

Master of Public Health  
Integrative Learning Experience Report

**GROING NEIGHBORHOOD GARDENING TEAMS IN THE TIME OF COVID**

by

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submitted in partial fulfillment of the requirements for the degree

MASTER OF PUBLIC HEALTH

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## **Abstract**

The COVID-19 pandemic is a crushing example of humanity's vulnerability to the natural world of which we are a part. Humanity's continued expansion into the last wild places, combined with destabilizing climate patterns that shift habitats of disease vectors, make novel disease outbreaks an expected occurrence. The development of a novel coronavirus strain is only one of many environmental changes that will challenge us now and in the future.

My dual internships with the Riley County Health Department's Contact Tracing team and UFM Community Learning Centers GRO Initiative each sought to mount an effective response to these changes.

Contact tracing seeks to reduce transmission of COVID-19 by reaching community members who test positive for the virus and those that they have come in contact with and provide timely and accurate recommendations for quarantine and isolation. By keeping these community members isolated from others during their infectious period, transmission is reduced.

The GRO Initiative is designed to increase access to healthy foods through organizing community members to grow food together and share it. The intention is for community members of all incomes, backgrounds, and experience levels to be able to participate, learn and share their skills around gardening with one another. Over time, local food production capacity and mutual support will grow, helping Manhattan, Kansas be a resilient community in an uncertain future.

*Keywords:* community gardens, food security, climate change, resiliency, contact tracing, COVID-19

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# **Chapter 1 - Background**

This year, 2020, will stand out for our lifetimes as a year of uncertainty, disruption, accommodation, and growth. Concrete realities, including that we would go to work at our workplaces, that grocery store shelves would always be full, that our friends and family could come close to us, have shifted this year. It feels like a new world.

This is the world in which my Applied Practice Experience took place. Working as a contact tracer with the Riley County Health Department was in direct response to the COVID-19 pandemic. Developing the Neighborhood Gardening Teams (GRO) Initiative with UFM Community Learning Center is an integrated response to the wider ecological circumstances that led to the evolution of a novel virus capable of killing hundreds of thousands of people and derailing social and economic systems we had considered inviolate.

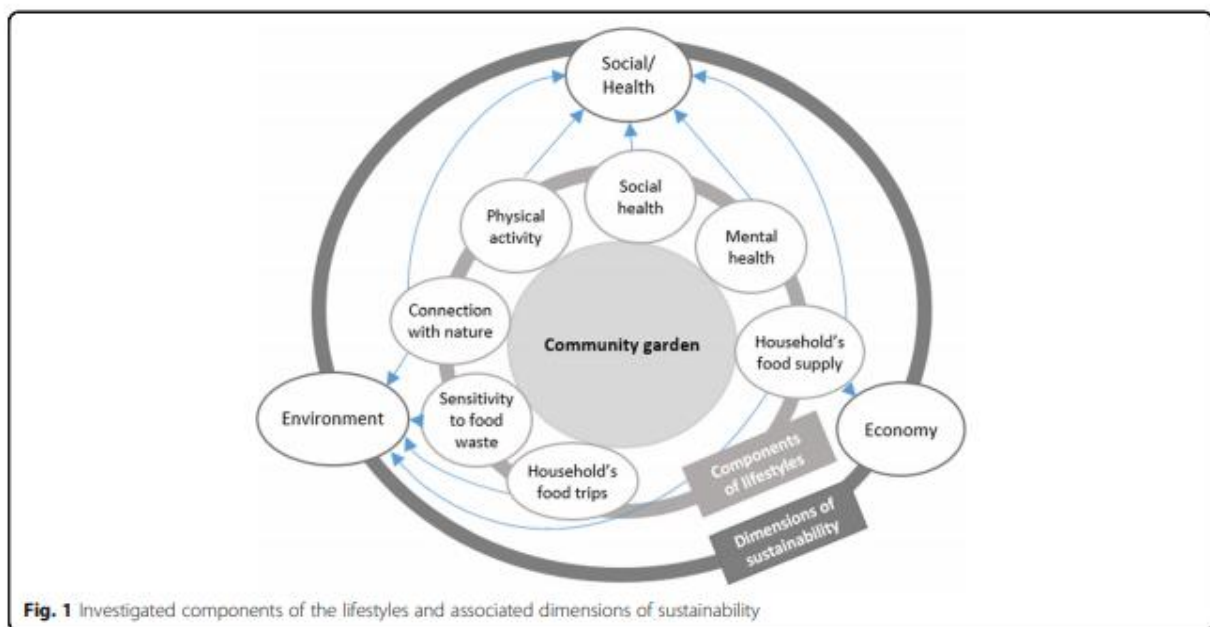
These two internship placements largely provided disparate learning opportunities. Contact tracing focused on leadership skills and systems thinking within a limited scope of influence, while my work with UFM was focused on the skills needed to develop a local public health intervention using a multi-level approach.

## **Literature Review – UFM GRO Initiative**

### **Theoretical Foundations of Communal Gardening as a Public Health Intervention**

Individual behavior change models contributed several concepts relevant to GRO. Social Cognitive Theory contributes the idea that individuals learn from witnessing the actions and resulting consequences of others' behavior. The Precaution Adoption Process Model defines seven stages of change from lack of awareness to maintenance of a behavior change (Glanz,1997). GRO engages participants in a variety of awareness-raising activities and provides a social framework to support the chosen lifestyle changes.

The health status of individuals exists within the context of their household, community, and nation (Marmot, Friel, Houweling, & Taylor, 2008). This ecological perspective recognizes the interplay and interdependence of individuals within their social environment (Glanz, 1997). Public health interventions can focus on changing people's behavior or changing the environment in which people live their lives. The following figure shows how community gardening may affect aspects of individual behavior, as well as their living and economic environments (Tharrey et al., 2019).



**Figure 1.1 Community gardening and sustainable lifestyles  
(Tharrey et al., 2019)**

E.M. Rogers, in his book *Diffusion of Innovation*, explores the process by which change takes place in a society. He defines diffusion of innovation as “the process by which an innovation is communicated through certain channels over time among members of a social system” (Rogers, 2003, p. 5). In order to effectively change the social environment, any program must look to change the behavior of groups of people and ensure those people are visible to others in the community.

### **Individual Level Impacts: Fruit and Vegetable Intake**

In a survey of 474 households in Denver, Colorado, 56% of respondents involved in community gardening reported consuming fruits and vegetables (F/V) at least 5 times a day. Only 37% of home gardeners claimed as much while 25% of non-gardeners did. While care was taken to randomize the sample, weaknesses of this study were the defacto rejection of 648 households due to accessibility issues such as access-controlled neighborhoods and apartments, and a 59% response rate of the remaining households (Litt, Soobader, Turbin, & Hale, 2011). Similarly, a survey of 766 adults in Flint, Michigan, found that household participation in a community garden resulted in household members consuming 1.4 times more F/V per day ( $P < 0.001$ ) than those households without a gardener even when controlling for health, demographic, and neighborhood variables. Households with a gardening member were 3.5 times more likely to meet the recommended dietary guidelines of at least 5 F/V per day (Alaimo, Packnett, Miles, & Kruger, 2008).

A qualitative study out of Portugal looked at F/V consumption at the beginning of a gardening intervention and 6 to 12 months later. The community garden under investigation was newly established at study inception. At the time of the first interview, 67.7% of the participants were new to horticulture. Gardeners received training on planting and composting. Nova and colleagues made specific inquiries regarding length of time spent gardening and found that increased time in the garden did not significantly increase F/V use (Nova, Pinto, Chaves, & Silva, 2018).



**Table 1.1 Impact of Gardening on Fruit and Vegetable Use (Nova et al., 2020)**

Impact of exposure duration on environmental sustainability practices and opinions towards aspects related to organic food, fruit and vegetables consumption.

	Up to 3 hours a week, n = 42 n (%)	More than 3 hours a week, n = 60 n (%)	p
<i>Savings in produce purchases</i>			0.016
Immense or a lot	3 (7.5)	13 (22.0)	
Moderately	12 (27.5)	21 (35.6)	
Little or anything	27 (65.0)	25 (42.4)	
<i>Increased organic food use</i>			0.011
Immense or a lot	29 (69.0)	53 (88.3)	
Moderately	9 (21.4)	7 (22.7)	
Little or anything	4 (9.5)	0 (0.0)	
<i>Increased fruit and vegetable use</i>			0.345
Immense or a lot	41 (97.6)	56 (93.3)	
Moderately	0 (0.0)	4 (6.7)	
Little or anything	1 (2.4)	0 (0.0)	
<i>Improved environmental sustainability practices</i>			0.783
Immense or a lot	35 (83.3)	51 (85.0)	
Moderately	6 (14.3)	9 (15.0)	
Little or anything	1 (2.4)	0 (0.0)	

A systematic review of gardening interventions aimed at children and youth found that, while 10 of 14 articles showed statistically significant positive impacts on F/V consumption, studies were plagued with limitations such as self-report, small sample sizes, and samples of convenience. Of the three randomized controlled trials included in this review, none found statistically significant impacts on F/V consumption among the intervention groups. Two discussion points are worth noting from this article; 1) two out of three studies combining gardening with nutrition education had greater success increasing F/V consumption over time, and 2) these largely school-based interventions did not change children's access to F/V in the home environment. Including parents in gardening/nutrition education could start to address this reality (Savoie-Roskos, Wengreen, & Durward, 2017).

### **Community Level Impacts: Social Support / Community Engagement**

A summer internship opportunity, called the Askiy project, included seven students in the city of Saskatoon, Saskatchewan. This project offers a glimpse into the social support and personal development possible when groups of people, even inexperienced ones, work together to grow a garden. These young adults shared and gained knowledge of agriculture, developed their team working skills through collective leadership and connected with the natural world through building an urban

brownfield into a productive market garden. These experiences led to a greater sense of self-efficacy and confidence in their ability to make positive change in their community (Martin & Lindsey, 2018).

Interviewing the community gardeners of southeast Toronto, Wakefield and colleagues found that the whole community was thought to benefit via increased community pride, improved relationships between people and sharing of food and knowledge. The culture of the community gardens was seen to foster sharing; sharing across cultures was facilitated by the universal, hands-on actions of growing and cooking food (Wakefield, Yeudall, Taron, Reynolds, & Skinner, 2007). In Flint, households with a gardener were more than twice as likely to participate in a neighborhood clean-up or beautification project compared to households without a gardener (Nova et al., 2018).

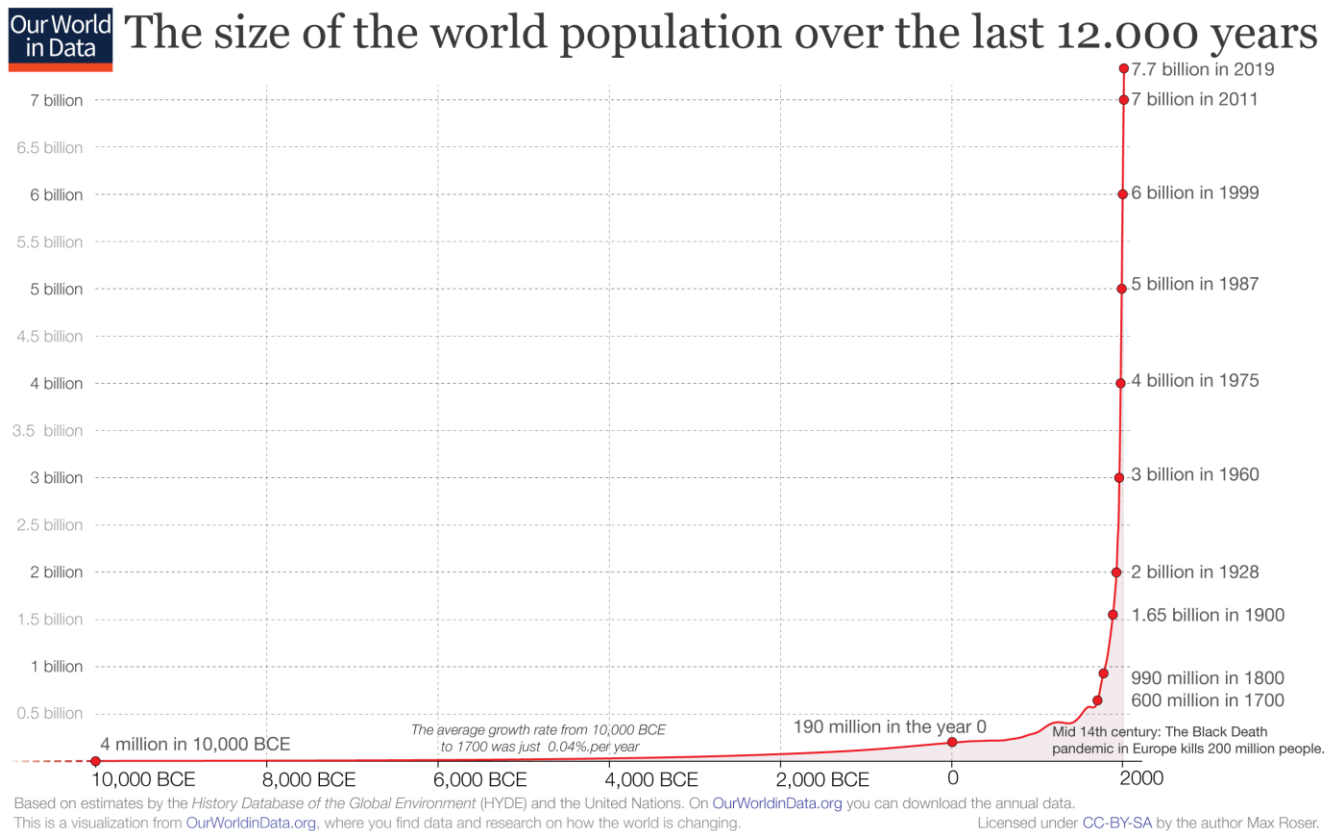
In Denver, community gardeners described their feelings of shared pride and responsibility for maintaining an attractive, productive garden. New gardeners learned from observing and talking to those around them. They had a sense of reciprocity between themselves and the garden landscape. (Hale et al., 2011). This sense of connection and interdependence between individuals and the garden seemed to foster stewardship of the urban landscape.

The GRO Initiative is focused on increasing local production and consumption of fresh produce through collective gardening. Public health issues addressed include chronic disease risk reduction, improved mental health and contributing to, rather than extracting from, the ecosystems on which we depend.

Chronic diseases have come to be the dominant cause of morbidity and mortality in the United States. These diseases, including heart disease, diabetes, and obesity, are largely due to lifestyle factors such as diets high in processed foods and sedentary behavior patterns.

### **Ecological Context**

Zoonotic diseases are caused by new agents or by familiar agents in environments or species that have not been seen before (Chomel, 2003). There is debate regarding the possible originating animal species and the intermediate species that allowed coronavirus to infect humans (Wenzel, 2020). It is known that human population has increased precipitously.



### Figure 1.2 Human population growth

(<https://ourworldindata.org/world-population-growth>)

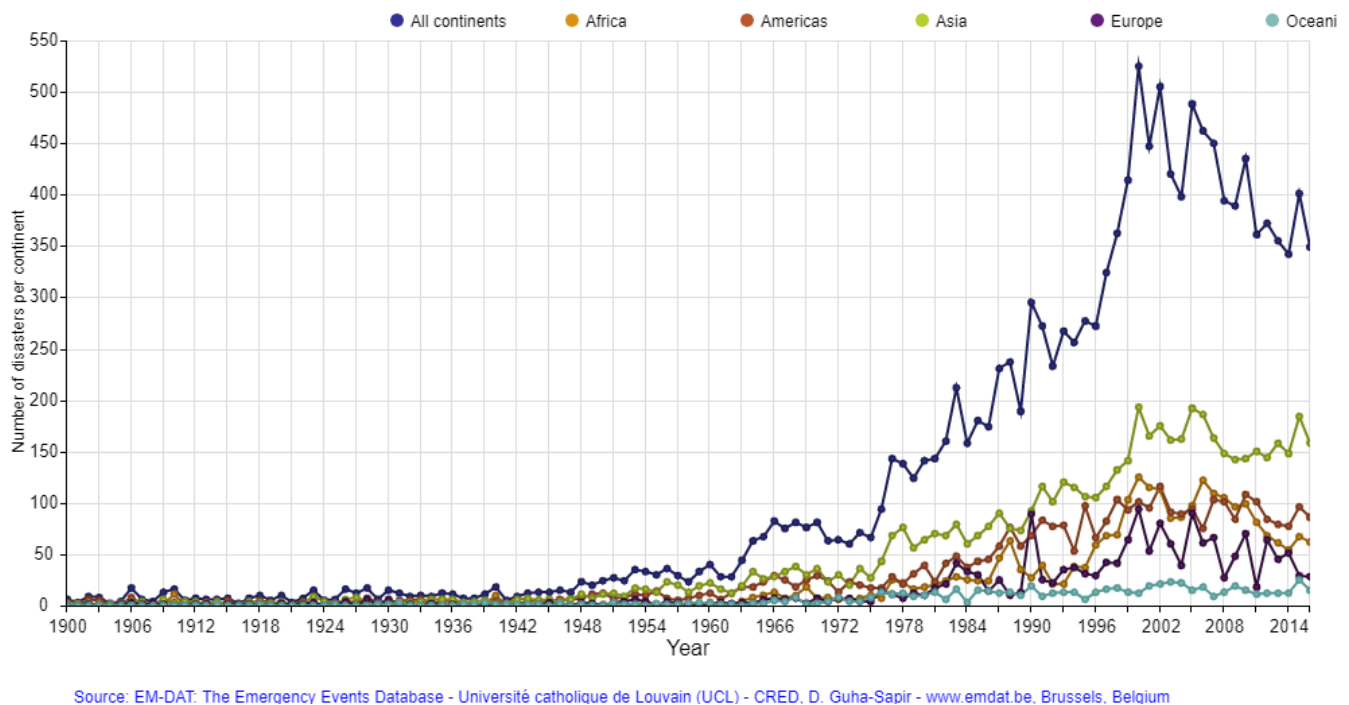
Global population accelerated with the advances of the industrial revolution. The global growth rate peaked in 1962-1963 at 2.2%. The past 50 years have seen a decline in the growth rate; in 2019 it was 1.05%. The burgeoning human population has resulted in rapid urbanization. The density of human population and our modern transportation system contributed to the rapid spread of respiratory illness in 2020.

Climate change is expected to affect global food systems. The Intergovernmental Panel on Climate Change's 2018 Special Report on Climate Change and Land stated that

- Given increasing extreme events and interconnectedness, risks of food system disruptions are growing (*high confidence*).

- Observed climate change is already affecting food security through increasing temperatures, changing precipitation patterns, and greater frequency of some extreme events (*high confidence*).

The figure below from the Emergency Events Database shows the increasing number of natural disasters over the last seventy years.



**Figure 1.3 Natural disasters by continent and globally (1900-2014)**  
**(The Emergency Events Database-Catholic University of Louvain)**

Jesse Nippert of Kansas State University, in his studies of the effect of climate change on the Konza Prairie, predict that precipitation will stay the same in our region. However, precipitation will be concentrated in fewer, larger events. Dry ground will be unable to soak up the large volume of rain when it comes, leading to flooding (Nippert, 2019).

As the impacts of climate change are felt at multiple points in the food system and distant food sources become less reliable, food produced locally could make major contributions to food security in Riley County. Increasing our local food production capacity and skilling up to adjust our growing

techniques as the weather changes will be key factors in maintaining a high quality of life in our community.

### **Agency Specifics**

UFM Community Learning Center was started in 1968 with the mission of connecting the Kansas State University community with the wider community through inexpensive, accessible classes. It began on the premise that “anyone could learn and anyone could teach.” UFM has been located at 1221 Thurston since 1975.

Linda Teener has been the Executive Director of UFM since 1990. She has a Bachelor of Science in Sociology and Social Work and a Master of Education in Counseling. She is a Certified Programming Professional. Program development has been her focus at UFM.

The Riley County Health Department is located at 2030 Tecumseh Road in Manhattan. However, the contact tracing site was set up in the designated Emergency Operations Center at the fire station on Denison Avenue. Andrew Adams, in his role as the Emergency Preparedness Coordinator, oversaw the contact tracing unit. He also served as my preceptor. In September, he accepted a position in Georgia, Julie Gibbs kindly agreed to assume the preceptor role. Both Andrew Adams and Julie Gibbs have Master of Public Health degrees. Julie Gibbs has 12 years of experience working in Public Health. She became the Director of the Health Department in January.

## **Chapter 2 - Learning Objectives and Project Description**

### **Learning Objectives**

#### **UFM GRO Initiative**

Learn how to create a diverse and inclusive organization.

Learn how to successfully apply for grant funding.

Learn how to project a strong vision while providing wide open space for others to become co-creators.

#### **Riley County Public Health Department Contact Tracing**

Learn about the systems being used for contact tracing.

Learn to use contact tracing methods as a population-based intervention.

Learn about the wider system that surrounds contact tracing; medical system, legal supports and constraints.

### **Primary focus**

#### **UFM GRO Initiative**

Build partnerships with organizations and individuals for learning and gardening together. Lead teams for inaugural growing season of 2021 (March through September).

#### **Riley County Public Health Department Contact Tracing**

Ensure systems are in place for the smooth movement of information within the contact tracing team.

Provide nursing critical thinking skills in support of non-medical contact tracers.

Manage contact tracing team.

### **Activities to be performed**

#### **UFM GRO Initiative**

- Arrange and conduct "critical conversations" with community members, organizations, city government, etc., to assess needs and build program in keeping with the input from a wide range of stakeholders
- Five garden sites confirmed
- Minimum of one grant application submitted
- Grant administering organization confirmed and involved

#### **Riley County Health Department Contact Tracing**

- Provide oversight of staff, review procedures and propose solutions to any gaps found.
- Provide training on objectives and focus of contact tracing work and set the tone at the worksite.

## **Anticipated products**

### **UFM GRO Initiative**

1. Outreach flyers for recruitment of Gardening Team members.
2. Grant proposal documentation.

### **Riley County Health Department Contact Tracing**

1. The development and implementation of spreadsheets to manage positive COVID-19 cases.
2. Maintain management systems that change in response to changes in workload and staffing to continue to meet the objective of calling every citizen who tests positive on the day their test results are received.

## **Project Description - UFM GRO Initiative**

Designing the GRO Initiative was the primary focus of my work with UFM. The idea of communal gardening to increase physical activity, reduce social isolation, and increase access and intake of fresh produce was in the early stages of development at the beginning of my internship experience. Initiating and attending meetings with a variety of experts and community members was a primary responsibility in the beginning stages of development. Their input and guidance determined the direction of the Initiative.

### **Critical conversations**

Local non-profit sector organization representatives who spoke with me included; Resiliency Coalition, Manhattan Alliance for Peace & Justice (MAPJ), Kansas Association for Conservation & Environmental Education (KACEE), Northview Rising, BikeWalkMHK and Wonder Workshop. Additionally, Wasatch Community Gardens in Salt Lake City took the time to explain their partnership with the city and county whereby they oversee the development of Community Gardens on publicly owned land when requested by the surrounding community.

As the concept of communal gardening on private land was explored, churches become one potential source of gardening plots. Many churches agreed to meetings; Ecumenical Campus Ministries (ECM), Trinity Presbyterian, Unitarian Universalist Fellowship Manhattan, Bethel African Methodist

Episcopal (AME), Islamic Center of Manhattan, Seven Dolors Catholic Parish, Manhattan Mennonite Church, as well as one of the teachers at Flint Hills Christian School.

A third group of “meetings” took place with neighborhood folks as they walked by and engaged with the garden in my front yard on Colorado Street. This first communally-gardened yard served as a talking point for spontaneous conversations. These conversations, while informal, resulted in a neighbor committing space for a GRO garden for the growing season of 2021, the creation of a logo by an experienced artist, and the opening of a Discord messaging account for team communication by an experienced computer programmer.

Providing GRO gardeners with formal learning opportunities during the first growing season became one of the project aims. To this end, relationships were initiated with Kansas Permaculture Institute and K-State Research & Extension. UFM itself is a third source of knowledgeable gardening instructors.

Lastly, a Manhattan City Commissioner, Aaron Estabrook, met with me regarding this communal gardening project and provided several contacts within the city and school system.

### **Gardener Recruitment**

Several techniques were used to recruit gardeners. In partnership with Seven Dolors Latino Liaison, Gloria Green, flyers were created in English and Spanish to reach that community. This outreach was directed at the downtown area surrounding Poyntz Avenue. A flyer was made specifically for door-knocking around the neighborhood of Trinity Presbyterian. Trinity is located on the west side of K-State. A presentation was created and given via Zoom to the Northview Rising group. This outreach was focused on the Northview neighborhood east of Tuttle Creek Boulevard. Here again, talking to neighbors around my home served to recruit gardeners for a local garden to the south of City Park. The flyers and presentation can be found in Appendices 4, 5, and 7.

### **Grant Writing**

A grant for tools, plants, and staff support was originally written using the template of the Greater Manhattan Community Foundation. This document was continually edited in response to expert



advice and community input. From June 15 to September 14, this document went through 14 revisions. Grant opportunities, grant selection, and grant writing were discussed extensively with my mentor at UFM, Linda Teener, Christian Watkins of ECM, and Laura Downey of KACEE. At Linda's suggestion, we applied to the Caroline F. Peine Foundation for grant funds. The Peine Foundation grant process starts with a Letter of Intent. This letter was drafted by me based on a model letter provided by Linda. Linda provided edits and support. The Letter of Intent was sent in September and accepted in November. It is available in Appendix 2.

### **Project Description - Riley County Health Department Contact Tracing**

My observations contributed to the development of several process improvements at the contact tracing site. Tracers switched from taking interview notes on a printed copy of one of the three online surveys to using one combined Note Sheet appropriate to all three surveys. Two contact tracers who assumed the majority of the clinical responsibility on the team worked with me and Andrew Adams, to make the following additional adjustments to processes.

1. Contact tracers did not have access to the results of the emailed daily monitoring data. This issue was resolved once the difficulty was understood by management.
2. Contact tracers were given greater access to the data they needed to make informed decisions regarding isolation/quarantine guidelines by the updating of individual timelines with the previous day's survey data then uploading the document to each work computer before the front line contact tracers arrived in the morning.
3. Contact tracers were able to see their cases and contacts and their newly assigned cases on color-coded tabs within shared documents.

As noted elsewhere, processes were altered as the situation changed. "Improvements" made when cases were low in number were no longer workable as cases increased from less than 10 a day to over 50 each day. I continually brainstormed with front line contact tracers and leadership team members to find ways to keep up with the caseload. After consulting with everyone on the team, we

would implement the changes needed to continue to meet our objective of calling every new case on the day we received it. The streamlined process became:

1. Survey data was uploaded to an online shared drive that was accessible to all staff on their work computers in the EOC.
2. Tabs were no longer made; color coding was discontinued.
3. A separate new file was created that accumulated all positive cases that came in, as cases were assigned, the contact tracer's name was added to this master list. This allowed leadership to know who to talk to if issues arose.
4. Each contact tracer was responsible for maintaining their own system of information management. A paper Contact Tracer Note Sheet was provided. Most tracers chose to maintain a sheet for each positive and each contact. This sheet became the system of record for isolation/quarantine timelines.

I learned that Kansas Train had several relevant trainings that were accessible to all contact tracers but contact tracers had not been required to take these trainings. With Andrew's permission, I instructed all contact tracers to complete 'Every Contact Counts: Contact Tracing for Public Health Professionals.' This training went into much greater detail on Covid-19 traits, isolation/quarantine timelines and decision-making than previously completed trainings.

## **Chapter 3 - Results**

### **UFM GRO Initiative**

I developed the GRO Initiative as a population-based program to be implemented in the 2021 growing season under the auspices of UFM Community Learning Center. With mentorship from Linda Teener, Executive Director of UFM, and in consultation with agencies and individuals in the Manhattan community, GRO leverages available resources to address food security and strengthen community connections.

Two organizations, ECM and Trinity Presbyterian, have agreed to provide land for a garden. Homeowners at 1130 Colorado have also agreed to their yard being used. Neighbors of 1130 Colorado have met to envision the garden there. Plans are in place to create garden beds in early spring.

A new branch of Community Gardening has been proposed and funding has been applied for. If funded, a set of tools and infrastructure will be provided to each Gardening Team, plants of the teams choosing will be provided, and a paid coordinator will provide support and logistics.

Relationships have been formed with the Kansas Permaculture Institute and Cooperative Extension such that a seasonally appropriate schedule of monthly educational gatherings can be run during the growing season of 2021.

### **Riley County Health Department Contact Tracing**

The Contact Tracer Note Sheet was created by me and is available at the end of this document in Appendix 9.

I collaborated in creating a master list of positives and contacts after creating individual tabs was no longer feasible. A set of HIPAA-complaint screen shots of this document are available in Appendix 9.

The main results of my internship with the contact tracers do not lend themselves well to inclusion in an appendix. The result of my presence in the role of was a contact tracer team that was

informed, respected, and participated at a higher level of competency and performance. They received greater clarity of purpose, instruction on how to best think out decisions and an “open door” policy to run any new situation by a nurse. My inclusion in the leadership team enhanced the working of that team and continues to influence workflow and processes at the site. It is my opinion that the goal of reducing transmission of COVID-19 in Riley County was strengthened by my presence at the contact tracing site.

## Chapter 4 - Discussion

### UFM GRO Initiative

Building this Initiative taught me about the challenges of matching public health knowledge of what *would be* good for a population long term with what a population values currently. Initiative development in this context was all about relationship building. Creating an Initiative that allows people opportunities to comfortably participate is only possible with the input of a diverse group of people.

In determining first steps, it was hard to know whether to prioritize assessing land or recruiting gardeners. I decided to focus on acquiring land for the growing season of 2021 while talking to organizational representatives, neighbors near gardening sites, and others about recruiting gardeners. Giles Larson from Wasatch Community Gardens contributed an opposing perspective, saying that it was only when a neighborhood had enough signatures of interested potential gardeners that Wasatch would take action to build the garden. Salt Lake City has a large and vibrant local food scene. Carol Barta, the current manager of the UFM Community Gardens, was helpful in describing the community gardens in Manhattan. She and others found increased interest in gardening over the summer due to the uncertainties brought on by the COVID-19 pandemic. It is my hope that this interest will remain high during the coming gardening season.

### Riley County Public Health Department Contact Tracing

Coming to understand the severe limitations placed on contact tracing efforts by our medical non-system, political interventions, and a hesitation to participate on the part of some citizens, it quickly became clear that this was a perfect opportunity to practice the philosophy embodied by the Serenity Prayer (Niebuhr, 1944).

God, grant me the Serenity to accept  
the things I cannot change,  
the courage to change the things I can,  
and the wisdom to know the difference.

I asked pertinent questions of my preceptor to understand the systems that were in place at the time my internship started. Systems within the contact tracing unit were put together in response to a rapidly changing situation by regular staff who were pulled away from their normal duties. The new hires tasked with taking over the contact tracing activities inherited this newly created flow of information. Some aspects of the system were still being developed. Other key factors were out of the scope of influence of contact tracers. Regarding testing, several challenges persisted, particularly early in the pandemic including availability of testing, time needed to run the test, processes for results to get from the lab to the clinic to the Health Department to the contact tracers. All these limited the effectiveness of contact tracing efforts. The contact tracing leadership team gained understanding of what was within our influence and took proactive steps to improve the processes within the EOC.

## **Chapter 5 - Competencies**

### **Student Attainment of MPH Foundational Competencies**

*Competency 9: Design a population-based policy, program, project or intervention*

#### **UFM GRO Initiative**

The GRO Initiative was developed as a population-based program to increase local food production, strengthen neighborhood ties, and positively impact the health of individual gardeners through exercise and diet. It was knowledge gained from such classes as the Social and Behavioral Basis of Public Health and Public Health Nutrition that led me to suggest a simple intervention to address a multitude of population-level challenges. Neighbors gardening together and sharing the products of their labor addresses a variety of public health objectives including reducing chronic disease through diet and exercise and creating urban green space that reduces stress and builds social capital. To turn a simple idea into a viable extension of the UFM Community Gardens required me to engage with stakeholders outside of traditional “public health.”

#### **Riley County Public Health Department Contact Tracing**

In a small way, I contributed to the design of the contact tracing program in Riley County. When I arrived, there were supposed to be two ways that contact tracers could follow residents who tested positive and their contacts, through a daily email or a daily phone call. In reality, contact tracers did not have access to the results of the emails so they had no choice but to call each person daily to learn of their health status. Once I explained to my preceptor that contact tracers needed the health status data to make informed decisions regarding release from isolation or quarantine, he started sending us this data daily.

As workflow increased, I was part of the leadership team that determined how the data management system could be simplified to ensure we continued to meet our goal of reducing

transmission of COVID-19. It was important to be clear about priorities. A list was made and posted, priorities for front line contact tracers were identified:

- 1) Call all new positive cases
- 2) Call their contacts
- 3) (Pass onto leadership) isolation/quarantine letters requested by cases/contacts
- 4) Review email monitoring data, make calls for daily follow up, prioritizing those within 72 hours

of anticipated release from isolation/quarantine.

I learned that in evolving situations the design of a program may require on-going assessment and reconfiguration to be effective.

*Competency 13: Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes*

In the GRO initiative, the early stages of program development focused on reaching out to experts at the intersection of nonprofits and urban agriculture. My basic search strategy was to reach out to people familiar to me who could provide advice based on their professional and/or personal experiences. During each interview I would ask if they knew anyone else I should speak to and if they would be willing to connect me with that person or organization. In this way I was introduced to nutrition educators, community gardeners and organizations with land available.

While GRO does not, strictly speaking, need grant funding to move forward, but material resources will be needed for gardening efforts to be successful. Grant funding would allow equitable access to these resources including tools, infrastructure, and support staff. To this end, some of the earliest conversations explored grant funding, what organization would best fit the objectives of this public health intervention and provide administration of any grant funds. K-State Research & Extension, ECM, MAPJ, and UFM were proposed as potential grant partners.

Ultimately, it is community members themselves who are the primary stakeholders in the transformative work of GRO. It is the land, labor, and imagination of local people that will create and



support sustainable lifestyles in urban neighborhoods. A variety of strategies were used, and will be used, to recruit gardening team members. One technique is to identify current and future gardeners among neighbors and bring them together to envision a communal garden and identify/volunteer space for such a garden. In neighborhoods where gardening space has been offered first, door knocking can be done. Partnerships with neighborhood organizations and churches can be helpful entry points for connecting to local communities and growing spaces. Trinity Presbyterian has committed to providing gardening space, while Northview Rising invited me to speak at one of their monthly meetings about the GRO Initiative. The seed is planted!

*Competency 14: Advocate for political, social or economic policies and programs that will improve health in diverse populations*

Creating an inclusive organization was one of the dominant concerns when first conceptualizing GRO. Here is some of the language included in early outreach emails to citizens and organizations.

a) “[I was thinking about] how to create a diverse, inclusive organization. I would like local people to know how to grow food, but I have no interest in creating another White space where those without are taught how to be by those that have.”

b) “The idea is that through real life experience of working together, many of the barriers and assumptions we have about one another can be broken down, strengthening our community and making it more tolerant and inclusive. Further, this Initiative is not about educating poor people, it is about working, learning and growing together.”

As documented in Chapter 3, diverse communities were interviewed during these initial “critical conversations.” People representing various races, religions, classes and sexual orientations were invited to give input and take part in envisioning. Multiple stakeholders mentioned that the current community gardens are a social space dominated by white community members. An advantage of gardening in urban neighborhoods is that the cultural norms and traditions of the teams are set at the team level. Teams can be diverse groups of citizens or all from one self-recognized group. Monthly

gatherings are a time when these groups can get together in shared social space to offer what they know and have learned with one another. Recognizing and honoring diverse backgrounds is a foundational principle of this Initiative.

The design of GRO is specifically intended to allow people, regardless of income or social status, access to the resources needed to grow food successfully. These resources include land, seeds, tools, knowledge, and labor. While individuals can make additional material contributions as they see fit, the basic tools will be provided to each team. There are no qualifying requirements to participate in this initiative. The contributions of team members are self-determined. Team members are free to volunteer land they own, time they have, and knowledge they are willing to share. The structure of teams within a wider initiative maximizes local decision-making while allowing space for sharing and respect between these micro-cultures.

*Competency 16: Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making*

Portions of this competency were demonstrated at each of my internship placements.

### **UFM GRO Initiative**

GRO development involved having a vision, describing that vision to stakeholders and altering the vision to be representative of a broad audience. Interviews with experts and community members filled in specifics, such as how much land would be needed, while loosening leadership expectations of exactly how teams would be managed. A small-scale example of empowering others was facilitating neighbors themselves to determine if beds would be created in the fall or spring. Fostering collaboration between neighbors to grow food together is the predominant focus of GRO.

### **Riley County Health Department Contact Tracing**

At the contact tracing site, fourteen people with great variation in professional experience were tasked with interviewing and monitoring residents who have tested positive for COVID-19 and their contacts. Health Department representative Andrew Adams, while he was in charge, stopped by for brief periods

but was not continuously present on site. The entire team worked in an open room, similar to a school gym. All staff were paid the same and have the same job description. However, before the beginning of my internship, two team members had come forward with skills and willingness to provide leadership and management to the team. Due to my nursing background and previous position as an intern at Riley County Public Health, I was given an informal mandate to work with them in a leadership role. I started my internship with the contact tracing team on July 30<sup>th</sup>. Although this paid internship was expected to start in early July, my roommate was exposed to COVID-19 at her workplace and (10 days after symptom onset) received positive test results. As a household contact, I spent the majority of July in quarantine. This turned out to be excellent preparation for my position with the contact tracing team. Andrew Adams served as my preceptor. I learned from him about the flow of information within the contact tracing unit. He explained how positive cases were received at the health department, provided to contact tracers at the EOC, investigated and monitored for their isolation or quarantine periods and released as appropriate per Kansas Department of Health and Environment protocol. COVID-19 contact tracing was a unique workplace setting in that a group of new staff, playing a novel role with no common professional experience, had the opportunity to build a cohesive team based on individual strengths. Getting buy-in from each member of the team was important to maximize performance. Providing clear, rational, and transparent communication was one way to respect and include the contact tracers. One way that I displayed leadership was by explaining the rationale for quarantine release or extension using my medical training as a nurse. This allowed contact tracers to better understand and articulate to the public why particular recommendations were made. It was vital to set a goal and stick to it as the external situation changed and internal processes were adapted. The goal, as articulated on day one was, and still is, *reduce transmission of COVID-19 in Riley County*. The objective for contact tracers was to reach people who tested positive and their contacts and provide timely and accurate recommendations regarding isolation and quarantine. Other concerns on the table, such as data collection, the reputation of public health, smooth workflows for

contact tracers, were valid, but secondary to the primary goal. As a leader at the contact tracing site I constantly spoke of the stated goal in the early weeks of my internship. By consistently making this goal the focus of my actions, the team gained confidence in my motives and felt greater confidence in the objective. It is my impression that they felt welcomed to provide feedback on internal processes, on which they were acknowledged to be front line experts. As specific medical situations came up, I was available to think them through with the predominantly non-medical contact tracers.

*Competency 21: Perform effectively on interprofessional teams*

As mentioned earlier, contact tracing required working with people from a variety of professional backgrounds. I interacted with full-time staff at the Health Department, particularly during the time of staff transition when Andrew Adams left. As our goal of reducing transmission called for, I reached out to clinics and providers to ensure timely results and/or address complications. Community members, businesses leaders, and medical professionals occasionally called in with questions or concerns. To the extent that they were working to gain clarity on, and reduce transmission of, COVID-19, these folks were also part of the team. I reach out to physicians that are named as close contacts and can otherwise navigate medical settings through connecting with nurses. Colleagues at the contact tracing site see me as someone who can work effectively with citizens and professionals serving in various capacities.

**Table 5.1 Summary of MPH Foundational Competencies**

Number and Competency		Description
9	Design a population-based policy, program, project or intervention	Develop Gardening Teams as a functional program to learn/share gardening skills and enhance social engagement and cohesion. Major benefits of increased vegetable intake and increased physical activity.
13	Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	Program development requires identifying and engaging with stakeholders and current programs. Growing and eating food produced in partnership with diverse others influences public health outcomes by decreasing sedentary behavior, decreasing social isolation and stigmatization between groups, decreasing chronic disease through increased vegetable intake and changing food habits over time.
14	Advocate for political, social or economic policies and programs that will improve health in diverse populations	Creating public/private partnerships that allow those without land access to land to grow food while intentionally and respectfully engaging diverse individuals and communities, opportunities for individual health improvements will be made available. Built environment changes that will benefit community health will be achieved through increased community engagement and neighborhood pride.
16	Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making	Developing Gardening Teams requires leadership and collaboration. Getting a new Initiative off the ground IS creating a vision. The Initiative intentionally engages with diverse groups and subject experts to make decisions that will result in successful food production and the creation of a welcoming space for a diverse population. The contact tracing role provides an opportunity to focus a vision and empower others to be effective in carrying out that vision. Leadership skills are

		used to keep the team informed, set a tone of universal competence and achieve buy in.
21	Perform effectively on interprofessional teams	<p>Contact tracing for Riley County requires the ability to work closely with staff from many professional backgrounds also well as staff of medical clinic and other agencies.</p> <p>The Neighbor Gardening Teams welcome anyone to contribute and act. The organizations and citizens who come forward are from the non-profit sector, religious organizations and schools.</p>

**Table 5.2 MPH Foundational Competencies and Course Taught In**

<b>22 Public Health Foundational Competencies Course Mapping</b>	<b>MP H 701</b>	<b>MPH 720</b>	<b>MP H 754</b>	<b>MP H 802</b>	<b>MP H 818</b>
<b>Evidence-based Approaches to Public Health</b>					
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	x		x		
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	x	x	x		
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	x	x	x		
4. Interpret results of data analysis for public health research, policy or practice	x		x		
<b>Public Health and Health Care Systems</b>					
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings		x			
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels					X
<b>Planning and Management to Promote Health</b>					
7. Assess population needs, assets and capacities that affect communities' health		x		x	
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs					X
9. Design a population-based policy, program, project or intervention			x		
10. Explain basic principles and tools of budget and resource management		x	x		
11. Select methods to evaluate public health programs	x	x	x		
<b>Policy in Public Health</b>					
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence		x	x	x	

13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes		x		x	
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations		x			X
15. Evaluate policies for their impact on public health and health equity		x		x	
<b>Leadership</b>					
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making		x			X
17. Apply negotiation and mediation skills to address organizational or community challenges		x			
<b>Communication</b>					
18. Select communication strategies for different audiences and sectors	DMP 815, FNDH 880 or KIN 796				
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	DMP 815, FNDH 880 or KIN 796				
20. Describe the importance of cultural competence in communicating public health content		x			X
<b>Interprofessional Practice</b>					
21. Perform effectively on interprofessional teams		x			X
<b>Systems Thinking</b>					
22. Apply systems thinking tools to a public health issue			x	x	

## Student Attainment of MPH Emphasis Area Competencies

**Table 5.3 Summary of MPH Emphasis Area Competencies**

<b>MPH Emphasis Area: Public Health Nutrition</b>		
<b>Number and Competency</b>		<b>Description</b>
1	<b><i>Information literacy of public health nutrition</i></b>	Inform public health practice through analysis of evidence-based policy, systems, and environmental change.
2	<b><i>Compare and relate research into practice</i></b>	Examine chronic disease surveillance, policy, and program planning and evaluation, and program management, in the context of public health nutrition.
3	<b><i>Population-based health administration</i></b>	Critically examine population-based nutrition programs.
4	<b><i>Analysis of human nutrition principles</i></b>	Examine epidemiological concepts of human nutrition in order to improve population health and reduce disease risk.
5	<b><i>Analysis of nutrition epidemiology</i></b>	Describe criteria for validity in nutritional epidemiological methodology.

**Table 5.4 MPH Emphasis Area Competencies and Course Taught In**

<b>MPH Emphasis Area: Public Health Nutrition Course Mapping</b>		
<b>Number and Competency</b>		<b>Course Taught In</b>
1	<b><i>Information literacy of public health nutrition</i></b>	FNDH 600 Public Health Nutrition FNDH 700 Global Health & Nutrition FNDH 880 Graduate Seminar in Human Nutrition
2	<b><i>Compare and relate research into practice</i></b>	FNDH 780 Functional Foods for Chronic Disease Prevention FNDH 700 Global Health & Nutrition FNDH 880 Graduate Seminar in Human Nutrition MC 750 Strategic Health Communication
3	<b><i>Population-based health administration</i></b>	FNDH 600 Public Health Nutrition FNDH 880 Graduate Seminar in Human Nutrition
4	<b><i>Analysis of human nutrition principles</i></b>	FNDH 844 Nutritional Epidemiology FNDH 700 Global Health & Nutrition
5	<b><i>Analysis of nutrition epidemiology</i></b>	FNDH 844 Nutritional Epidemiology FNDH 880 Graduate Seminar in Human Nutrition

*Competency 1: Information literacy of public health nutrition*

Several classes contributed to my ability to review nutrition research and apply it to the development of a public health intervention. Public Health Nutrition (FNDH600) introduced me to many of the federal programs addressing the nutritional needs of the public. This class also provided valuable information about the political and economic realities that effect these program guidelines. Graduate Seminar (FNDH880) provided an opportunity to review the impact of school and community gardens on diet. Global Health & Nutrition (FNDH700) introduced me to research on micro and macronutrients in various diets, including plant-based diets. These classroom experiences contributed to the development of GRO, specifically regarding the list of vegetables available.



### *Competency 2: Compare and relate research into practice*

Not mentioned in Table 5.4 is the contribution of core classes to this competency. Social & Behavioral Basis of Public Health (MPH818) helped connect economic factors to increased risk of disease. Introduction to Epidemiology (MPH754) provided a first exposure to disease surveillance. I elected to take Strategic Health Communication (MC750). This class introduced theoretical frameworks to use when developing and managing programs designed to influence health behaviors. These frameworks were applied when developing the gardening intervention and when guiding the contact tracers in provide timely, accurate recommendations to the public.

### *Competency 3: Population-based health administration*

Public Health Nutrition class provided the information needed to critically examine nutrition programs. The nutrition education programs offered through K-State Research & Extension were indirectly examined during the development of the GRO Initiative. In a very broad way, I applied my understanding of climate impacts to food insecurity interventions being currently offered in Riley County. Provision of industrial food products through mechanisms such as food banks and donation boxes do not adequately address the upstream causes of food insecurity. There are many current reasons for food insecurity including severe income inequality and an economy crippled by the shutdowns of the COVID-19 epidemic. Future contributors will include reduced crop yields and interruptions in the wider food system. What is called for are radical new interventions that provide people with the tools they need to provide for themselves.

Contact tracing is intended to reduce transmission in a population by quarantining people who test positive and the people who are known contacts to them. The focus in contact tracing is the exposure of individuals to one another, not the health care of the individuals themselves. This population-based intervention can be quite effective if the legal and social supports are in place to ensure people honor the quarantine instructions. In Kansas during the COVID-19 pandemic, legal

support is severely lacking. To the contrary, House Bill 2016 passed in June required contact tracers to state that participation was voluntary and to get verbal permission to reach out to any contacts they named. Social supports are also lacking, some household members are asked to be in quarantine for 24 days. Public Health has fewer resources than I believe are necessary to help these citizens get their needs met during this extended period.

#### *Competency 4: Analysis of human nutrition principles*

Nutrition-focused research articles have much to say about what foods to include in an optimal diet. Nutritional Epidemiology (FNDH844) taught me that sometimes study methods or statistical analyses have near fatal flaws. Often study conclusions contradict one another. My study of studies did not dissuade me from a couple basic principles of nutrition:

- 1) Start with whole foods
- 2) Energy intake should equal energy output

Broad conclusions from Epidemiology (MPH754), Functional Foods for Chronic Disease Prevention (FNDH 780) and Social & Behavioral Basis of Public Health (MPH818) would support a diet high in fresh food and a lifestyle including moderate exercise to prevent disease. These principles were applied during my internship with UFM.

The GRO Initiative aims to connect and empower community members to share land, the work of growing food and the food produced. Food grown in a garden consists of whole, fresh foods. Gardening requires physical activities to plant, care for and harvest the food. The intention is that people who do not have access to land, perhaps they live in apartments or cannot afford to purchase property, can grow food through participation in GRO. Material barriers are overcome through a combination of grant funding and neighborly cooperation. Families who cannot afford fresh produce would be able to access these healthy foods while contributing their skills and labor during the process of gardening.

### *Competency 5: Analysis of nutrition epidemiology*

The core classes of Epidemiology (MPH754) and Biostatistics (MPH701) were built upon in Nutritional Epidemiology (FNDH844). Nutritional Epidemiology specifically taught criteria for validity of nutritional studies. These studies generally look at the effect of diet on individual health factors. MPH courses have taught me to be aware of the socioeconomic factors that are also at play. As a contact tracer during the COVID-19 pandemic, under the current administration, it has been important to recognize the limitations in food access that families are encountering. Household quarantines can last as long as 24 days. This amount of time away from work can certainly affect food access. As a public health professional in nutrition, accessing and assessing nutritional studies is foundational to developing appropriate interventions, however, without access to food resources segments of the population will not reap the benefits of nutrition science.

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# Appendixes

## Appendix 1

### ***Gardening Teams Grant Proposal***

Dear Friends and Fellow Community Members,

You have expressed interest in, or, more likely, I have enthused at you, about an idea I have for people to grow food together and share it. Here is that idea in writing. I am requesting input and collaboration from you. I have just the seed of an idea. Perhaps with watering from lots of people and organizations it can grow into a tree of abundance and joy.

## Neighborhood Gardening Teams: A cooperative food production initiative

### **A. Project Goals**

- 1) To make a significant impact on the food security of team members and their families.
- 2) Increase knowledge and skills needed to grow and consume your own food.
- 3) Build ongoing communities of mutual support and interdependence around food production activities.

### **B. Project Description**

The goal of this initiative is to connect community members with land and each other to grow food and share it. The standard team would consist of four to six people. Each team member would bring their labor and expertise. All team members would work in the garden and share the food produced.

The Neighborhood Gardening Teams Initiative creates space for fully-functional teams of gardeners to come together. Team members are the decision makers in their gardens to the extent embraced by the team. Initiative staff are available to facilitate, consult, and connect teams with human and material resources. Activities the NGTI will undertake....

- Pre-season land assessment and plot preparation
- Pre-season commitment and logistical arrangement with land owners

- Connect experienced local gardeners with each team; mentors encouraged to be available to answer questions, visit the garden weekly
- Fall cohort gathering to get to know one another, assessment of Team Member assets and skills
- A Team meeting on site in early March to assess state of beds, prep for planting, Team determination of work schedule for ongoing maintenance and upkeep of garden
- Discord communication app for group chatting within and between Teams
- Selection of common plants/seeds at appropriate time to be provided by Initiative and planted by Team
- Additional team specific plants as determined by team consensus
- In partnership with teams, determination of garden layout to maximize harvest
- Ongoing visits by Initiative coordinator; minimum of once per week
- Home gardening factsheets on individual plants, weekly Community Garden Newsletter
- Monthly education and social gatherings at a central location, preferably outside;
  - to include a group activity / learning experience by gardening expert or team member who is willing to share their skill or interest
  - 5-minute share from each Team
  - Team members to bring food, ideally to highlight foods grown in the gardens
- Use of commercial kitchen for food preservation
- Experiential cross team learning by sharing recipes, food preservation skills, social events, etc.

### Landowner expectations

#### A) Organizations

- (1) Organization commits to provide land for one growing season.
- (2) At the end of the season (September) renewal or withdraw will be discussed. Garden Team to prepare plot for next season or return plot to state requested by Organization if no Gardening Teams garden anticipated for next growing season.
- (3) Members of the organization can choose to be part of a Gardening Team if they wish.
- (4) Additional contributions of the Gardening Team to the welfare of the Organization to be determined between Initiative, Gardening Team and Organization. (Eg. grounds pick up)
- (5) Team members having bathroom access would be ideal but not required.
- (6) Provision of tool storage space to be provided by Organization or, if unavailable, arranged by Initiative.

#### B) Home owners

- (1) Home owner commits to provide land for one growing season.
- (2) At the end of the season (September) renewal or withdrawal will be discussed. Garden Team to prepare plot for next season or return plot to state requested by Home owner if no Garden Teams gardens anticipated for next growing season.

- (3) Home owners may choose to be on the Gardening Team or not, but still receive an equal portion of the food produced.
- (4) Additional contributions of the Gardening Team to the welfare of the Homeowner to be determined between Initiative, Gardening Team and Homeowner. (Eg. mowing the grass)
- (5) Team members having bathroom access would be ideal but not required.
- (6) On site tool storage space to be worked out between Homeowner and Initiative.

#### Space requirements

Each garden team of four will tend a minimum of 4 beds of 4' x 12'. Individual teams can determine if they would like to make use of more space if and when available. Fewer beds could be considered for homeowners who want to participate but have less space to offer. Initiative will contribute \$25/month to the water bill of landowners for the 7 months of the growing season.

#### Team Member social contract / recruitment

Ideally local gardeners will come forward from the neighborhood directly around a garden site. Neighbors talking to neighbors, developing working relationships through on-going positive, organic interactions...Initiative staff will be responsive to the needs of gardens/neighborhoods vis-à-vis outreach and recruitment; creating flyers, door knocking, social spaces as co-created with Gardeners.

#### Time commitment

Monthly gatherings September through February leading up to growing season. Community building, food preservation, garden planning are anticipated during these gatherings.

For consecutive and productive food production, sixteen hours of labor is anticipated each week of the growing season, March through September. This works out to 4 hours per week per team member, less if the team is larger. Ideally, all 4 team members would be present in the garden at least once each week to work together and discuss/assess garden.

Monthly gatherings will continue during the growing season. Team members and mentors are encouraged to lead one of these gatherings; set the tone, flow, share/teach. Initiative will organize professional expert teaching if needed; i.e. K-State Extension, Kansas Permaculture Institute, etc.

### **c. Timeline**



June 2020 through February 2021 unfunded pre-pilot activities	Secure commitments to land  Recruit Gardeners  Design monthly gathering events for September through February  Determine Administering 501(c)3  Assess & prepare plots  Build organizational collaborations  Design assessment tools
March through September 2021	Growing season, details above
October 2021 unfunded post-pilot activities	Assessment of Season 1, write report  Affirm/renegeotiate with current land owners for 2022 growing season  Outreach additional landowners for 2022 season  Prepare plots for next season

## D. Partnerships with organizations, planned and potential

**UFM Community Learning Center:** Potential administrator of grant, mentorship in grant writing, has 47 years of experience with community gardening. Group classes on gardening, food preservation, herbs for healing, etc. available.

**Master of Public Health Program:** Program development support and potential student involvement.

**Ecumenical Campus Ministries (ECM):** Use of commercial kitchen at minimal costs to Initiative. Expert advice on grant writing, potential grant administrator, likely site.

**Bethel AME (African Methodist Episcopal):** Support of concept, experienced gardeners, ideas for possible sites and willingness to recruit folks.

**Manhattan Alliance for Peace and Justice:** Support of concept, potential grant

administrator, and potential connections for gardeners.

**Kansas Permaculture Institute:** Outreach initiated, involvement to be determined.

**K-State Research and Extension and Master Gardener Program:** Expert advice on gardening, school gardening initiatives, presentations at monthly gatherings on gardening topics, potential provision of mentors with Master Gardener training.

**MHK Resiliency Coalition:** Support of concept, exact role of Coalition to be determined.

**Trinity Presbyterian:** Garden site.

**Islamic Center of Manhattan Kansas:** Initiative discussed, initial positive reaction, follow up needed, potential garden site, potential gardeners.

**Flint Hills Christian School:** Initiative discussed, initial positive reaction, follow up needed, potential garden site, potential gardeners and Steering Committee participation.

**Northview Rising:** Support of concept, organization of garden site in Northview.

**Area Center on Aging:** Potential recruitment of homeowners or experienced gardeners willing to work with others.

**Horticulture Services:** Sponsorship of Teams through provision of tool kits, reduced price on set boxes of plants.

**Kaw Valley:** Sponsorship of Teams through set boxes of plants at discount price.

**HyVee:** Sponsorship of Teams through donation of food preservation supplies.

## **E. Food products and brief reasoning**

Suggested foods to be discussed, customized and added to at Teams discretion.

Budget per garden: \$200

These plants were specifically selected for

- 1) Likely success at producing food in Manhattan, KS
- 2) Nutritional value and diversity (i.e. micro and macronutrients)
- 3) Shelf stability to extend dietary contributions into the winter season

Spring	Planting Date	Harvest	Summer	Planting Date	Harvest	Fall	Planting Date	Harvest
Garlic	March	Fall/winter	Sweet potato	May	After Fall Frost	Spinach	Mid Aug	Until frost
Onion	March	Fall/winter	Winter squash	May	August	Lettuce	Mid Aug	Until frost
Lettuce	Early March	May	Spaghetti squash	Late April	August	Garlic	Sept	Over winter
Radish	Early March	May	Zucchini	Late April	July	Leek	Sept	Over winter
Spinach	Early March	May	Tomato	May	July			
Potato	Mid-March	July/winter	Cucumber	Late April	July			
Broccoli	Mid-March		Bell pepper	May	June			
			Black beans	Early May	After First Frost			
			Kidney beans	Early May	After first frost			
			Green beans	Early May	Early July			
			Snap peas	Early March	July			
			Basil / herbs	May	July			
			Cantaloupe	May	July			
			Watermelon	May	July			
			Broccoli	June	fall			
			Collard greens	June	Into winter			

## F. Budgets / Project Expenses

### Materials

<b>Tools</b>	<b>Cost / team</b>	<b>Infrastructure</b>	<b>Cost / team</b>
Shovel x 2	\$40 x 5 = \$200	Double trellis (5ft)	\$8 x 5 = \$40
Hand Trowel x 2	\$20 x 5 = \$80	Climbing trellis (5ft) x 2	\$8 x 5 = \$40
Bow rake	\$25 x 5 = \$100	T-post x 14	\$60 x 5 = \$300
ProHoe	\$40 x 5 = \$200	Tomato cages (7ft) x 4	\$21 x 5 = \$105
Water Hose (100ft)	\$50 x 5 = \$250	Vigoro 100ft sturdy twists	\$3 x 5 = \$15
Tape Measure	\$10 x 5 = \$50		
Hand pruners	\$25 x 5 = \$125		
Tool sharpener	\$15 x 5 = \$75		
<b>Total</b>	<b>\$185 x 4 = \$740</b>		<b>\$100 x 4 = \$400</b>

	<b>GRANT REQUEST</b>	<b>APPLICANT'S CONTRIBUTION</b>	<b>OTHER RESOURCES</b>
<b>Land</b>	\$0.0	Land provided by individuals and organizations at no cost to Initiative	
<b>Personnel</b>	coordinator position \$1000/month during grouping season March-September	Initiative development so far	
<b>Supplies &amp; Materials</b>			
• Plants/seeds	\$200 x 4 teams = \$800		Request wholesale price from Horticulture Services
• Water	\$25/garden/month = \$700		
• Tools & infrastructure	\$285 x 4 = \$1140		Request sponsorship or donation from stores
• Preservation supplies	\$50 x 4 = \$200		Request sponsorship or donation from stores
• Soil assessment	\$7 x 4 gardens = \$28		
• Soil amendment	\$10 x 4 gardens = \$40		

• Mulch for when the weather gets hot	Research needed, buy hay from local farmer		
• Wood chips,compost	$\$80 \times 5 = \$320$		
• Monthly educational gatherings	$\$100 \times 10 = \$1000$		
• Water catchment system	$\$250 \times 4 = \$1000$		
<b>Space &amp; Maintenance</b>			
• Grass seed, etc. if land owner chooses to withdraw at end of season	$\$50 \times 4 = \$200$		
	<b>\$12,408</b>	<b>\$0.00</b>	<b>\$0.00</b>

## G. Grant opportunities

Greater Manhattan Community Foundation, Deihl Foundation grants (minimum of \$10,000)

Caroline F Peine Foundation, Manhattan Fund

Kansas Health Foundation Impact Capacity Grants (maximum of \$25,000)

USDA Specialty Crop Block Grant

USDA Urban Agriculture and Innovation Production Competitive Grants available for 2020. "Urban farmers and gardeners work among diverse populations to expand access to nutritious foods, foster community engagement, provide jobs, educate communities about farming, and expand green spaces." (Possibility in future years; \$100,000-300,000 for 12-35 months)

Historically, Kansas produced enough fruits and vegetables to feed its citizens, and also to export to other states. Currently, we produce less than 5% of our consumption needs.

<https://hnr.k-state.edu/extension/food-crops/local-foods/>

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***Letter of Intent Caroline F. Peine Foundation***

**1221 Thurston St, Manhattan, KS 66502 | 785-539-8763 | [info@tryufm.org](mailto:info@tryufm.org) | @ufmclc**

Caroline F. Peine Foundation  
Bank of America, NA, Trustee  
ATTN: Tony Twyman  
PO Box 419119  
Kansas City, MO 64141-6119

September 21, 2020

Dear Mr. Twyman,

UFM Community Learning Center is requesting \$12,500 from the Caroline F. Peine Foundation to support a new neighborhood community gardening project in Manhattan. The Neighborhood Gardening Teams (GRO) Initiative seeks to connect community members with land and each other to grow and share food at the neighborhood level.

The shutdowns of this year's COVID-19 pandemic have made clear the fragility of our food system. Restaurant closures, staffing disruptions and stay-home orders have greatly disrupted our food system resulting in large and growing pockets of hunger in our communities. Gaining the skills and support needed to grow food locally can help to address this ongoing situation.

Thinking more broadly, gardening increases physical activity, access to fresh food and much needed contact with the natural world. Gardening together strengthens neighborhoods and reduces social isolation. The Initiative will provide tools, plants, skills training, and social supports for Gardening Team development and success. With the support of the Peine Foundation, UFM will be able to grow neighborhood cultures around food and friendship, cultures in which local citizens can thrive in an uncertain future.

UFM has 46 years of experience with community gardens, currently managing two sites with a total of 280 plots. On average, 185 families garden each year at the community garden sites. The GRO Initiative is intended to reach individuals and families within neighborhoods who would

not take on a plot of their own, due to a host of barriers including inexperience, transportation, or unfamiliarity with community gardening.

During this time of Public Health crisis and political division, GRO seeks to proactively engage with people from diverse backgrounds to grow food and learn from one another in a smaller, more protected setting than the current community garden. Through lived experience, neighbors grow to understand each other, reducing division and building resiliency in the face of changing economic and environmental circumstances. Diversity and inclusion will be built into the social fabric of this Initiative, through outreach to minority communities, ground-up leadership and an assets-based approach. Decisions on what to grow and how to organize the work required will be determined at the team level with support from the coordinator as needed. This structure is intended to maximize team ownership while ensuring success at producing food and building positive relationships.

Trinity Presbyterian, Ecumenical Campus Ministries (ECM), and private yard space at 1130 Colorado will be the first GRO garden locations in the coming year. Northview Rising, a grassroots organization in the Northview neighborhood, will provide a fourth, yet to be determined, gardening space. For the Trinity and Colorado Street gardens, families from the surrounding streets will make up the teams. The team at ECM will consist of students already involved in the sustainability-focused activities there. While these communities have committed to the 2021 growing season, other neighborhood groups were contacted and have reacted positively, including Bethel African Methodist Episcopal Church, Seven Dolors Parish, and the Manhattan Islamic Center.

Relationships have been initialed between GRO and K-State Cooperative Extension and the Kansas Permaculture Institute. Adding these expert resources to UFM's current staff of gardening teachers will provide GRO gardeners with a wealth of information that is curated to fit their needs as new urban gardeners. This expertise will be shared at monthly gatherings. Currently planned learning includes garden design, seed starting and water saving for urban settings. Perhaps more importantly, the sharing of food will be a vibrant part of these community building events.

With the aim of reducing barriers to gardening, funds will be spent to address the following needs

- Physical materials - gardening tools, seeds, infrastructure (eg. tomato cages, rain barrels), wood chips, compost, water at a cost of \$1100 per garden
- Knowledge - a gardening expert will present on a seasonally appropriate topic at each monthly gathering at a cost of \$100 per event
- Social support and organization - a coordinator will recruit, maintain and support the gardens and gardening teams at a cost of \$1,000 per month from March to September.

The Neighborhood Gardening Teams (GRO) Initiative will offer equitable access to a most vital resource: food and the ability to grow it. From the COVID-19 pandemic to climate change impacts, this is a time that calls for innovative solutions to complex problems. GRO addresses a multitude of challenges using a simple, approachable concept of growing food together. This Initiative leverages resources we already have, land and people, to get something that can feel uncertain these days, food to feed our families. It will take consistency and hard work, but with the material support from the Caroline F. Peine Foundation, well-fed families tending and eating from GRO gardens could become the norm in vibrant, connected Manhattan neighborhoods.

Sincerely,

Linda Inlow Teener  
UFM Executive Director

Patty McKenna  
Neighborhood Gardening Teams Initiative Coordinator



### Appendix 3

***Gardening Site Assessment –Developed at the suggestion of Jerry Longren***

## Garden Site Assessment

Address: \_\_\_\_\_ Location/Neighborhood: \_\_\_\_\_

Organization/Homeowner: \_\_\_\_\_ Contact phone/email: \_\_\_\_\_

- ☐ Square footage being offered \_\_\_\_\_ Room for “extra beds”? \_\_\_\_\_
- ☐ Water
  - Distance from spigot to plots \_\_\_\_\_
- ☐ Bathroom assess
- ☐ Soil type \_\_\_\_\_
- ☐ Tool storage \_\_\_\_\_
- ☐ Sun exposure \_\_\_\_\_
- ☐ Drainage \_\_\_\_\_
- ☐ Current use \_\_\_\_\_
  - Bermuda grass? \_\_\_\_\_ Other invasive plants? \_\_\_\_\_
- ☐ On bus route

### Appendix 4

***Flyer for Trinity Presbyterian GRO Garden***

# Neighborhood Gardening Teams



Let's grow some food together!

Trinity Presbyterian and the Neighborhood Gardening Teams Initiative, known as GRO, would like to invite you to grow food at Trinity. In response to the pandemic and food security concerns, neighbors are joining together to grow food and share it.

GRO will provide:

- monthly educational gatherings starting this September
- a set of gardening tools
- access to plants/seeds
- social connections between new gardeners and experienced gardeners

Decisions about your neighborhood garden at Trinity will be made by you, the Gardening Team.

Four other neighborhood teams will be supported by GRO and participate in the gatherings.

We would love to share more details with you. Please reach out to us,

Patty McKenna

GRO Coordinator

1204 Colorado Street

253-970-7040

[pmckenna28@gmail.com](mailto:pmckenna28@gmail.com)

Pastor Jim Hawley

Trinity Presbyterian

1110 College Avenue

785-577-9330

[jimandaj@mac.com](mailto:jimandaj@mac.com)

## Appendix 5

**Flyer-Seven Dolors Catholic Parish—outlined by myself, formatted and translated to Spanish by Gloria Green, Latino Liaison**



**Equipos de Jardinería:**  
*Una iniciativa cooperativa de  
producción de alimentos*  
**Organizado por: Patty McKenna**  
**1204 Colorado Street**



¿ Quieren cultivar alimentos juntos y compartirlos?  
¿ Quieres construir comunidad con tus vecinos y amigos?  
Ven a ser parte de un equipo de jardinería!

Formas de que puedan participar:

- Tierra de jardín (200 pies cuadrados)
- Compromiso de un año
- Su trabajo
- Formar su propio equipo o estar conectado con otros



**GROW FOOD**

- unas 4 horas a la semana de Marzo a Septiembre de 2021
- su experiencia en jardinería, cocinar, construcción, arte, ayudar a las personas a llevarse bien y trabajar juntos.....realmente cualquier habilidad práctica que tenga... queremos aprender de USTED, nuestros miembros de la comunidad



Lo que el programa trae a la mesa:

- Reunión mensual ( empezando en Septiembre) donde aprenderemos, creceremos y jugaremos juntos (Zoom es una posibilidad dependiendo de la situación de Covid-19 en septiembre)
- compartir alimentos juntos
- compartir diversión y conocimiento



Actividades potencial:

Diseños del jardín, hacer señales para nuestros jardines,  
Fabricación de jardineras de cerámica, inicio de plantas a partir de la fabricación de sidra de semillas

Traiga su idea: Su conocimiento es bienvenido!!!

- un conjunto de herramientas de jardinería
- Presupuesto de \$200 para plantas/semillas por jardín
- ayudar a organizar la tierra / personas / construcción de equipos / ayuda con el horario / organización / realmente cualesquiera que sean sus necesidades particulares, estoy listo para ayudar



**Gloria Green**  
**785-317-5729**



**Neighborhood Gardening Teams:**  
*A cooperative food production initiative*  
**Organized by: Patty McKenna**  
**1204 Colorado Street**



*You are welcome to stop by and see my current garden*



Want to grow food together and share it?

Want to build community with your neighbors and friends?

Come be part of Neighborhood Gardening Teams!



Ways you can participate:

- land to garden (200 square foot minimum space)
- one year commitment
- your labor
- form your own team or be connected with a team of 4-6 others to

**GROW FOOD**

- about 4 hours a week March through September of 2021
- your expertise in gardening, cooking, building, art, helping people get along and work together.....really whatever hands-on skills you have...we want to learn from YOU, our community members



What the program brings to the table:

- monthly get-togethers (starting in September) where we will learn, grow, and play together (Zoom is a possibility depending to Covid-19 situation come September)
- share food together
- share fun and knowledge



Potential activities:

Garden design Calculate yields Make signs for our gardens  
Making pottery planters Starting plants from seed Cider making  
Bring your idea: Your knowledge welcome

- a set of gardening tools
- \$200 budget for plants/seeds per garden
- help organizing land / people / team building / help with schedule / organization / really whatever your particular needs are, I am ready to help



## Appendix 6

*Masthead with GRO logo created by Guy Powers*



## Appendix 7

*Northview Rising Neighborhood Night presentation slides*

# Neighborhood Night

September 3rd, 2020

- Eisenhower Community Center
- GRO - Neighborhood Garden Initiative
- Community Vision & Collective Discussion

# Neighborhood Gardening Teams Initiative



August 14, 2019





April 29, 2020



May 23, 2020



July 23, 2020







How can others get access  
to the resources that  
allowed me to success at  
growing food?

## GRO will provide

- A set of tools
- Seeds / plants
- Speakers at monthly gatherings
  - Team support
- Space to grow (food & vision)



People power

Community building

Grant writing

Sharing of resources

## What you can provide....

- Land
- Gardening skills / willingness to learn
  - Mentorship for new gardeners
  - Vision and leadership

Contact:  
Patty McKenna  
GRO Coordinator  
253-970-7040  
[pmckenna28@gmail.com](mailto:pmckenna28@gmail.com)  
Instagram pattymckenna8

Visioning & Community Dialogue

## Appendix 8

### MasterList CASES

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Case Status	Last Name	First Name	Date of Birth	Age	Gender	Street Address	City	State	Postal Code	County	Phone Number	Contact Tracer	Monitoring Start	Monitor End	Result Date	Swab Date
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	

### MasterList CONTACTS

	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Contact type	First Name	Last Name	Street Address	Apt/Suite	City	State	Zip	Email Address	Phone Number	Date of birth	Age	Gender	Parent Patient	Date of Last Exposure	Tentative quarantine release date
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																

## Appendix 9

### Contact Tracer Note Sheet

## CONTACT TRACER NOTE SHEET

### Demographics:

CONFIRMED CASE ☐

HOUSEHOLD CONTACT ☐

CLOSE CONTACT ☐

PROBABLE CASE ☐

Name (last, first): \_\_\_\_\_

Preferred phone: \_\_\_\_\_ Contact time: \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_

County of residence: \_\_\_\_\_

Birth date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Age: \_\_\_\_ Sex: ☐ Male ☐ Female ☐ Unknown

Occupation: \_\_\_\_\_

### FOR CONTACTS ONLY:

Who is the positive case? \_\_\_\_\_

Date of last contact: \_\_\_\_\_

### TESTING INFORMATION:

Date tested: \_\_\_\_\_

Date results: \_\_\_\_\_

Location tested: \_\_\_\_\_

POSITIVE

or

NEGATIVE

### Symptoms:

General symptom onset date (test date if asymptomatic positive case): \_\_\_\_\_

### BOTH CASES AND CONTACTS:

### Onset/End Date:

Fever: ☐ Yes ☐ No

Temperature: \_\_\_\_\_ °F

Cough: ☐ Yes ☐ No

Shortness of breath: ☐ Yes ☐ No

Difficulty breathing: ☐ Yes ☐ No

Loss of taste: ☐ Yes ☐ No

Loss of smell: ☐ Yes ☐ No

Other, specify: \_\_\_\_\_

### ONLY CONFIRMED/PROBABLE CASES:

### Onset/End Date:

Chills: ☐ Yes ☐ No

Muscle ache: ☐ Yes ☐ No

Runny nose: ☐ Yes ☐ No

Sore throat: ☐ Yes ☐ No

Nausea/vomiting/diarrhea: ☐ Yes ☐ No

Abdominal pain: ☐ Yes ☐ No

Headache: ☐ Yes ☐ No

### Other notes:

\*Day 0 is the symptom onset/test date for positive cases OR last known contact date for contacts.\*

\*Timeline starts 48 hours prior to Day 0 to encapsulate infectious period of positive cases.\*

Day	Date	Locations visited	Symptoms	Survey submitted?
-2				
-1				
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
<sup>o</sup> 11				
12				
13				
14				
<sup>o</sup> 15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
<sup>o</sup> 25				
26				
27				
28				

<sup>o</sup>denotes tentative out dates for isolation (Day 11) and quarantine (Day 15 for non-household contacts and Day 25 for household contacts).