is mostly unavailable in rural areas, especially the Diabetes Belt. The Diabetes Belt is in the eastern Appalachian region of the United States. People who live in this area of the country are more likely to develop diabetes than those who do not. Mason County, Kentucky has a higher than average diabetes incidence rate, and residents present with increased diabetes risk factors such as obesity, physical inactivity, low fruit and vegetable intake, being age 45 and over, and poor overall health, including hypertension, heart disease, obesity-related cancer, and arthritis. This proposal, by the Buffalo Trace District Health Department in Mason County, is backed by a diverse Community Advisory Group in its implementation in 3 community event sites over 3 years. Participants will either receive a lifestyle intervention or a medication intervention, both following the CDC's 'Prevent T2' curriculum. Change will be assessed by measuring biological and behavioral outcomes and compared to a baseline measurement.

Project Narrative

Target Population and Need

Diabetes is a pressing public health concern, affecting 180 million people worldwide in 2008, including 23.6 million people in the United States.¹ Evidence-based interventions have proven difficult, particularly in rural communities like Mason County, Kentucky, due to decreased access to care, information and opportunities.² Mason County is located in the Northern part of the state, on the Ohio River. The population is estimated to be roughly 17,190 as of July, 2016.³ The prevalence of diabetes in Mason County was 15% in 2013, more than the state prevalence of 12% in 2014.⁴ Figure 1 shows the 2013 prevalence of diabetes in Kentucky by Area Development District (ADD) according to the Kentucky Behavioral Risk Factor Surveillance System (BRFSS). Mason County is located in the ‘diabetes belt’ of the United States. People who live in this portion of the country are more likely to have diabetes than those who live in other parts of the country. People who do not already have diabetes can reduce their risk by being physically active and losing weight. Obesity and inactivity account for nearly a third of the increased risk for type 2 diabetes in people living in the diabetes belt.⁵



Patrick, Melissa. "Big Sandy Diabetes Coalition in E. Ky. Helps Counties Take Charge of This Disease That Affects 15.2 Percent of the Area's Population." *Kentucky Health News*, 13 Dec. 2015

Thirty-four percent of adults in Mason County are obese, compared to the Kentucky average of 33%.⁴ Mason County also has higher rate of physical inactivity (32% to 30% for KY), lower rate of fruit and vegetable intake (10%) compared to Kentucky (19%), higher percent of adults rating their health as fair or poor (27%) than Kentucky (23%).⁴ Roughly 45% of residents of Mason County are age 45 or older.⁶ Obesity, physical inactivity, low fruit and vegetable intake, being age 45 and over, and poor overall health, including hypertension, heart disease, obesity- related cancer, and arthritis, are risk factors of developing diabetes.⁷

Diabetes has an array of health consequences. Diabetes could cause damage to blood vessels, which could lead to heart attack, stroke, kidney damage, and problems with the eyes, feet, and nerves.⁸ Diabetes was listed as the number one cause of kidney failure in 44% of all new cases in 2014⁹, and kidney disease was the number 9 cause of death in the United States.¹⁰ According to the National Institute of Diabetes and Digestive and Kidney Diseases, people with diabetes are more likely than people without diabetes to develop and die from diseases of the heart and blood vessels, called cardiovascular disease. Adults with diabetes have heart disease death rates about two to four times higher than adults without diabetes, and the risk for stroke is two to four times higher among people with diabetes.⁷

The important, but poorly understood, condition of prediabetes is extremely prevalent in the county, state, and nation. Prediabetes is a condition in which blood glucose levels are higher than normal but not high enough for a diagnosis of diabetes. The U.S. Department of Health and Human Services estimates that 33.9 percent of U.S. adults aged 18 years or older— or 84.1 million people—had prediabetes in 2015. Those with prediabetes are likely to develop type 2 diabetes within 10 years, unless they take steps to prevent or delay diabetes.¹¹

Using local resources and community gathering areas as recruitment sites, it is possible to assess the prevalence of those in Mason County with pre-diabetes, and use the national Diabetes Prevention Program (DPP) guidelines in order to prevent individuals from developing diabetes.

Primary data was gathered through, first, a community health forum. Members of the community gathered to discuss the most pressing health topics in the community. Included in the forum were teachers, lawyers, physicians, business owners, students, parents, city officials, restaurant workers, factory workers, long term care workers, hospital administration, retired citizens, veterans, and many more citizens of the community. After getting information on the diabetes issue in Mason County, my team observed the community, focusing on behavior and the built environment. We looked at the choices people make and the community emphasis on diabetes risk factor behaviors, including observing grocery store food choices and participation in optional diabetes education programs. After observing, my team gathered a small focus group of physicians, health educators, and other experts in the field. This group was able to come up with issues and solutions due to the expertise in the problem area. Finally, my team was able to talk to these experts one-on-one to gain more in depth information on diabetes concerns in the community, and to come up with solutions to the issues.

Currently, there are many resources in the community for those who have diabetes, such as a local support group, health department, hospital, extension agency, local fitness clubs, dialysis clinics, and more. Each of these entities work together in the local health coalition to ensure more community participation in diabetes management practices. In the past, there have been local classes to teach good diabetic practices and programs to help with

the purchase of diabetic supplies, such as machines, insulin, and needles, but these programs were not sustainable.

An issue, as founded by the experts panel, was that individuals with prediabetes were unaware of their condition and felt no need to participate in resources labeled for those with diabetes. According to the Centers for Disease Control and Prevention (CDC), 90% of people with prediabetes don't know they have it.¹² My team plans to better these practices and programs by using the Diabetes Prevention Program to identify those with prediabetes, and educating them on best practices for prevention of diabetes development.

Increasing diabetes risk-management practices has many benefits. It could contribute to increased health, decreased hospitalizations, and more. A program to encourage these practices can benefit adults with prediabetes tremendously. Previously, there have been similar programs to increase positive health outcomes in communities with increased incidences of uncontrolled prediabetes, but the best results have come from the Diabetes Prevention Program.

Program Approach

The Buffalo Trace District Health Department (BTDHD) proposes to use the national Diabetes Prevention Program (DPP) to combat the previously identified issues. The DPP was originally a multi-center clinical research study aimed at “discovering whether modest weight loss through dietary changes and increased physical activity or treatment with the oral diabetes drug metformin (Glucophage) could prevent or delay the onset of type 2 diabetes in study participants.” Participants were overweight and had prediabetes. The study showed that weight loss through diet change and physical activity reduced the incidence of diabetes, and that

taking oral diabetes medication had the same effect, to a lesser degree.¹¹ DPP is currently offered in hundreds of locations across the country.

In 2006, an update of the Diabetes Prevention Program results was released. It concluded that both intervention groups (medication and behavior modification) of the program showed delayed or no sign of diabetes development.¹³ A 10-year follow-up study was done in 2009 and it found that the incidence of diabetes was lowest in the behavior modification group, but prevention or delay of diabetes with both intervention groups could continue for at least 10 years.¹⁴ As shown here, there is evidence that, even with a simple diabetes prevention program, many outcomes can be measured based on the health goals of the target population.

The program uses a randomized control trial study design. The sample is divided randomly into three groups: lifestyle intervention, medicinal intervention, and a control group that receives a placebo. Groups are created as even in number of participants and in characteristics as possible. This study design allows researchers to imply causation of a particular health outcome due to the proposed interventions. The proposed intervention will include 2 groups: lifestyle and medicinal intervention. The adaptation to include 2 intervention groups instead of 3 is based on the fact that all outcomes for previous studies are due to the lifestyle and medication groups interventions and that a pre-post program analysis will allow for each person to act as their own comparison group.

In the Diabetes Prevention Program, outcomes (hemoglobin A1c, weight, fat intake, and physical activity) are measured for respective groups. Behavior and biological results will be collected for each group to create a pre-post test analysis.

This program aims to reach approximately 5% of the population of Mason County, or around 850 participants. Eligibility will be based on biological tests to determine the diagnosis of pre-diabetes. Hemoglobin A1c, fasting blood glucose, and oral glucose tolerance test will be measured on 2 consecutive days to determine the diagnosis. Those who are diagnosed with pre-diabetes will be invited to participate in the program.

This program entails enlistment of a wide variety of locations for administration of the program specifics. Program staff can use these sites to question and recruit participants to partake in eligibility testing. Examples of these sites are local physicians' offices (general and specialty), dialysis clinics, farmer's markets, health departments, grocery stores, fast food restaurants, education institutions, etc. These settings can ensure a broad range of adults with potential pre-diabetes in a variety of stages of disease awareness.

Potential participants will be recruited and encouraged to attend eligibility screenings at a local laboratory service. The eligibility procedure consists of 3 tests, on 2 consecutive days. The tests include hemoglobin A1c, fasting blood glucose, and oral glucose tolerance test. These results will be documented by the laboratory service and passed on to program staff. Program staff will then determine eligibility based on these tests.

After getting information on current pre-diabetes cases throughout the local community, program staff can begin the intervention portions of the program. Using some of the locations mentioned previously as sites for program administration, interventions can be delivered as designated by the Diabetes Prevention Program guidelines. Both eligibility screenings and interventions will be delivered at 3 specific locations: the local community college, the county cooperative extension office, and the local hospital.

The American Association of Diabetes Educators (AADE) is one of many organizations that have signed a memorandum of understanding with the CDC to offer in-person and online training to program staff in order to deliver a successful Diabetes Prevention Program. Program staff will travel to a 2-day lifestyle coach training session in order to gain skills necessary to provide the program interventions in an appropriate way. The AADE also offers a master training program for lifestyle coaches to be able to train other coaches in the future.¹⁵ This is a possible interest of the DPP because, in the future, more lifestyle coaches will get training without travel and added costs.

Staff members will ensure that each group gets the appropriate treatment. Both groups will receive a 1-year intervention. Lifestyle intervention participants will receive intensive in-person guidance on nutrition and physical activity and the medication participants will receive 850 mg of metformin and information on nutrition and physical activity, but no one-on-one guidance.

The CDC has created a specific curriculum for this program, Prevent T2. The 'Prevent T2' program curriculum is based on original 2002 trial and follow-up studies. The program curriculum consists of 26 modules. In order for each specific program to be recognized by the CDC, 22 of these module have to be offered throughout the duration of the program; 16 in the first 6 months and 6 in the second.¹⁶ This ensures consistent quality standards in all national Diabetes Prevention Programs.

The lifestyle intervention group curriculum is broken into 2 sections of 6 months each. In the first 6 months, the participants will meet once a week and each session will include information on physical activity, healthy eating, tracking activity and diet, stress, etc. For the

second 6 months, participants will meet 2 times per month, with the recommendation being 1-2 times per month. These sessions will include information on goals, progress reflection, sleep, etc. Every session in the lifestyle intervention portion will include a review and check in from the previous week, a private weigh in, presentation of the weekly topic, and a wrap up and a to do list for the next session.

The medication intervention group will also meet once per week for the first 6 months and 2 times per month for the second 6 months. Participants will be given enough medication to cover until the next session, and adherence will be measured by pill count. Each session in this group will also include a private-weigh in to compare to both the weight of the lifestyle group and to their previous weights.

At the beginning and end of the program, both groups will go through biological testing including hemoglobin A1c, blood glucose, and oral glucose tolerance test to determine the progression of the diagnosis state. A pre-program/post-program analysis will determine the effectiveness of the program at decreasing diabetes development in those with pre-diabetes.

Program staff will use Apple iPads to record data for biological markers, attendance, adherence, and program materials. Participants will be offered incentives for participating in eligibility screenings, attending all recommended sessions, meeting previously set goals, and completing the program.

The DPP consists of a lifestyle intervention group, but has also been utilized with a secondary intervention group. In this case, the secondary group, the medication intervention, will only be utilized in the event that the primary lifestyle intervention does not prove to be effective at achieving the projected outcomes.

Performance Measures and Evaluation

Formative Evaluation

The Community Advisory Group (CAG) will provide information on pertinent health issues in the area, and how the community should proceed. Members of the CAG are diverse in demographics and expertise. This group was able to come up with issues and solutions due to the expertise in the problem area. Program staff members were able to talk to these experts one-on-one to gain more in depth information on diabetes concerns in the community, and to come up with solutions to the issues.

The BTDDHD staff ensures that data are used to adjust programs to meet the changing needs of the community. This is an important quality improvement tool. BTDDHD, along with the Community Health Coalition, frequently assess community needs and resources to ensure the changing community needs are met. BTDDHD assesses and enhances the community's readiness for intervention programs.

Process Evaluation

The investigators will assess the integrity of the program throughout the implementation process. The investigators will need to be sure the program is being implemented the way it was intended to be implemented. In order to accomplish this, it is important to examine a few different evaluation concepts: fidelity, dose delivered, and dose received.

Fidelity of the program implementation will need to be closely monitored. This will be done by ensuring those persons in contact with participants are trained so that inconsistencies in judgement of eligibility do not occur. These staff members will use clearly defined definitions

when interacting and explaining initial information and will use strict criteria for eligibility, including disease status defined by diagnostic testing, so that no bias is formed. Over the course of the program, these criteria and definitions will be reviewed to ensure the program is still on the initial path. In addition, some of the program staff will have been trained to be lifestyle coaches to ensure the curriculum is being followed.

Dose delivered refers to the number of contact sessions implemented by the program staff. As previously mentioned, 22 of 26 sessions must be completed in order for the program to be implemented as intended. Dose received is the other portion of this: are participants attending the allotted number of sessions, participating in out-of-session activities, and are participants in the medication group obtaining and taking medication as prescribed. Attendance will be taken at each session and surveys will be administered to question participants about their activities outside of the program. Participants will be given enough medication to cover until the next session, and adherence will be measured by pill count and documentation of prescriptions being picked up.

Biological data will be collected at baseline, at the midpoint of the program, and at the conclusion of the program. These include hemoglobin A1c, fasting blood glucose, Data that will be collected at each lifestyle session are weight, fat intake, and physical activity. The participants in the medication group will be tested each session for weight. A major limitation to the program is having confidence in the reliability of self-reported outcomes such as diet and physical activity adherence.

Outcome Evaluation

To collect and report performance measures, the investigators will use biological and behavioral data. Biological data will be collected from each participant, regardless of treatment group. Biological markers such as blood glucose and hemoglobin A1c will be collected and recorded for comparison. Participant's weight and diet will also be measured and tracked. Behavioral data will be collected using surveys administered by program staff. The survey will include items about physical activity, diet, and general lifestyle habits. For the medication intervention group, participant's adherence to the suggested medication regimen will be tracked. Outcomes of biological and behavioral data will be compared pre- and post-intervention to assess the effectiveness of each treatment.

The BTDDHD has the capacity to collect and report these data. The data will be used for program evaluation and also for quality improvement. Although the data collection is straightforward, there could be some potential challenges. One challenge is that it could be hard to recruit participants if the program is marketed to be for individuals with pre-diabetes. As stated before, 90% of those with pre-diabetes do not know they have it.¹² Due to this, these individuals will not feel the need to participate in the program, or even in the initial eligibility screenings. To combat this issue, program staff will offer small incentives for participating in the eligibility screenings, regardless of diagnosis. This will increase the number of individuals that are willing to get tested for program eligibility.

To ensure sustainability for this program after federal funding has ended, plans for the continuation of the program will begin early in the program planning phases. The main goal for the plan for sustainability is to enlist the help of the Community Advisory Group (CAG). The CAG is a group of community members and experts put together to ensure the success of the

program during and after funding. Making sure the CAG partners know the importance of their role in this program can ensure the program's success after funding has ended. The CAG will establish core supporters for the project funding. Starting the program in the local health department will increase the likelihood of the availability of the appropriate resources and staff for this type of program. Another plan is to try to institutionalize the program and incorporate it into existing community resources, such as community centers, the extension agency, or support groups.

The largest employer in the area, the public school system, will assist in sustainability efforts. The program can be offered through the school system to reach a large population of people. It will also be wise to work with the insurance companies in this area to promote the program through their policies.

BTDHD effectively and efficiently manages financial resources, staff resources, and strategic relationships with partner organizations. The budget allows for financial resources for programs and in the past budgets, additional funds were not necessary for program complications. After one round of funding, BTDHD is able to sustain programs with independent financial resources. The organization provides staff with professional development opportunities at least yearly.

The BTDHD will disseminate the results of the program to the local community members and organizations. This will allow for possible future funding after the grant period, and for more potential participants once the success is disseminated. This will be done through local social media outlets, community forums, and community events.

Capacity and Experience of the Applicant Organization

The Buffalo Trace District Health Department, serving the Mason County, Kentucky area, has experience implementing evidence-based programs on a large scale. The organization implements programs such as HANDS, Walk with Ease, Microclinic International, Cooper Clayton Method to Stop Smoking, etc¹⁷. BTDHD has experience implementing these programs and more in the target community to promote positive development and prevent negative health outcomes. BTDHD has been acknowledged throughout the community for its work in positive program implementation. The BTDHD is partnered with the local Community Health Coalition. The Coalition is made up of members of the community, political leaders, policy makers, law enforcement, medical personnel, teachers, religious leaders, child and family specialists, etc. This organization provides training and support for evidence-based programs throughout the community. The BTDHD is sustainable, both in the sense of programs and financially, showing the ability to sustain past and current grant-funded programs at the completion of the funding.

The mission of the BTDHD is to lead and empower communities to achieve better health. The vision is a health community for everyone. The Diabetes Prevention Program conforms to these values by decreasing disease incidence while providing healthy opportunities for people of all backgrounds.

The BTDHD has experience and the capability to manage a program of this scope in the target community. The already created partnerships will allow easier access to implementation sites, and therefore, better access to the people of the community. Along with the partnerships, BTDHD has, in the past, been able to manage challenges in program implementation due to growth and scale.

BTDHD's values are represented by the acronym CARE: Confidentiality, Accountability, Respect, and Equality. BTDHD ensures confidentiality for all clients, is accountable for high standards of behavior, including honesty and fairness in all aspects of the work, treats others with the utmost respect at all times, and provides equal treatment to all regardless of social or cultural differences.

Partnerships and Collaboration

The Buffalo Trace District Health Department's efforts to decrease the transition from per-diabetes to diabetes by implementing the national Diabetes Prevention Program will be supported by key community stakeholders. These key community stakeholders will serve as partners in the preventative health outcome initiative. Members of the stakeholder entities will comprise the Community Advisory Group (CAG). The CAG will be diverse with input from various sectors of the community. Members will include both medical and non-medical backgrounds. Each entity is already thriving in the community and will assist the BTDHD in providing program access to residents.

Maysville- Mason County Fire Department

The Maysville- Mason County Fire Department (MFD) houses the fire department and emergency medical services for the area. They are experienced in implementing community programs targeting every population within Mason County. The MFD is committed to the success of the Diabetes Prevention Program. The mission of the MFD is to "provide the highest quality fire, rescue and emergency medical services to our customers, who are the citizens of Maysville and Mason County." The success of the DPP would ensure less diabetic related

emergency calls for MFD. The MFD has agreed to be present for emergency medical calls during physical fitness sessions to ensure comfort and safety of the program participants.

Individual Health Care Providers

There are various options for individual primary and specialty care physicians and providers in Mason County. Examples are Primary Plus, Family Practice Associates, etc. Each provider has experience in developing and implementing programs for their patient population. It is important to note the providers are continuously collecting performance measure data to make quality improvements to their programs. The goals of the Diabetes Prevention Program and the individual providers align closely. Individual health care providers have agreed to accept new patients based on diagnoses from the DPP.

LabCorp

The private laboratory services provided by LabCorp in this area can greatly assist the BTDHD in implementing the Diabetes Prevention Program. Program eligibility requirements are identified by biological lab testing to be conducted through this partnership. LabCorp is motivated to see the program through to success due to the negative impacts of the diabetic disease state. LabCorp has agreed to offer discounted biological testing rates to program participants. The BTDHD will reimburse the difference to LabCorp to ensure they are not losing funds.

Meadowview Regional Medical Center

Meadowview Regional Medical Center (MRMC) is the only hospital serving the Mason County residents. MRMC is dedicated to providing quality care to their patients. MRMC has ample experience in implementing community health programs and assessing their

effectiveness. MRMC currently serves a wide variety of people from varying demographics. As of 2016, the uninsured population was 7.1% and the poverty level in Mason County was 19.4%, while the federal poverty level was 12.7%.^{18, 19} It is important to note this due to the possibility of these populations having difficulty seeking regular medical care. MRMC ensures that partnered education programs are for everyone, including these populations. In the past, MRMC has partnered with BTDDHD to provide health education programs to the community, such as the annual health fair. Screenings offered at the health fair will be used to refer individuals to a primary care physician, specialist, or the DPP.

Faith Based Organizations

Various denominations of faith based organizations are located in Mason County. These organizations play a large role in community gatherings and recruitment sites. Recruitment sites for programs can be networked through faith based organizations as well. These organizations as a whole reach a large number of individuals in this area.

Maysville- Mason County Recreation Park

The Maysville- Mason County Recreation Park, informally known as the 'Rec Park' is the largest park in Mason County and serves as a location for social gatherings, sporting events, and recreational physical activity. The partnership between BTDDHD and the Rec Park will drive the Diabetes Prevention Program to be even more successful. The Rec Park is open to the public, which means the population served is demographically diverse. The Rec Park can be marketed as a location for physical activity for participants in the lifestyle intervention group, and has agreed to promote physical fitness activities to participants of the DPP.

Government Officials

Government officials, such as the Mayor, City Manager, and Sheriff, are major contributors to the success of any community program. These officials have extensive experience working with the target population and with making continuous quality improvements to current programs. These officials have the motivation to support any program intending to improve health of the residents they serve.

Maysville Nursing and Rehabilitation Facility

Maysville Nursing and Rehabilitation Facility (MNRF) is a long and short term care facility for various disease states. The facility has agreed to provide support to the Diabetes Prevention Program by encouraging family members to participate to avoid future complications from diabetes.

Mason County Cooperative Extension Office

The geographical location of the Mason County Cooperative Extension Office is ideal for all members of the community. Events are held here regularly and the extension directors have agreed for the location to serve as an implementation site for the Diabetes Prevention Program. The site is affiliated with the University of Kentucky and Kentucky State University, which allows for a broader reach for resources. In the past, the Cooperative Extension Office has partnered with the BTDHD to offer health programs at this site.

Transportation Services

The Maysville Transit service and Licking Valley Community Action Program serve residents of Maysville, while Geno's Taxi service serves residents of Mason County and even surrounding counties. Working together, these services make it possible for residents to get to programs offered in the community, and therefore increasing the success of the programs.

These services are willing to provide discounted transportation to and from intervention sites for participants in the DPP.

Maysville Community and Technical College

Maysville Community and Technical College is the only college in the Mason County area, and it serves residents and commuters of a large range of ages. The college has agreed to serve as a recruitment site, as well as for an implementation site, due to its easy accessibility. Due to the academic nature of this institution, the programs, events, and staff are held to high standard of professionalism and integrity.

Civic Groups

Civic groups such as the Fraternal Order of Eagles (FOE), Fraternal Order of Police (FOP), Knights of Columbus, Lion's Club, Rotary Club, and Veterans of Foreign Wars (VFW) are active in the area, and strive to make programs for health and community successful. These groups have agreed to assist the BTDDHD in recruitment for program participants, and could be a source for future funding for program sustainability. These entities are motivated to assist the DPP to increase the health of the community and the health of their members.

Mason Family Drug

Mason Family Drug is the only locally owned pharmacy in the Mason County area, and the only pharmacy in the area to deliver prescription medications. Mason Family Drug has agreed to be the prescription distributor for the medication group of the DPP. The program physician will prescribe each participant enough metformin to cover until the next session, and Mason Family Drug will report the prescription pick-ups/ deliveries for program participants.

Limestone Family YMCA

The local YMCA has previous experience working with the CDC and offering the Diabetes Prevention Program, and for this reason, has agreed to work as a partner to assist the BTDDHD in the management of the program. Additionally, 2 employees for the YMCA have agreed to work with program participants directly.

Project Management

The Director of the Buffalo Trace District Health Department will act as the Principal Investigator. The Principal Investigator will oversee the IRB process and the allocation of grant funds. The Health Education Coordinator at the Buffalo Trace District Health Department will hold the title of Program Coordinator. The Program Coordinator will oversee the day-to-day operations of the program and will supervise all other staff. The Program Coordinator will attend all education and medication interventions. A health coach will serve as the lifestyle intervention educator for that intervention group, and a pharmacist will serve as the medication coordinator for the medication intervention group. Two undergraduate nursing students will be in charge of recruiting, eligibility, and post-testing. An endocrinologist will be on staff to supervise all medical operations, and will act as the “final voice” in the event of an adverse effect.

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Appendix 1: Budget Narrative

	Year 1	Year 2	Year 3
A. Personnel	\$232,258	\$304,590	\$108,679
B. Fringe	\$59,758	\$82,590	\$32,679
C. Training	\$1,700	\$0	\$0
D. Equipment	\$750	\$0	\$0
E. Supplies	\$11,500	\$9,500	\$7,250
F. Travel	\$2,000	\$11,000	\$11,000
G. Incentives/ Prizes	\$40,000	\$25,000	\$30,000
H. Other			
Total	\$432,894	\$526,886	\$236,178

Appendix 2: Budget Justification**Personnel:**

Laurie Howard: 10%; Laurie will spend 10% of her time in years 1-3 supervising the execution of the program. She is the Director of the Buffalo Trace District Health Department. She will oversee the IRB process and ensure proper training materials are utilized. She will be in command of the grant funding.

Christopher Janson: 85%; Chris will spend 85% of his time in years 1-3 overseeing the day-to-day operations of the program. He will be the go-to contact for all following staff. Chris is the Health Education Coordinator at the Buffalo Trace District Health Department.

Ty Norris: 70%; Ty will spend 70% of his time in year 2 as the main educator for the lifestyle intervention group in the program. Ty is a health coach at the local YMCA.

Amy Clark: 60%; Amy will spend 60% of her time in year 2 as the assistant health educator for the lifestyle intervention group. Amy is a health coach at the local YMCA.

Madison Boone: 25%; Madison will spend 25% of her time in year 2 tracking and monitoring medication prescribed and picked up by the medication intervention group. She is a pharmacist at Mason Family Drug Pharmacy.

Stacy Brooks: 25%; Stacy will spend 25% of her time in years 1 and 3 acting as a liaison for recruiting participants, and as an eligibility coordinator. As the intervention continues, she will also work to assist in post testing. Stacy is a DNP student at Maysville Community and Technical College and is a research assistant in her field.

Justin Hanley: 25% Justin will spend 25% of his time in years 1 and 3 assisting Stacy in eligibility and also in post testing. Justin is a DNP student at Maysville Community and Technical College and is a research assistant in his field.

Gregory Ware: 10%; Gregory will spend 10% of his time in years 1 and 2 overseeing medical operations in the program. He will oversee the other physicians as they complete physicals for each participant. He will also prescribe medication for the medication group of the program. He is an endocrinologist at his private practice.

Allen Jones: 30%; Allen will spend 30% of his time in years 1 and 2 conducting physicals and follow-up exams before and directly after the program. Allen is a physician at a local group practice.

Leslie Webb: 30%; Leslie will spend 30% of her time in years 1 and 2 conducting physicals and follow-up exams before and directly after the program. Allen is a physician at a local group practice.

Travel:

Travel around the county and to training sessions will be required in year 1 as well as travel to conferences and meetings in years 2 and 3.

Incentives:

Gift cards and other incentives will be given to participants at the beginning, middle, and end of the program to ensure retention of participants, and prizes will be given out to participants meeting personal goals in each session. Focus groups and committees will also be compensated for their time. Incentive spending is higher in year 1 due to the compensation of all individuals who are tested for eligibility.

Supplies:

Printed materials, food for meetings, and rooms will be necessary to carry out the daily tasks of this program. Printed materials are a larger part of the budget in years 1 and 2 due to the pre-program forms and intervention materials for participants.

Equipment:

Apple iPads are necessary for the recording of data and display of educator materials. Three will be purchased in year 1.

Appendix 3: Gantt Chart

Task	Y1Q1	Y1Q2	Y1Q3	Y1Q4	Y2Q1	Y2Q2	Y2Q3	Y2Q4	Y3Q1	Y3Q2	Y3Q3	Y3Q4
Recruit Staff	X	X										
Train Staff		X	X									
Collect Program Materials	X	X	X	X								
Recruit Participants		X	X									
Select Intervention Sites	X	X										
IRB Approval	X											
Analyze Participant Health Records			X	X								
Intervention Implementation					X	X	X	X				
Community Advisory Group Meetings	X				X				X			
Recruit Community Advisory Group Members	X	X										
Results Analysis									X	X		
Program Evaluation										X	X	
Community Dissemination											X	X
Participant Monitoring					X	X	X	X				

Appendix 4: Logic Model

