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2018

## MICROCLINIC INTERNATIONAL SOCIAL NETWORK BEHAVIORAL HEALTH INTERVENTION IN MONGOLIA

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Dr. Angela Carman, Committee Chair

Dr. Corrine Williams, Director of Graduate Studies

MICROCLINIC INTERNATIONAL SOCIAL NETWORK BEHAVIORAL  
HEALTH INTERVENTION IN MONGOLIA

CAPSTONE PROJECT PAPER

A paper submitted in partial fulfillment of the  
requirements for the degree of  
Master of Public Health  
in the  
University of Kentucky College of Public Health  
By  
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Vacaville, California

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April 19, 2018

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## **Abstract/ Project Summary**

Diabetes is a chronic communicable disease that is projected by 2030 to be the seventh leading cause of death worldwide. In Mongolia diabetes and cardiovascular disease are the number one reason for disability-adjusted life years and trends of diabetes is starting to be observed in the poorer populations. Diabetes in countries like Mongolia are extremely costly to treat using insulin, costing \$200 USD per month while the average annual income sits only at \$1,466.85 USD. Mongolia has a total population of 2,959,000 and half of its population resides in the capital city of Ulaanbaatar. 60% of residents in capital live in an area called the Ger District that surrounds the urbanized areas. The ger district lacks access to water, electricity and has an unemployment rate of 60%. Based on the KAPs survey the average Mongolian does not know what diabetes is or how it can be prevented. To help address the increasing prevalence of diabetes and lack of knowledge in Mongolia the Flourishing Futures NGO community centers is proposing the implementation of the Microclinic International Social Network Behavioral Health Intervention program. his program uses social relationships to prevent and manage diseases like diabetes, obesity, and HIV/ Aids. A Microclinic itself is not a solid building or a particular place but is made up of a person's social network or family. Research has demonstrated that this program effectively reduces blood glucose levels and has been used in several low-income countries like Jordan and Kenya. Through implementing this program, Flourishing Futures aims to reduce risk factors associated with diabetes and increase knowledge on what diabetes is and how it can be prevented in Ulaanbaatar, Mongolia.

## Project Narrative

### Target Population

Mongolia has a population of 2,959,000 people, with a life expectancy rate of 65-73 years of age.

[1] There are only three major cities in Mongolia, the largest being Ulaanbaatar, Mongolia's capital. Ulaanbaatar has a population of 1,345,000 people—nearly half the nation's population. Mongolia is mostly a homogeneous population and the majority speak Mongolian; however, ethnicity/culture does differ due to the influences of surrounding countries such as Kazakhstan and Russia. Mongolia is deeply rooted in its tradition, culture, and history, and although Ulaanbaatar as a city has been influenced by westernized standards of living, those who live in the ger districts still lack access to water, electricity and more. In 2010, a local meteorological phenomenon called dzud caused the deaths of millions of livestock. Dzud is when a dry summer is followed by a rough winter. This devastation to livestock caused the nomadic populations to relocate to Ulaanbaatar by the thousands; now the bulk of the ger ghettos are within the city borders. [2]

A ger, or yurt as the Russians call them, are circular structures that can be easily constructed, taken down and transported, though some people do live in single-family households in this area as well. [3] The ger is the home for the many nomadic populations around Mongolia, though they lack access to water, sewerage and depend on raw coal and anything else they can burn for heat. The ger districts made up 60% of Ulaanbaatar total population in 2010. [2]

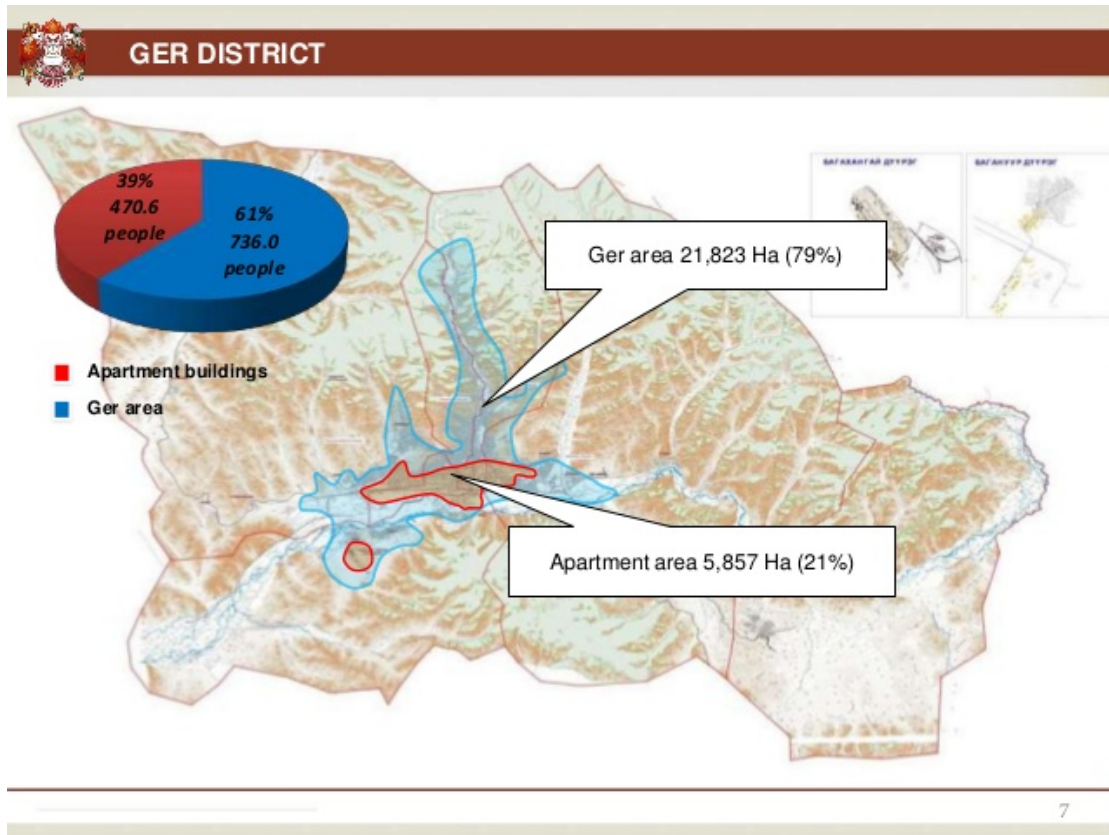
The unemployment rates in these ger ghetto's that surround Ulaanbaatar is around 60%, while the national unemployment rate is 9.4% (2016). Mongolia has had a recent advancement in the mining industry, which has expanded Mongolia's economic growth. This economic growth, however, has not trickled down to the country as a whole, and the government has paid little attention to the advancement of health, education and social support systems. [2] Many who have relocated to the capital lack documentation, which prevents and or lessens their access to health care, which can delay or prevent the treatments of chronic conditions. They are also more likely to experience little to no access to social services caused by a poor infrastructure and experience social isolation due to not having a local support

system. [2] The nomadic lifestyle originally protected the population against chronic diseases such as diabetes. However, due to the increased sedentary lifestyle, low socioeconomic status, lack of necessary amenities and poor quality physical environments caused by living in the capital city [2], could be the reason diabetes and other chronic diseases are on the rise in these poorer populations in the ger districts.

Diabetes is a chronic disease that is projected by the World Health Organization to be the seventh leading cause of death in the world by 2030. There were 422 million people living with diabetes in 2014, which is a world prevalence of 8.5%. The prevalence of diabetes has started to increase in more middle and low-income countries such as Mongolia. In recent years Mongolia has moved into the open market economy, yielding an influx of unhealthy foods to a population that has devoid the education of the risks of developing diabetes. [4]

According to the World Health Organization (WHO) statistical profile of Mongolia, the number one Disability-adjusted life years (DALYs) is caused by Cardiovascular disease and diabetes. Adults with diabetes in Mongolia aged 20-79 is 97.8 (confidence interval 32.6-174.7) per 1000, and a national prevalence of 5.1% (confidence interval 1.7-9.0). These numbers are projected to increase by 2040. [5] Local health professionals in Mongolia have begun to see trends of diabetes amongst the poorer populations—of which the disease was mostly observed amongst populations of greater economic standing. [4]

The primary problem with diabetes in Mongolia is that it is very expensive to treat, costing around \$200 USD per month. This is unrealistic for many of the poorer populations in Mongolia whose average household annual income was reported to be \$1,466.85 in 2016. [6] The average food consumption for a poor family is \$31 a month, which is one-third of what a non-poor family spends a month. [7] This illustrates that a \$200 a month treatment would be unmanageable for those living in the ger districts.



[Image 1: Map of Ulaanbaatar ger district 2014]

The community needs and resources were identified during a secondary data analysis, meeting with key informants in the ger district community affected by diabetes and a health assessment survey looking at how housing, education, and health influence one another. The majority of information was obtained through the 2010 NCD KAPS survey, which was a nationally representative, mixed-method survey. Across Mongolia, 3,450 households in both rural and urban areas were surveyed, half of which the participants lived in the capital city of Ulaanbaatar. Questions explored demographic and administrative parameters, as well as knowledge, attitudes, and practices around non-communicable diseases (NCDs) and their risk factors, followed by a more vertical approach surveyed individual disease knowledge, attitudes, and practices. [8] 15% of participants were unemployed at the time of the survey. It was found that one in five reported never have heard the term diabetes prior to the survey, and if one had a lower education level they were five times as likely to have no knowledge about the disease. Two-thirds of the participants were aware that diabetes was preventable. [8] The survey was conducted to

access the knowledge and health gaps in Mongolia that are due to the increased urbanization that comes with the amplified diabetes rates that poorer populations are not equipped to financially afford. This survey supported the health assessment conducted by Ariunaa Bayarsaikhan of the Department of Education and Counselling Psychology of McGill University in Montreal. Bayarsaikhan concluded that children and youth in ger districts are possibly at increased risk of poor education, health outcomes and there is a significant association between educational attainment and health. [2] Of Bayarsaikhan sample 66% of those who lived in a ger was classified as the second to the poorest class. 63% of those who lived in a single-family home were classified as second to the wealthiest classification and 89% of those who lived in an apartment/condominium were classified as the wealthiest. 14% of those living in the ger district between 2013-2014 academic year did not attend school, in comparison to the 4% of those living in apartment/condominium and 9% of those living in single-family homes. A positive relationship between education and health, finding that where a person lives and their education, directly and indirectly, affects their health outcomes. [2]

Informant Interviews supported this notion that poor populations are more at risk. "A worrisome increase of diabetes is largely connected to Mongolia's transition to the open market economy where availability and accessibility of non-healthy foods have been increasing uncontrollably whereas awareness of the population about risks of developing diabetes is very unsatisfactory," says T. Khulan, head of the Professional Management and Policy Implementation and Coordination Division of the Ulaanbaatar City Health Department, an endocrinologist herself. [4] "Diabetes is a disease with a very high burden on patients, their families, and the country's economy. And diabetes is a disease that may end up with serious complications if not diagnosed and treated early. Hence, we applaud to the Government of Mongolia for enacting preventive policies through introducing free of charge blood sugar rapid tests to every person with health insurance aged 40 years and above," says Dr. Soe Nyunt U, World Health Organization (WHO) Representative in Mongolia. [4]

Non-communicable diseases are becoming a huge public health problem in Mongolia, and these types of diseases are now one of the main causes of death and disability for its population. Based on the



Stepwise Approach to Surveillance survey of 2009 estimates that 9 of 10 people in Mongolia had a least 1 major risk factor for developing a non-communicable disease and 1 in 5 were at risk for developing one.

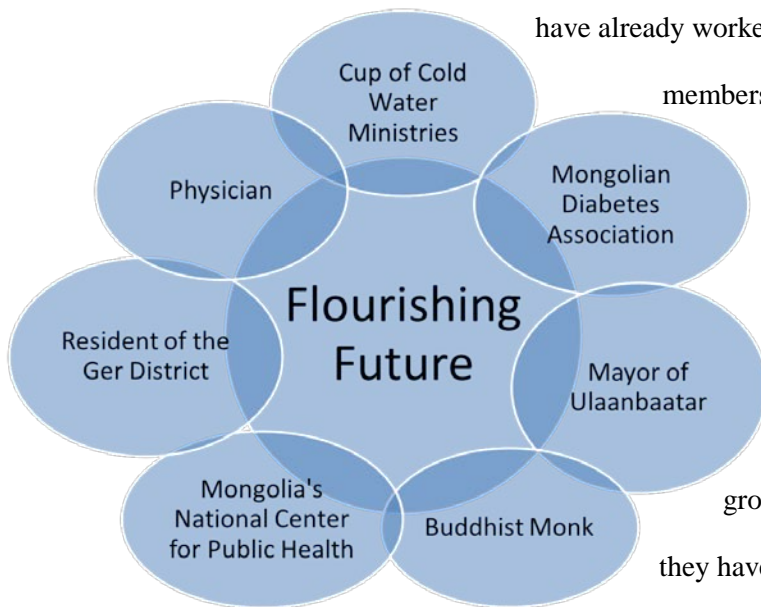
[9] The main burden that a non-communicable disease like diabetes has on the people who live in the ger districts in Ulaanbaatar is treatment costs, limited health resources and access to care. It is estimated that 20% of those living in the ger district are undocumented, which means they are not eligible for social welfare and not allowed to access social health insurance benefits that are offered by the Mongolian Government. [7]

Some of the existing health care resources made available by the government of Mongolia include free primary health services for socially vulnerable groups, this includes elderly, single parents, children younger than 16 years of age and unemployed individuals. However, this does not include the undocumented migrants to the capital city, that makeup 20% of the ger district. [7] Resources that directly help the ger districts are places like the Community Center and Ark-Community Center, which are maintained by Flourishing Future NGO and the Cup of Cold Water Ministries to help the suffering and poor populations in two locations in Ulaanbaatar, one in the center of the ger district and the other on the border. Community centers like this offer a variety of classes which include nutrition and physical activity. They also focus primarily on social relationships to help support those in their communities and currently serve 900 families between the two community centers. The Ger Community Mapping Center located in the ger district is a place where dwellers can gain information and access geographical maps of their living environment. It has a shared working space for training and workshops, a corner shop/café, a medical consulting room, rental conference spaces and a greenhouse to grow organic food. The Ger community mapping center has been working on several projects including mapping access to water and pollution. Working with the Ger community mapping center could open up options for mapping health problems that affect the ger district and finding solutions for them. [10]

At the national level, there is the Mongolian Diabetes Association which was founded in 2003 and has been a member of the International Diabetes Federation since 2006. Their main focuses are: to generate the best environment for people with diabetes, to help people manage their diabetes better, to

improve the quality of life of people with diabetes, and to act as a leader to raise awareness of diabetes. They have not however specified which areas in Mongolia they have focused their efforts on. In addition to the Mongolian Diabetes Association, the nation has The Poverty Right Project, The Vocational Education Project and The Health Project from 2009-2013. The Health Project priority was Non-Communicable Disease prevention and control which included diabetes. Other programs focused on education of medical doctors for diabetes prevention in April 2013. Most of these programs were part of a five-year plan to address poverty and health concerns in Mongolia. [11] Another project: Support the National Poverty and MDG's Monitoring and Assessment System 2005-2013, which is to continue on until at least 2021. This project focuses on upgrading the statistical data collection and dissemination system; facilitating the use of analysis and assessment for policy making and communicating the progress on poverty reduction and achievements of the MDGs to the general public. They also utilize the data collected to help with strategic planning and country development. [12]

To utilize resources and current connections to the target population in Ulaanbaatar, a Community Advisory Group will be formed of community members and stakeholders that will lead to the community mobilization planning and activists. The Mongolian Diabetes Association will be contacted and asked to be a part of the advisory group. This will allow for the introduction to professionals who have already worked in Ulaanbaatar, and lead to crucial community



[Figure 1: Community Advisory Board]

members and or form connections. These connections will later allow access to key community members, who eventually might want to be involved in this project. The Cup of Cold Water Ministries Community Centers will be asked to have a member represent them in the group, as well as Flourishing Future NGO since they have already established a relationship with the target population in the ger district. Due to the history,

religion, and culture of Mongolia, a Tibetan Buddhist monk would be a fitting choice to be involved with the Community Advisory Group. Mongolia has been rebuilding their temples, and the monks have more influence now than in past decades. [13] The mayor of Ulaanbaatar would be a fitting choice to have on the Community Advisory Group, due to the fact they hold a lot of power and are able to help gain acceptance from the Governor of the Capital City and the Prime Minister if needed. [14] Other community members will include someone from Mongolia's National Center for Public Health, whom would be connected through the MDA, and stakeholders in the community such as individuals who live in the ger district and medical professionals who treat diabetes at the local hospitals or clinics. The community advisory board members will have a voice in the planning and program activities to help identify any issues or possible improvements.

Community needs and resources will be continually assessed on an ongoing basis to ensure that any planned programs are aligned with the changing community needs through reviewing secondary data sources when they are made available during the grant period, Which includes the Stepwise Approach to Surveillance survey which was recently conducted in 2017 and will be again in 2021 and the NCD KAPS survey which is also administered roughly every 4 years, which will fall in 2018/2019. The Flourishing Future Community Centers will hold a Community Forum quartile to address any concerns and needs of the families they serve might have, and how the intervention program might be able to address those concerns and needs.

The intervention program, Microclinic Social Network Behavioral Health intervention program seeks to increase the knowledge and reduce the risks associated with diabetes among Mongolian adults 18-79 living in the ger District in Ulaanbaatar, Mongolia. This is done through weekly classes by utilizing the foundation of existing social networks and the use of the social cognitive theory where if people see a behavior as the 'social norm' then that behavior will spread through a person's social network. As of 2013, there are 1.345 million people living in Ulaanbaatar, of which 28% are living below the poverty line. [15] Data from 2007 states that 60% of the 1.1 million population of the district was living in the Ger districts, and 55% of that 60% was living below the poverty line. [15] This equates to

roughly 660,000 people living in the ger districts in 2007, and 376,600 people in 2013 living below the poverty line. Due to the high cost of diabetes treatment (\$200 USD per month), all of those living in the Ger district above the age of 18 and who is at risk/ has diabetes will be eligible for this program. The goal is to serve the families that are currently associated with the Flourishing Future Community Centers over the course of the 3 years starting with 3 micro clinics that are made up of 3-15 people at the main community center and an equivalent control group at their second location.

The main strategy that will be used to recruit individuals to participate is to focus on the families that have already been participating in classes and programs offered by the Flourishing Future Community Centers. This strategy was chosen because Flourishing Future already serves 900 families between their two community centers which will aid in recruiting as there is already an existing relationship with these families. This will allow for a similar control group to be recruited and add additional services Flourishing Futures has not previously offered. This will be done through snowball sampling so that each Microclinic is made up of a participant's social support system and or family. This is ideal because the Mongolian culture is based on bartering and social interactions, and if one person is willing then generally others will be more accepting. This strategy will allow for those who may already have diabetes or pre-diabetes to be supported during their journey through the education and management or their disease by family members or their social system.

The expectation that each Microclinic to hold each other accountable may be a new concept for this population, however, the retainment of individuals may not be the main issue since to these people education and health are the top priority, especially when they are made aware of how it benefits them. Ways to retain individuals if there are ever any difficulties is to offer to help in their community, such as helping set up a ger. Another possibility is to offer participants vitamins as a thank you for participating of which they generally do not have access to or cannot afford them. Culturally many Mongolians would be insulted if they were offered paid incentives to participate in a program such as this, which is why vitamins will be provided to participants as a thank you for participating at the end of the program rather than the reason they do participate. There will be a comparison group used during the first 6-months of

the program, Because of the established trust is already in place between Flourishing Futures and the population served by the community centers it has been found that this population will be open to participating as a comparison group as long as eventually they receive the intervention. The comparison group will not receive any intervention and will be permitted to continue attending classes and using resources that are already offered at flourishing futures.

### **Program Approach**

The evidence-based program selected for the target population is the Microclinic International Social Network Behavioral Health intervention, which was created by the non-for-profit group Microclinic International. The mission of Microclinic International NGO is to improve how major health challenges in the community are development, researched, prevented, and managed worldwide. [16] The Microclinic itself is not a solid building or a fixed place but is a human network that consists of small groups of 3-15 people who are similar to one another and have the same access to education, technology, and social support who self-organize and manage their own disease. This is a 28-week program that follows a specific lesson plan created and maintained by the NGO Microclinic International, that is based on the foundations of social relationships and social networks. However, the Microclinic is not just a support group intervention, it incorporates therapy management that focuses on both the biology and sociology of major health problems at the community level. By addressing the community level, the social dimension is key for this intervention, it reduced the individual's feelings of isolation and powerlessness about their health and utilizes the strength of pre-existing social unity to spread health behaviors. Like how unhealthy behaviors are contagious the Microclinic International NGO believes that healthy behaviors can be contagious as well and has a basis in social cognitive theory.

The Microclinic International program has been successfully implemented in Jordan, and Palestine for diabetes, Kenya for HIV/AIDS, and Kentucky for multiple conditions including diabetes, heart disease, and obesity. The program is now being piloted in other countries such as Mexico and India. The implementation in Jordan used a multicenter, three-arm, cluster-randomized control trial approach

that was designed to test the effectiveness of the 28-week (6 months) Microclinic program in influencing lifestyle behavioral risk factors to improve diabetes management that effects weight and metabolic outcomes through social networks with a 3-month, 6-month and 12-month follow up. [17] 920 eligible participants who were enrolled in the study who gave consent and qualified for the study based on the enrollment criteria. For Arm A, 545 individuals were randomized to receive the Microclinic intervention and were assigned to 128 Microclinic groups. Arm B had 187 individuals were randomized to receive individual education and Arm C, 188 individuals were randomized for individual control monitoring and were considered the control arm. The results in Jordan found that the Microclinic International Social Network Behavioral Health intervention was effective in preventing weight gain and mild improvement of HbA1c in comparison to controls. None of the weight changes were statistically significantly between Arm B and C. [17] Multi-level related measures regression estimated the long-term change in weight, BMI, and HbA1c during the program and follow-up. The results conclude that the intervention program correlated well into the culture of the participants and had positive effects on the long-term benefits of BMI, glucose control and body weight. [18]

The randomized trial of social Network lifestyle intervention for obesity in rural Appalachian Kentucky consisted 552 participants and each social clustered had 2-8 individuals who participated together in the Microclinic International program that had weekly physical activity, nutrition, health education and social activity session which were led by health educators for a shortened version of 4 months. The controls had access to standard care from the local county health departments. They collected a baseline of body weight and waist circumference and were continuously collected at each follow up during the intervention, and 16 months after the baseline. This study concluded like the Jordan study that the long-term findings show that the Microclinic Social Network Behavioral Health intervention demonstrate effectiveness for obesity control in this resource-limited setting. [19]

The Microclinic Social Network Behavioral Health intervention program was selected primarily because it uses the social network of an individual to create a Microclinic to support one another during the intervention and has been utilized in several different low economic countries with different

ethnicities and languages. The NGO Microclinic International provides trainers to train facilitators on how the intervention program works, and how each of the 28-week meeting sessions should be formatted. Each week will focus on different components to a healthier lifestyle such as stretching and fitness, grocery store tour and cooking together. Program facilitators can be anyone in the community from social workers, health educators, nurses and or inspired community members.

The purpose of this intervention is to illustrate that implementation of this program works in Mongolia, the study design will be Implementation study design using pre-test, post-test. The Flourishing Future Community Centers will serve as the meeting place for recruitment, screening for meeting the intervention criteria, educational classes, and collecting the biometrics of participants such as HbA1c, BMI and blood pressure. All approved consenting participants for the intervention will be informed of their health status and will be expected to encourage their family and friends to come get screened to participant in the intervention as well. [20] Screened participants who meet the intervention criteria will be expected to confirm consent to participant in the program by filling out a written consent form. To meet intervention criteria participants will need to be 18+ years of age and have family members or a social system willing to participate with them. The program will not exclude participants who test positive for diabetes on account that it would be unethical to exclude individuals who could benefit from this program and do not have access to any other treatment options. Participants will then complete a self-report questionnaire relating to their health knowledge, physical activity, fruit and vegetable intake, and stress. Meetings and the educational components of the intervention will be conducted at the community centers located in the ger district. Participants will come for the intervention program once a week for six months and once for a follow up at 12 months. Meeting days and times will be based on what each Microclinic decides.

### The Three Settings

The intervention program will start with three Microclinic for implementation. As mentioned before a Microclinic is not confined to any one geographical location and participants are encouraged to work together outside of the interventions weekly meetings. Each meeting for these three Microclinic's

will be held at the main Flourishing Future Community Center located at the heart of the ger district, which is also known as Bayanzurkh district. The setting for the control group which will not have any intervention outside of the resources already provided by the community centers will be located at the Ark-Community Center located at the edge of the ger district. After the first 6-months the program will be offered at both community centers and will be offering 8 Microclinic's the first 6-months of year 2 and 8 more clinics the second half of year 2. In year three 2 additional Microclinic's will be offered with data collections the first 6-months. Appendix 6 details all program objectives and timeline.

Several adaptations to the Microclinic Social Network Behavioral Health intervention program will need to be made in order for its success in Mongolia. The first being is implementing this program in Mongolia is a major adaptation, as well as catering the program materials and education to the culture participants which will be provided by NGO Microclinic International prior to implementation. These cultural adaptations would include language used in the intervention and materials and replacing any photos or images used in educational/intervention materials with photos of local residents. A Major adaptation to the intervention itself will be made from the multicenter, three-arm, cluster-randomized control trial approach implemented in Jordan to a simple implementation study design approach. This will still allow for the same data to be collected to see the effectiveness of the intervention based on the intervention vs. control, without using an RCT. Another adaptation would be adding in the health knowledge survey at the start of the program and 6-month follow up to see if the program has been able to impact their understanding of diabetes overall. Microclinic International NGO will aid us in adaptations to the weekly program topics itself to gear it more towards the Mongolian Culture. Appendix 3 illustrates the titles of the weekly program meetings that is used in the Kentucky, United States program, some of these will be changed to things like in place of 'get smart about food labels' there might be a lesson on gardening. These changes will help make the program more culturally relevant to the population of the Ger District.

Plans to implement and monitor programs with fidelity would to first, create a checklist of all forms, data, participant follow-ups, and education materials/classes that program staff must complete. Data collected will include a baseline information that will need to be collected at the start and then



additional follow-ups at 3-months, 6-months, and 12-months. This data will include the number of people screened for participating in the program, biometric data, the number of participants who completed each follow up, the survey at the start and 6-month follow up, demographics and any other relevant information that might influence the impacts of the program. Program staff is expected to continuously update checklists and ensure all have been maintained, completed and documented. Each staff member will be trained on their role in fidelity monitoring and its importance. If issues arise and fidelity monitoring is not going as planned, then staff can address it and make the appropriate changes for the remainder of the program.

All program materials will come from the NGO Microclinic International created by their team in collaboration with the local university in Mongolia for accurate language translations of materials. Because this intervention will be focusing on adults 18+, age appropriateness will not be a primary factor, but educational and literacy levels will be factored in. The majority of Mongolians have attended primary schools including those living in the ger districts and are able to read, but for any participants with lower educational or literacy levels due to dropping out of school after primary school, the program staff will be trained to explain unfamiliar terms in the appropriate way. As part of their training to deliver the program, staff will complete cultural competency training for any staff hired from foreign countries, which will help ensure that program materials are medically accurate, age-appropriate, culturally and linguistically appropriate, and inclusive [21].

The plan for sustaining this intervention program after the period grant funding ends is to make the Microclinic Social Network Behavioral Health intervention program as one of the main programs offered by the Flourishing Future Community Centers. The community center's share 13 paid nationals and 4 volunteers from the United States and Singapore who are able and willing to manage the program. Some of the programs previously/ currently offered by the community center's focus on similar subject matters that are covered in the Microclinic program, however, they do not focus specifically on health and or how to manage their health conditions with the support of their social system. Making the

continuations of this program in their community centers beneficial for the 900 families they currently serve and any future families.

Other focuses for sustainability, will be the maintenance of participants, volunteers and healthcare professional's active in the program by having the NGO Microclinic International virtually train new program facilitators in place of the old. This training incorporates how to teach each weekly lesson and role-playing different scenarios that may occur. Only five trained facilitators will be used during the 3-year grant period, four of these facilitators are Flourishing Future staff members who have their masters in social work. Only three facilitators will be used in year 1, each responsible for the three Microclinic's. In year 2 there will be 4 facilitators and in year 3 there will be 5 total facilitators, each responsible for no more than 2 Microclinic's at a given time. If these professionals were to leave Flourishing Future, they would only be replaced by other social work professionals and training as a Microclinic facilitator will be mandatory. Training to become a facilitator will be offered to all Flourishing Future Staff, its 30+ volunteers and anyone else in the community that wishes to become involved and may look to fly Microclinic International training facilitators back in the future if interest in becoming a facilitator increases after the first initial training during the grant period in year 1. Other sustainability considerations would be funding; however, Flourishing Community Centers in Ulaanbaatar have successfully been running for over 10 years on donations from individuals, corporations, and churches. Looking into other potential grants will just help add additional funds to this network that has already proven itself sustainable for over a decade.

One key component of the project is to plan for dissemination and communication to raise awareness of The Microclinic Social Network Behavioral Health intervention program in Mongolia and its outcomes through the target population themselves. Word of mouth is the best method in this community to get the word out about this program and how it could benefit their health. The first-hand experiences and results of participants will also be disseminated at the city level in forms of promotional posters, fliers, and artwork, primarily in the ger district. Ways to evaluate the effectiveness of dissemination and communication activities will be through regular focus groups to allow for formative

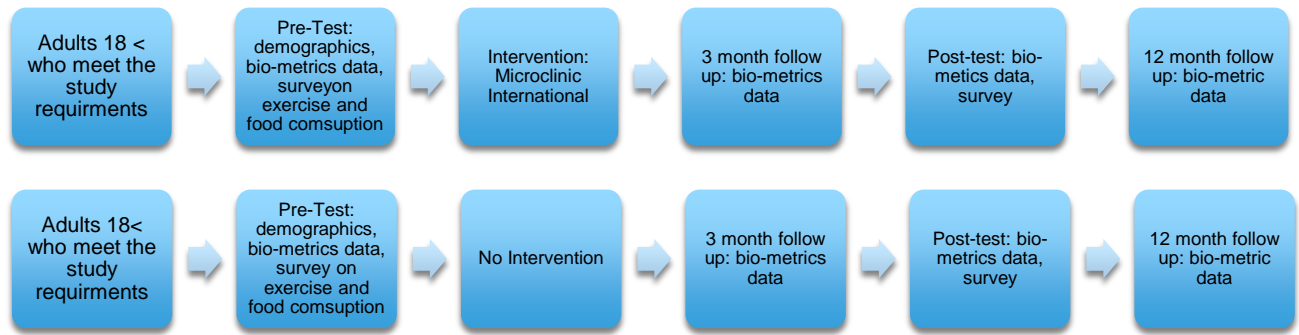
evaluation through feedback and engaging stakeholders. At the national level, the results of this program will be presented to the Mongolian parliament to help impact future policies and management of this disease. At the global level, results will be posted on the Microclinic International Website and will be presented at the International Diabetes Federation Congress and two other diabetes-related conferences.

One of the primary challenges in terms of dissemination is the lack of basic knowledge the general populations have about diabetes and how its management and prevention should be a health priority. Ways to address this is to ensure the information being disseminated is in the voice of the program participants, first-hand accounts will be more influential in this culture in comparison to other methods of dissemination. Other significant challenges include current policies for public health in Mongolia and how current low social economic status people are currently being treated in healthcare. Those who are documented and seek treatment may be pushed to the back of the line if a more prominent person walks in. Healthcare centers nationwide might not want to promote this program that will serve these populations. This could all cause possible pushback from the Mongolian Government who might not want to potentially change current methods for diabetes prevention and management. Dissemination of results to the Government of Mongolia is going to be important to prevent this pushback. This would be achieved through focus groups with the leaders in the government such as the Mayor of Ulaanbaatar, Governor of Bayanzurkh District and if possible the Prime Minister of Mongolia. Through this method we will be able to illustrate how much money could be saved by preventative measures for diseases such as diabetes for the Mongolian people, the evidence will speak for itself and show the impact this program had on it. Mongolia has a real chance to impact their people's health before it escalates to where more developed countries are now in terms of diabetes prevalence, such as the United States.

### **Performance Measures and Evaluation**

#### **The Study Design:**

The outcomes of this study will be evaluated using pretest-posttest design with a comparison group. See the study diagrams in the Figures below.



[Figure 2: Study Design]

The purpose of this study is to illustrate that this program can be implemented in Mongolia, instead of evaluating its efficacy, so randomization is not required. Thus, the selected study design will be adequate to determine if this program can successfully be implemented in this setting.

Formative Evaluation:

In the course of the first month of the project planning period, the Program Coordinator and Ben Lannister, Program Director who is currently in charge of running both Cup of Water Community Centers that will be used as the meeting place for all Microclinic’s will have a formal meeting with Cup of Cold Water Ministries. During this meeting, the program will be explained in full and its potential benefits for this community. The main purpose of this meeting is illustrated to Cup of Cold Water the importance of this intervention program and how these community centers could benefit from it and their support of a program like this. Any questions the organization may have will be answered at this time.

During the project planning, period focus groups will help with adults and families who already are using the community center resources to help organize the intricate details of the program such as approving survey questions that will be asked at the beginning of the program and 6-month check-in. The Community Advisory Group will meet twice a month during this time in order to formalize the implementation plans for the program. After the planning period concludes, the Community Advisory Group will then only meet once a month to go over the progress of the program.

### Process Evaluation

Throughout the implementation, the Graduate Assistance and Program Coordinator will track the rates of those who were screened, consented to be a part of the program and enrollment. The table below details the process measures that will be tracked. The costs of tracking these measures will be mostly due to personal time, supplies for the collection biometrics (A1C, blood pressure, BMI) and survey materials. Our projected capacity is no more than 10 Microclinic’s participating in the program at any given time to maintain the quality of the program and quality of data collection.

Figure 3: Process Measures

<b>Process Measure</b>	<b>Measurement Method</b>
Consent Form completion rate	Compare number of consent forms to the number of individuals screened to participate in the Microclinic or control group.
Pre-Test	The collection of HbA1c, BMI, glucose level, and blood pressure, self-report modified NCD KAPS survey.
3-month check-up	The collection of HbA1c, BMI, glucose level, and blood pressure.
Post-Test	The collection of HbA1c, BMI, glucose level, and blood pressure, self-report modified NCD KAPS survey.
12-month check-up	The collection of HbA1c, BMI, glucose level, and blood pressure.
Completion of the weekly Microclinic meetings	Track how many participants apart of each Microclinic show up to the 6-month weekly educational meetings.

The process measures described above will help determine if the program was implemented correctly by tracking if the participants are attending the weekly meetings and by collecting biometric data to see if we observe reductions. If results are not being observed during any of the check-up stages listed, then the program staff will be able to know where improvements to the program need to be made in order to maintain participation.

To foster fidelity to the implementation of this program, the staff and volunteers of Flourishing Future will participate in a 2.5-day facilitator training session hosted by Microclinic International

Facilitator trainers provided by Microclinic International NGO of San Francisco. The staff will be taught how each Microclinic meeting should be formatted for the entire 6-months and will practice role-playing with the guidance of the trainers. The biometrics will be collected pre-test post-test mimicking the original implementation of this program and again at 3-month and 12-month follow-ups which will contribute to the fidelity of this program.

A checklist procedure that the program coordinator and graduate assistant will be responsible for maintaining will ensure that all consent forms, biometrics, surveys, and attendance are collected through the duration of the grant period. If fidelity needs are not being met Microclinic International NGO will be available for virtual sessions through Skype with the program coordinator or facilitators. Through this method, facilitators will be able to refresh how a session is supposed to be formatted and the program coordinator can discuss any unforeseen issues with the program and how they could be resolved.

#### Outcome Evaluation:

Our first targeted outcome for this intervention is to increase the knowledge of diabetes and its associated risk factors through the support of a participant's social system or family. The slogan for Microclinic International is contagious health, and individuals with the support of their families or social systems are associated with better health outcomes. This will be measured by using a modified NCD KAPS survey, which is similar to the United States BRFSS survey. As mentioned earlier this survey incorporates questions such as demographic and administrative parameters, as well as knowledge, attitudes, and practices around NCDs and their risk factors, followed by a more vertical approach surveyed individual disease knowledge, attitudes, and practices. Our modified version will incorporate stress and add more questions dealing with diabetes and nutrition. We will disregard demographic questions when given the survey again at 6-months. The results from the survey pre-post will be compared to that of the control group to see if there was a significant difference not only between the pre-verses post but the control groups as well.

Our second targeted outcome is to reduce diabetes risk factors and or help participants manage their disease. This will be done by measuring BMI, HbA1c and blood pressure. BMI will be calculated

by the formula  $\text{kg}/\text{m}^2$ , where kg is a person's weight in kilograms and  $\text{m}^2$  is their height in meters squared. HbA1c will be collected to determine if a participant has/does not have diabetes or to establish their risk of developing diabetes. This will be based on the figure below. Participants who fall above an HbA1c of 5.6 will be considered pre-diabetic, above 6.4 participants will be classified as being diabetic. Blood pressure will be used to measure the risk of hypertension based on the current approved thresholds determined by the American Heart Association.

[Image 2: Glucose Levels to determine diabetes]

**Blood Test Levels for Diagnosis of Diabetes and Prediabetes**

	A1C (percent)	Fasting Plasma Glucose (mg/dL)	Oral Glucose Tolerance Test (mg/dL)
<b>Diabetes</b>	6.5 or above	126 or above	200 or above
<b>Prediabetes</b>	5.7 to 6.4	100 to 125	140 to 199
<b>Normal</b>	About 5	99 or below	139 or below

Definitions: mg = milligram, dL = deciliter  
For all three tests, within the prediabetes range, the higher the test result, the greater the risk of diabetes.

Based on these measures that will be compared to the control group it will determine if there is a statistically significant difference between participants at each checkpoint stage during the program in comparison to the control group.

The primary reason for these targeted

outcomes is to reduce risks associated with diabetes and to increase the knowledge of diabetes, nutrition, physical activity, and prevention. The initial three Microclinics will serve as a pilot program to see if this program can be adapted to the ger district of Ulaanbaatar, Mongolia. Once the three pilot Microclinics come to an end, we will expand to 8 Microclinics per 6-months in year two in anticipation the pilot was a success. In year 3 we will expand to 10 Microclinics for 6-months and use the remainder 6-months to finish reports and collect the 12-month follow up. Concluding the program, it is expected to see results in a reduction in HbA1c and increased knowledge similar to that of the program in Jordan. Our results may have limitations due to the fact we are accepting participants who may be diagnosed diabetic after the pre-test biometric data collection. This will be addressed in our data analysis conducted at the end of the grant period. A more detailed outline of the program and its objectives can be found in the Logic Model in Appendix 2.

### Obstacles and Challenges to Evaluation:

Some of the challenges to evaluation that might occur is data collection. There are 4 data collection checkpoints for each Microclinic and if an individual was to miss one those days and we are unable to collect that data at a later time, then it will affect the statistical significance of the study. Due to the fact, many of this study population lives in survival mode, and their schedules may be subjected to change. To combat this possible challenge at the start of each Microclinic we will inform all participants of their responsibility to attend each checkpoint appointment and that we will work with their schedule if it was to change during the 6-months they are in the program. The Mongolian cultural is a proud one, and if you ask them to do something they will do it, so giving them flexibility will enhance the program success in this area. To encourage participants to complete the program vitamins will be offered as a thank you for participating. This could help increase participation in the Microclinic program after the first 3 pilot Microclinic's are completed and ensure they complete the program.

### Evaluation Sustainability:

Sustainability to evaluation is not a primary concern for the Microclinic International intervention program. In Kentucky where this program is implemented in over 20 counties no longer collects any data to see if the program is a success statically speaking. However, each trained facilitator will be taught on how to use the HbA1c machine, blood pressure cuff, and scale. This will allow for facilitators or participants to manually track their process in the program in the future if they wished to be able to see biometric results. The surveys will not be necessary either in the future of stainability of evaluation unless Flourishing Future deems it important to show the progression of increased knowledge for future participants or the government for future possible funding. Evaluation after the grant period ends is overall not necessary for the future and stainability of this program.

Once the grant period ends some changes will be made to what can be offered to participants in terms of diabetes checking and prevention. The ability to consistently pay for blood testing strips for everyday glucose level testing could end. To help counter this potential issue other grants will be applied for and or a deal will be made with the local medical center to offer the services needed. The families



served by the community center will not be left shorthanded if glucose strips cannot be obtained, they will be able to depend on the 3-month checkup of HbA1c to personally see if they have improved or not in place of being able to check multiple times a day. This is not an ideal circumstance but it does offer a possible solution to the sustainability of checking one's HbA1c level.

### **Capacity and Experience of the Applicant Organization**

Flourishing Future NGO of Mongolia has demonstrated our position in the Ger District in Ulaanbaatar as a place that can provide services, support and education that helps a population who lives every day in survival mode. Founded in 2001, we have a holistic approach to challenging poverty and focusing on the individual as a whole which includes the physical, emotional and educational needs. We find that our "small" approach allows us to help at the personal level so that no one is ever just a number and that their needs are met. Flourishing Future has employed thirteen fulltime positions for local Mongolians and has four fulltime volunteers from the United State and Singapore and has over thirty plus Mongolian volunteers.

With the success of our 1<sup>st</sup> Grade School Preparation program which helps children prepare for first grade by teaching them to read, write and understand basic arithmetic, demonstrates that Flourishing Future has the experience and financial stability required for implementation of the Microclinic International Social Network Behavioral Health intervention program. We offer several other effective services such as English education, nutrition education and computer classes that help promote more opportunities to the families we serve. However, several of these services address the needs of children and young adults, leaving a hole in health services for adults. The incorporation of the Microclinic program will allow us to expand on the health needs of this community and help them manage and or prevent this very costly disease.

An aspect of our commitment to the ger district is to continuously monitor the condition of our community through quartile community forms and checking secondary data when it becomes readily available. Through this approach we are able to continuously check the needs of this community and how

we could make improvements to meet those needs. Meeting with stakeholders following each community forum will help increase our reach in the community and expand to help even more families. Based on our secondary data diabetes is not a well-known problem in Mongolia, however the families we serve once educated on a topic are genuinely eager to make changes to help their own health, and the health of their families.

The Microclinic International NGO facilitator team will join Flourishing Future staff and volunteers for training over the course of a 14-day period. The facilitator team will train all 17 staff members of Flourishing Futures and 30 of their current volunteers, each training session lasts 2.5 days. Only five of the staff members will be used as facilitators during the grant period, but this training will allow for each of our staff members and volunteer understand how the program works and are able to influence families to participant in it in the future and or expand this program in the future to increase the capacity for more families to participate at any given time.

If future staff and or volunteers wish to become a facilitator in the future Microclinic International NGO will be willing to virtually train individual in the future to maintain sustainability of facilitators. This will help prevent facilitator turnover rate and increase the knowledge of those who are apart of Flourishing Future. Thanks to Cup of Cold Water Ministries and other individual and corporation donations from around the world Flourishing Futures is able to pay Mongolian workers a living wage and maintain high quality and educated staff that help run all of the current programs.

Flourishing Futures does not answer to Cup of Water Cold Ministries but works with them and accepts volunteers through their organization. Each director of Flourishing Futures has been a member of CCWM since its founding, and acts as a fulltime volunteer. Each success of Flourishing Futures is a success of CCWM. The Director of Flourishing Future works closely with the organizations director of social work, director of government relations, accountants, translators, and each of the community centers facility manager. The director of social work is in turn in charge of the three social workers employed by us. Flourishing Future is 100% funded by donations and our main goal is to combat poverty and diabetes is a disease that poverty cannot afford to manage, we are prepared to incorporate this program into our

community centers and make a significant difference in this community. All of Flourishing Futures Staff is fluent in Mongolian and they teach all classes in Mongolian aside from the English Language courses that they offer. All International volunteers are expected to start to learn Mongolian while living in Ulaanbaatar but they will have access to a Mongolian Translator who is employed by Flourishing Futures if need be.

### **Partnerships and Collaboration**

The primary collaborators contributing directly to this project are the Mongolian workers and volunteers at the Flourishing Future and Ark Community Centers and international volunteers that are managed by Cup of Cold Water Ministries, the Bayanzurkh District Health Center and Microclinic International NGO. The endorsement of this project by those who work and volunteer at each community center is critical for the success of recruiting families and social networks into the program, collection of data, delivery of the program and 12-month follow up. The staff's willingness to become program facilitators and reach out to families on the benefits of this program will increase recruitment numbers, which will help the program increase its reach to the 900 families served by the community centers over the course of the three years. Because many of the classes that are taught at the community centers correlate with the implementation program, push-back is not expected from the Mongolian workers or volunteers. Each Microclinic session will be scheduled weekly according to participants and facilitators available schedule, limiting any possible conflicts with other obligations.

The Bayanzurkh District Health Center will offer clinical support during the collection of biometric data at the start, 6-month, and 12-month follow-ups. Each of these clinics is located in the Bayanzurkh District and health professionals will volunteer their time to come to the community centers during each collection time for the control group and each Microclinic. Flourishing Future in the past purchased water access pipes for the Bayanzurkh District Health Center for better health access for the families served. This prior relationship with the Bayanzurkh District Health Center has helped ensure their assistance with this project.

The program itself will be acquired by working closely with Microclinic International NGO. They generally offer their program at little to no cost, but due to the complexity of the Mongolian language, it has been agreed that we help with the process of translating materials and assuring the program is culturally relevant. It is expected that Microclinic Representatives come to Mongolia to train the employees of each of the community centers and any of their volunteers within the first month of the grant period. Microclinic International NGO is good about updating program materials over time and training any future facilitators through skype or other communications means in the future to maintain the sustainability of facilitators after the grant period has ended.

Other partners in the Bayanzurkh District (ger district) whose support may increase the future use of this program are The Ger Community Mapping Center, religious leaders and other local health clinics and healthcare providers. Partners outside of Bayanzurkh District include The Mongolian Diabetes Association, Mongolia's National Center for Public Health and the Governor of Ulaanbaatar and the Prime Minister of Mongolia. These are important stakeholders to include as well as demonstrate the effectiveness of the Microclinic program and showcase how it could align with future agendas on this topic. These stakeholders will be brought together during the quartile community forums and will be invited to the two events hosted at the community centers during the grant period. Their involvement and presence could lead to gaining possible resource support after the grant period ends. Though these more high-level partners will not have an everyday say or role in the Microclinic program at Flourishing Futures however they will be guiding entities for possible expansion of this program in Mongolia and or dissemination of its results. A figure of all partnerships and collaborators can be found in appendix 3.

## **Project Management**

### **Program Director:**

Flourishing Future's Director Ben Lannister will act as the Program Director and will be responsible for all aspects of the implementation program during the 3-year grant period. He will be in charge of managing all staff and volunteers associated with the program during each of the planning,

implementation and evaluation stages of the Microclinic International program. He will oversee the implementation of each of the Microclinic during over the course of the grant period, the Program Coordinator, Graduate Assistant and the five Flourishing Future Staff and any Volunteers. Mr. Lannister will be responsible for arranging the quarterly meetings with the Community Advisory Group and Community Forums. Mr. Lannister has a background in the health worker field and has been in charge of managing Flourishing Futures and its current programs the past five years. He has proven himself capable of heading this implementation program as he has shown by stepping in and maintaining the current programs such as the Head Start program that Flourishing Future has been in charge of over a decade.

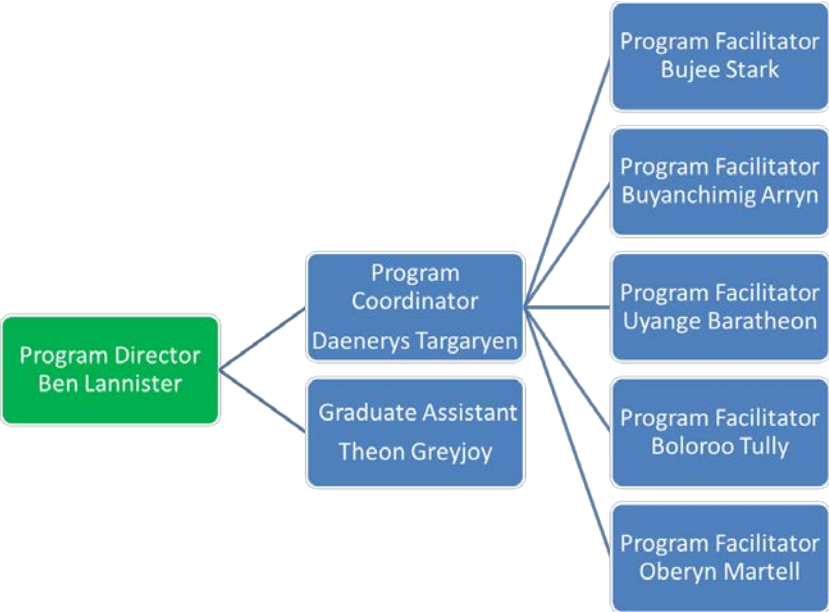
Program Coordinator:

An outsourced Public Health professional will act as the Program Coordinator and will be hired on at the start of the grant period. In this role, they are responsible for overseeing the day to day management of the program and will verify that all of the goals and objectives are met. They will be accountable for all of the data collection, reports and evaluations are completed and maintained throughout the grant period. They will be a part of the quartile meetings and community forums and work closely with Flourishing Future Staff Facilitators making sure all measures are being collected efficiently. If any problems occur they will work with the appropriate persons to identify and enact a solution. The Project Coordinator will also be in charge of the program evaluation and that all appropriate information is collected and maintained throughout the grant period.

Additional Personal:

Additional Personal will include a Graduate Assistant from the University of Mongolia and four Mongolian members of the Flourishing Future Staff who have a degree in social work, and one American volunteer. The graduate assistant will be responsible for data collection, data entry and help to prepare results for dissemination and will be hired on at the start of the grant period. The five members of Flourishing Future will be responsible for the weekly program activities, helping with data collection, completing and updating checklists for fidelity purposes. Only three of the five members of Flourishing Future will be hired on in year 1. In year 2 four of the five will be use, and in year 3 all five members of

Flourishing Future will be employed by program. Appendix 1 details the budget of all personnel during the grant period.



[Figure 5: Program Personnel]

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**Appendix 1: Budget Narrative**

**Overall Budget:**

Cost Category	Year 1	Year 2	Year 3	
Personnel	\$136,619	\$139,493	\$158,643	
Fringe	\$51,416	\$56,008	\$63,211	
Supplies	\$12,916	\$22,447	\$32,697	
Travel	\$13,300	\$3,300	\$15,500	
Other	\$5,000	\$6,400	\$6,400	<b>Grand Total:</b>
<b>Total</b>	<b>\$219,251</b>	<b>\$227,648</b>	<b>\$276,451</b>	<b>\$726,350</b>

**Personnel:**

	Year 1			Year 2			Year 2		
	Effort	Salary	Total	Effort	Salary	Total	Effort	Salary	Total
Program Director Ben Lannister	70%	\$85,000	\$59,500	60%	\$87,550	\$52,530	80%	\$90,177	\$72,141
Program Coordinator Daenerys Targaryen	100%	\$70,000	\$70,000	100%	\$72,100	\$72,100	100%	\$74,263	\$74,263
Graduate Assistant Theon Greyjoy	40%	\$1,300	\$520	50%	\$1,300	\$520	60%	\$1,300	\$520
Program Facilitator Bujee Stark	20%	\$1,500	\$300	40%	\$1,545	\$618	30%	\$1,591	\$477
Program Facilitator Buyanchimig Arryn	20%	\$1,500	\$300	40%	\$1,545	\$618	30%	\$1,591	\$477
Program Facilitator Uyange Baratheon	0%	\$1,500	\$0.00	40%	\$1,545	\$0.00	30%	\$1,591	\$477

Program Facilitator Boloroo Tully	0%	\$1,500	\$0.00	0%	\$1,545	\$0.00	30%	\$1,591	\$477
Program Facilitator Oberynt Martell	20%	\$30,000	\$6,000	40%	\$30,900	\$12,360	30%	\$31,827	\$9,548

**Ben Lannister, Program Director** (70% / 25.2 calendar months) Mr. Lannister will spend 70% of his time in years 1-3 managing the implementation and evaluation of the program. He is the Director of Flourishing Future and is in charge of administering grant funds, the IRB process and ensuring program materials were translated correctly.

**Daenerys Targaryen, Project Coordinator** (100% / 36 calendar months) The project coordinator for this project will spend 100% of their time in years 1-3. They will be responsible for overseeing the day-to-day activities of the program and any data collection. They will oversee the communication between facilitators, Microclinic and each community center. They will track the completion of initial data collection and follow-ups and conduct the evaluation of the program at each stage. They will be in charge of the Graduate Assistant and report project progress to the Director Monthly.

**Theon Greyjoy, Graduate Student** (50% / 18 calendar months) This individual will be recruited from the University of Mongolia who is a Public Health Masters Candidate. They are expected to be proficient in both English and Mongolian with a statistics background. This student will be expected to spend 50% of their time year 1-3 and will work closely with the Program Coordinator. They will be responsible for data collection, entry, and statistics of results to ensure validity of the program. The student will have weekly meetings with the Program Coordinator and bi-weekly with program Facilitators.

**Bujee Stark, Program Facilitator** (30% / 10.8 calendar months) The program facilitator will be responsible for leading the Microclinic material during weekly meetings for 6-months. Bujee Stark has a Masters in Social work and has experience dealing with the hardships that the families they serve face and will be able to help tackle areas of interest that may not be covered in the program materials. Future

Facilitators will not be expected to have a formal education, only enthusiasm for this program and helping these families in need, though a background in social work or public health will be encouraged. Each Facilitator is expected to work 30% of the time during years 1-3. They will each be responsible for no more than two Microclinic's at any given time during the grant period. Facilitators are responsible to help collect data from participants and each follow up check point.

**Buyanchimig Arryn, Program Facilitator** (30% / 10.8 calendar months) The program facilitator will be responsible for leading the Microclinic material during weekly meetings for 6-months. Buyanchimig Arryn has a Masters in Social work and has experience dealing with the hardships that the families they serve face and will be able to help tackle areas of interest that may not be covered in the program materials. Future Facilitators will not be expected to have a formal education, only enthusiasm for this program and helping these families in need, though a background in social work or public health will be encouraged. Each Facilitator is expected to work 30% of the time during years 1-3. They will each be responsible for no more than two Microclinic's at any given time during the grant period. Facilitators are responsible to help collect data from participants and each follow up check point.

**Uyange Baratheon, Program Facilitator** (30% / 7.2 calendar months) The program facilitator will be responsible for leading the Microclinic material during weekly meetings for 6-months. Uyange Baratheon has a Masters in Social work and has experience dealing with the hardships that the families they serve face and will be able to help tackle areas of interest that may not be covered in the program materials. Future Facilitators will not be expected to have a formal education, only enthusiasm for this program and helping these families in need, though a background in social work or public health will be encouraged. Each Facilitator is expected to work 30% of the time during years 1-3. They will each be responsible for no more than two Microclinic's at any given time during the grant period. Facilitators are responsible to help collect data from participants and each follow up check point.

**Boloroo Tully, Program Facilitator** (30% / 3.6 calendar months) The program facilitator will be responsible for leading the Microclinic material during weekly meetings for 6-months. Boloroo Tully has a Masters in Social work and has experience dealing with the hardships that the families they serve face

and will be able to help tackle areas of interest that may not be covered in the program materials. Future Facilitators will not be expected to have a formal education, only enthusiasm for this program and helping these families in need, though a background in social work or public health will be encouraged. Each Facilitator is expected to work 30% of the time during years 1-3. They will each be responsible for no more than two Microclinic's at any given time during the grant period. Facilitators are responsible to help collect data from participants and each follow up check point.

**Oberyn Martell, Program Facilitator** (30% / 10.8 calendar months) The program facilitator will be responsible for leading the Microclinic material during weekly meetings for 6-months. Facilitators are expected to have experience dealing with the hardships that the families served by Flourishing Future face and help trouble shoot any problems that could arise. Future Facilitators will not be expected to have a formal education, only enthusiasm for this program and helping these families in need, though a background in social work or public health will be encouraged. Each Facilitator is expected to work 30% of the time during years 1-3. They will each be responsible for no more than two Microclinic's at any given time during the grant period. Facilitators are responsible to help collect data from participants and each follow up check point.

**Fringe Benefits:**

Benefits will be allocated to all program employees and facilitators during the grant period.

<b>Position</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Program Director	\$20,165	\$17,803	\$24,449
Program Coordinator	\$25,620	\$26,388	\$27,180
Graduate Assistant	\$2,046	\$2,558	\$3,069
Facilitator	\$1,027	\$2,055	\$1,542
Facilitator	\$1,027	\$2,055	\$1,542
Facilitator	\$0.00	\$2,055	\$1,542
Facilitator	\$0.00	\$0.00	\$1,542
Facilitator	\$1,531	\$3,094	\$2,345

**Travel:**

Travel between the two community centers in Ulaanbaatar will be necessary, \$7,200 will be allocated towards 10 monthly bus passes. This will not only allow for us to allocate passes to project members to

travel between community centers, but to any participants who may need help getting to the local medical center or hospital. Round trip airfare will be covered for two Microclinic International Facilitator trainers and the program coordinator to Ulaanbaatar and two different conferences. Conference costs and any possible unforeseen increase prices for airfare or cab use.

<b>Travel</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Bus Passes	\$2,400	\$2,400	\$2,400
Airfare	\$10,000		\$2,000
Conferences			\$11,100
Travel unforeseen Increases	\$900	\$900	
<b>Total</b>	<b>\$13,300</b>	<b>\$3,300</b>	<b>\$15,500</b>

**Supplies:**

<b>Item</b>	<b>Justification</b>	<b>Cost</b>
Bayer Contour NEXT Diabetes Testing Kits	To prevent any barriers participants may have for monitoring blood sugar levels, these kits will be offered to those of high risk or have diabetes.	\$40,943
A1C Now Self Check 2 test 1ea Check Diagnostic	These machines will be used during the pre, follow ups and posttest to help illustrates the validity of the program.	\$360
Blood Pressure Cuff	These instruments will be used during the pre, follow ups and posttest to help illustrates the validity of the program.	\$90
Height and Weight Scale	These scales will be used during the pre, follow ups and posttest to help illustrates the validity of the program.	\$304
600 Count Diabetes testing strips	An average diabetes patient will use 1,200 testing strips a year. By providing testing strips to our participants during the grant period will remove barriers to diabetes management that they currently have in Mongolia even if it's only for a limited time.	\$19,775
Microclinic Translated program booklets	Microclinic International NGO currently does not have their program offered in Mongolian, because this a difficult language we will be working with the	\$1,800

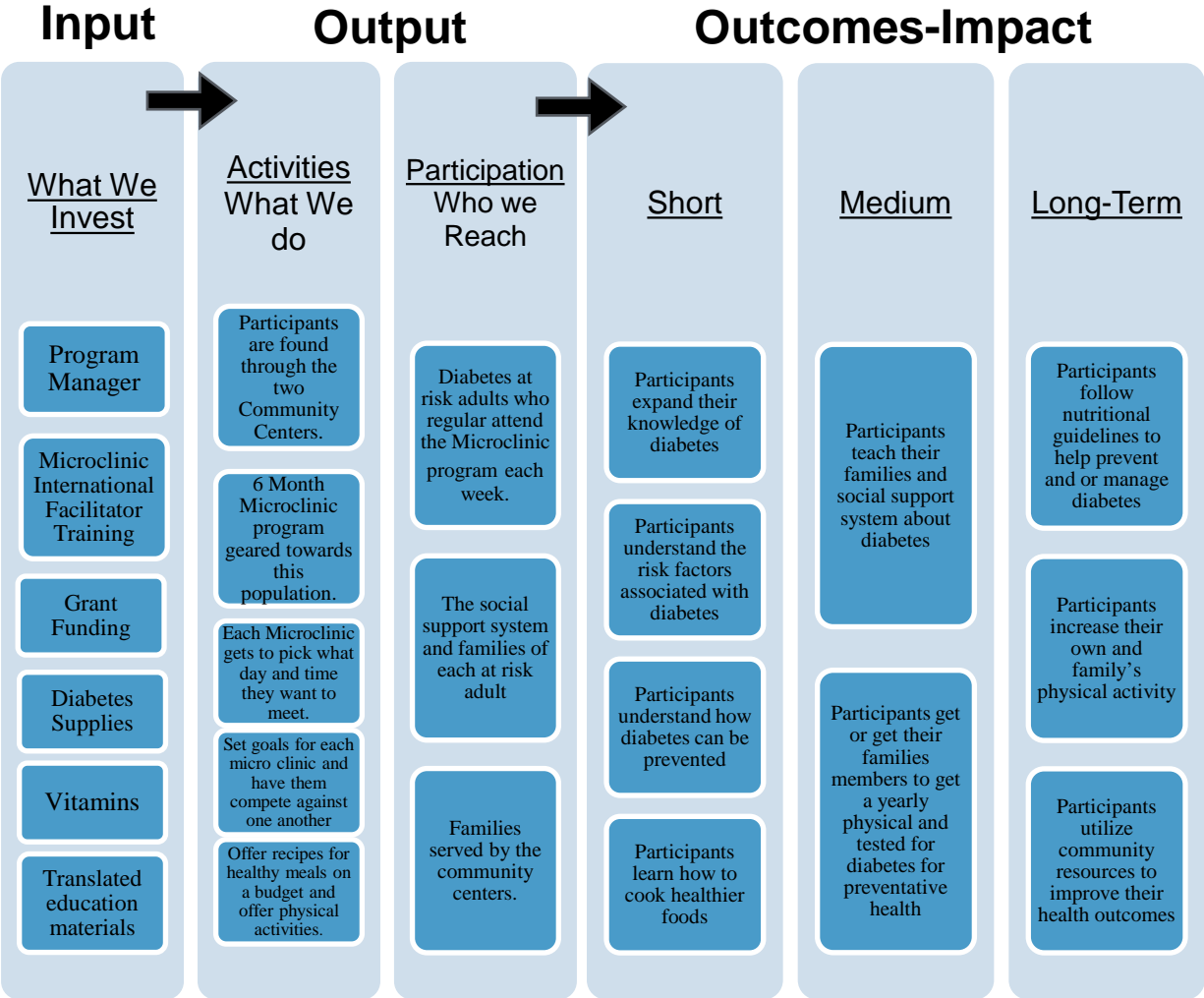
	NGO and pay to have the materials translated in the capital city.	
Translation of printed materials	Generally, Microclinic International NGO offers their program booklets free of charge, but because we are having them translate to a language that will only be useful in Mongolia we decided to pay for the booklets to be printed and keep working with the NGO for any future updates in program materials.	\$3,088
Microclinic Training food supplies	The training to become a facilitator takes approximately 2.5 days. We are offering two different sessions of facilitator training adding up to 5 days. During that time, we will cover all meal costs.	\$300
Catered events	To remove any cultural stigma and awkwardness of participating in the program, two events will be hosted for participants and their families. There will be a kickoff event of the program, and a celebratory ending of the grant period part in the program to thank everyone for participating.	\$600
Cooking Supplies	The Microclinic Program has a week where they teach participants how to cook healthy with the foods that are readily available to them. We are allocating these funds to purchase supplies such as pots and pans, cutlery, plates, bowls, spices and the food that we will prepare.	\$800

**Other:**

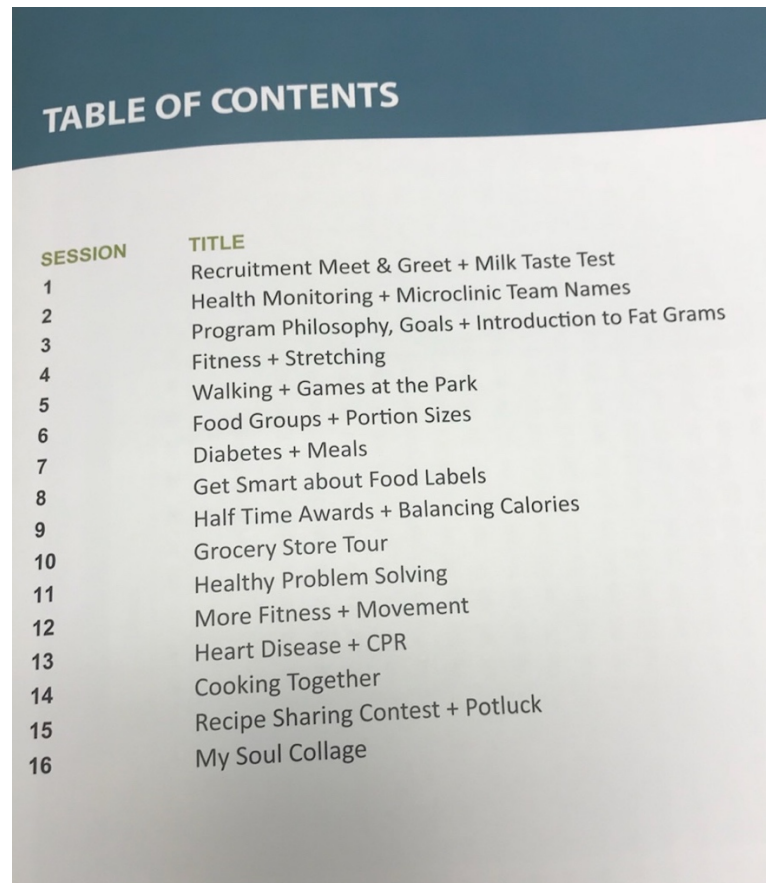
<b>Classification</b>	<b>Justification</b>	<b>Cost</b>
Multivitamins and Minerals Formula 1-year supply	Vitamins will be offered to all participants in the control group and Microclinic's as a thank you. They will not be informed of this prior because it could possibly insult them.	\$9,000

Microclinic Facilitator Trainers Expenses	The program will also cover the expenses the visiting Facilitator trainers will have will in Ulaanbaatar. Because it is a relatively inexpensive city to visit, we do not expect their costs to exceed this amount.	\$400
Graduate Student Tuition	The graduate assistant university's tuition will be covered by the program for all 3 years of the grant period.	\$8,400

**Appendix 2: Logic Model**



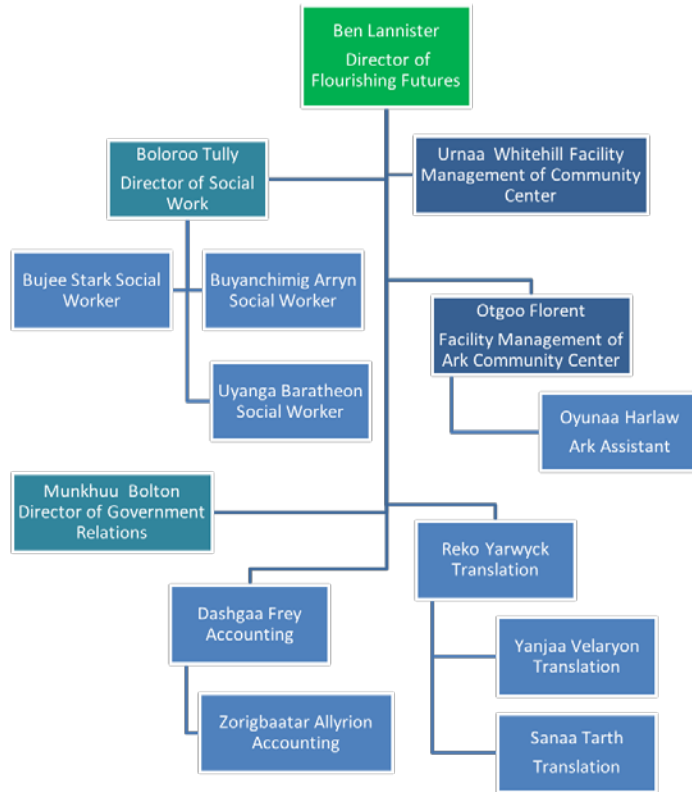
**Appendix 3: Microclinic Weekly Program Outline (Kentucky 4-month program version)**



<b>SESSION</b>	<b>TITLE</b>
1	Recruitment Meet & Greet + Milk Taste Test
2	Health Monitoring + Microclinic Team Names
3	Program Philosophy, Goals + Introduction to Fat Grams
4	Fitness + Stretching
5	Walking + Games at the Park
6	Food Groups + Portion Sizes
7	Diabetes + Meals
8	Get Smart about Food Labels
9	Half Time Awards + Balancing Calories
10	Grocery Store Tour
11	Healthy Problem Solving
12	More Fitness + Movement
13	Heart Disease + CPR
14	Cooking Together
15	Recipe Sharing Contest + Potluck
16	My Soul Collage



**Appendix 4: Hierarchy of Flourishing Futures Employees**



**Appendix 5: Partnerships and Collaborators**



Green: Primary  
 Red: Secondary  
 Blue: Tertiary

**Appendix 6: Gantt Chart**

# Project Planner

ACTIVITY	PERIODS											
	Y1	Y1	Y1	Y1	Y2	Y2	Y2	Y2	Y3	Y3	Y3	Y3
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Obtain IRB approval	X											
Purchase all needed supplies		X	X		X		X		X			
Have Program Materials Translated to Mongolian	X											
Community Forums	X	X	X	X	X	X	X	X	X	X	X	X
Facilitator Training	X											
Obtain Participation Consent Forms			X		X		X		X			
Start Microclinic Program			X		X		X		X			
Collect Biometric Data			X	X	X	X	X	X	X	X	X	X
Collect Survey Data			X		X	X	X	X	X	X		X
Collect Demographic Data			X		X		X		X			
Program Party/Event		X										X
Complete final analyses											X	X
Presentations at Global Conferences										X	X	X
Prepare manuscripts for publishing											X	