

Back-to-College Challenge: Health Ambassadors for a Coordinated Culture of Safety and Wellness on WNC Campuses + Statewide Co-Morbidity Study

Project Overview

Our project has three coordinated aims:

1. To initiate a WNC University Health Ambassador program to engage campus communities in rapidly adopting safe, evidence-based practices to establish a culture of safety on the 6 regional campuses, and evaluate the effectiveness.
2. To research the impact of reducing social isolation by rapidly escalating the roll out of the Social Bridging Initiative. Designed to increase connection of socially-isolated individuals, especially older adults, the Social Bridging Initiative utilizes trained wellness volunteers to link people to community resources to reduce isolation, lower risk of COVID 19 infection, increase access to telehealth services, and increase wellness through access to programming and requested resources.
3. And to conduct a statewide study of comorbidity for individuals who have died from COVID-19. (See page 8 for summary of this aspect of the proposal; budget for all 3 components on page 9-10).

WNC University Health Ambassador Program

We propose to initiate an innovative WNC University Health Ambassador program at the six residential colleges and universities in the western region of the state. This program will employ and train a team of upper level student leaders to engage the student body in rapidly adopting safe, evidence-based practices that will quickly establish a culture of safety and prevention on campus. Leading conversations, training fellow students and monitoring safety practices in an age appropriate and creative manner should enhance more rapid acceptance and adoption of social distancing, wearing of face coverings, participation in symptom tracking and other measures that will minimize the impact of COVID infection on campus. These paid ambassadors will be trained well by UNC Asheville faculty and staff in conjunction with MAHEC medical and public health professionals and will share practical implementation successes with each other.

In addition, the six leaders of the institutions have agreed to a common mitigation strategy, including sharing a rapid response team run by MAHEC. The rapid response team will consist of trained medical professionals, on call to quickly follow up on positive symptoms, test, isolate, contact trace and quarantine in accordance with state and national guidelines. The response team will work with local health departments and colleges to react quickly and to continue to test. Student ambassadors will work with the team and help ensure that the student's non-medical needs are met.

This student-led, campus culture change along with the partnership with UNC Health Sciences at MAHEC represents an innovative approach to educate, inspire, and mitigate against a rapid and pervasive spread of COVID on campus and prevent closure of the campus. We intend to also employ UNCA faculty and students in a regional study of the process and effectiveness as a unique and novel approach to rapid, student-led, culture change and mitigation strategy. Not only will this project provide vital communication and services for the University and area communities in the time of crisis, but it will develop young people's interest in health-related careers and promote the health sector as a career choice for young people. We expect the results of this program to be published and widely disseminated to the rest of the state. We are requesting funding to implement, evaluate, and seed the sustainability of this effort.

Expanding and Studying the Impact of the Social Bridging Initiative

Student Ambassadors and community volunteers will also participate in a Social Bridging Initiative to help older adults (65+) and other with comorbidities, stay in their homes safely and receive benefits from willing and trained ambassadors. By doing this, team members will work with other agencies including Department of Health and Human Services and regional Area Agencies on Aging, to minimize the disproportionate impact on individuals with comorbidities (advanced age, diabetes, inactivity, etc.) which make them at higher risk to COVID.

In the state of NC, individuals age 65 and older account for 20% of COVID-19 cases and 85% of deaths due to COVID-19 (source: <https://covid19.ncdhhs.gov/dashboard/cases>). One in four residents in WNC is 65 or older, 64% of veteran in WNC are 65 or older, one in two have no vehicle available to them, and 16,500 individuals 65+ are living alone or with others not related to them as family. (source: [NC DHHS COVID-19: Cases](#)) In addition, there are 10,000 elderly living in long term care facilities in the 16 western counties in North Carolina. This is the major comorbidity associated with excess fatalities with COVID 19. In the United States, more than 30% of all deaths have occurred in residents of long-term care facilities and some states that percentage is over 50%. Of the six most common risk factors for social isolation for seniors in the US, NC ranks higher than the national average on 4 of these (disability, divorced/widowed/separated, homebound, and living below poverty level.) (source: [America's Health Rankings | AHR](#))

Social isolation leads to inactivity, increased cognitive decline, weakened immunity, and depression and anxiety (source; <https://www.cdc.gov/aging/publications/features/lonely-older-adults.html>). The Social Bridging Initiative utilizes undergraduate students, medical and pharmacy learners, and community volunteers to help socially-isolated older adults to learn and set up technology to access virtual social and medical visits. In addition, through calls to their homes the socially-isolated elders will be supported in connecting with evidence-based programs for remote disease risk management and fall prevention opportunities and resources for addressing social and behavioral determinants of health. They also will provide companionship and a bridge to the outside world of which they have been largely isolated. The effectiveness of this program will be evaluated and studied to assess the merits of expansion. In addition, it will provide valuable but safe, on- campus employment for students.

Context: A Coordinated Process of Safely Re-opening Campuses

In order to provide a safe, onsite, educational experience during the COVID-19 pandemic for Western NC (WNC) colleges and universities a team of chancellors, presidents and Mountain Area Health Education Center (MAHEC) leaders have been meeting weekly to prepare for an August reopening of the WNC Campuses. Considerations driving this preparation for reopening are numerous. Clearly, the situation will remain dynamic so the response will need to remain dynamic and will be driven by local case counts and other metrics, state phase, and regulatory guidelines. Plans to reopen campus for onsite instruction in August will include a combination of virtual education as well as in-person instruction but with significant modifications to traditional practices. Colleges and universities will need to alter the physical environment to accommodate physical distance guidance and gathering size limits. As it is not currently possible to guarantee safety, strategies will focus to prevent spread, isolate cases, and mitigate risks. Guidelines and plans will need to follow Governor's orders with respect to travel, sheltering in place and reopening campuses.

The overall plan for WNC college and university reopening is based on published general guidance on best practices for higher education, congregate living situations, and food service. Planning for environmental controls is underway and incorporates creating work and study areas that promote physical distancing, ensuring current airflow controls are working optimally, adding physical barriers to reduce close personal contact where necessary, following recommended guidelines for cleaning and disinfection practices, marking one way passage through buildings and down corridors and six feet of spacing in lines at high-traffic areas, and establishing a space plan for isolation and quarantine of students living in congregate settings. In addition, guidelines are being prepared for student, faculty and staff arrival on campus with regular symptom checking, testing, surveillance and monitoring, and systems for communication, and best practices in public health education.

While all of this work must and will continue in a coordinated manner, these last three, surveillance and monitoring, public health education, and communication efforts are the focus of this proposal. The proposed project focuses on research and activities related to monitoring, assessing and addressing the public health impacts of COVID-19 (priority 4).

Goals: Student, faculty, and staff teams at UNC Asheville will partner with MAHEC colleagues to:

- Develop a national best-practice to improve adherence with COVID prevention strategies and reduce COVID transmission in colleges and universities with on-campus congregate living through student peer-to-peer led education, communication and supporting case and contact intervention.
- Enhance community outreach, decrease social isolation and improve well-being of older adults and other socially isolated community members through connection by expanding the Social Bridging Initiative.
- Safely employ 100+ learners and recent graduates from 6 residential campuses in WNC to participate in the Back-to-College Challenge, the Social Bridging Initiative and applied health and social science research.

- Study and report on the impact of these two initiatives as important elements in a statewide response to the COVID-19 pandemic.

Participating colleges and universities: University of North Carolina Asheville (UNC Asheville), Western Carolina University (WCU), Brevard College, Mars Hill University, Montreat College, and Warren Wilson College.

Intervention: Hire and train student health ambassadors to serve as peer leaders, wellness supporters and COVID experts among their student body and with socially-isolated community members. Student health ambassadors will participate in peer education activities, facilitate communication on key COVID messaging including accessing symptom checking and testing, support case and contact follow-up and support and engage in social bridging calls to socially-isolated community members and peers.

Activities--UNC Asheville will partner with MAHEC to:

1. Educate--Create and evaluate appropriate health education for college and university students and WNC community members and provide initial and on-going education and support for student ambassadors and college and university faculty and staff.
2. Communicate--Develop and evaluate peer-to-peer communication strategies and communication with WNC community members for COVID interventions including COVID evaluation, testing, and follow-up.
3. Monitor--Adapt and evaluate guidance for tracking, tracing and supporting people diagnosed with COVID and their contacts for a student population.
4. Bridge--Connect to socially-isolated Western North Carolinians (older adults, people quarantined, caregivers, people in rural areas, among others) by phone to increase social connection, help them access and use tools for connection (telehealth platforms, video conversation platforms, ways to link to family, social and faith-based groups), and offer support in connecting to NCCare360 and 211 for help with addressing social determinants of health.
5. Evaluate Impact--Through collecting both process and outcomes data on both projects

Deliverables:

- Develop a replicable peer-to-peer education model for supporting peers in engaging in safer, healthy, and more resilient behaviors as colleges and universities navigate re-opening during a pandemic.
- Hire and train up to 98 student ambassadors and 10 undergraduate students from all six colleges and universities in WNC.
- Adapt NC DHHS model for training students to do health and safety communication (for mask wearing, physical distancing, checking on isolated folks, etc.)
- Conduct virtual interactive seminars (ECHO model) weekly for education and support of ambassadors.
- Socially connect by phone to all self-identified or referred socially-isolated community members (target 400 social bridging calls per month over 6 months = 2400 calls)

- Evaluate and report on the effectiveness of the peer-to-peer health communication, education, monitoring, and social bridging efforts.

Responsibilities:

- UNC Asheville and MAHEC will develop education, communication and tracking and monitoring guidance and training.
- MAHEC will provide project coordination and clinical consultation.
- UNC Asheville will serve as the coordinating university and research and evaluation lead institution.
- UNC Asheville and UNC Health Sciences at MAHEC will coordinate the Social Bridging Initiative.

Participating student body: up to 98 student ambassadors trained + 12 undergraduate researchers + 4 learners at MAHEC (MPH, Pharmacy, Medicine) = 114 learners employed part time

Over 20,000 campus community members will likely be impacted by the efforts of the Health Ambassadors and professional team members in the Back-to-College Challenge.

Potential number of students impacted by this project

UNC Asheville Community impacted 3765 students--40 ambassadors

Western Carolina University 12,167 students--30+ students trained as health ambassadors

Mars Hill 1255 students--7 students trained as health ambassadors

Montreat 695 students--7 students trained as health ambassadors

Brevard College 688 students--7 students trained as health ambassadors

Warren Wilson College 582--7 students trained as health ambassadors

Faculty and staff on all 6 campuses will be impacted by the efforts of the Health Ambassadors and professional teams guiding the communication, education and monitoring efforts.

An additional 2000 (more possible) socially-isolated older adults and others through the Social Bridging Initiative.

Socially-isolated community members around the western region of North Carolina will be identified and contacted by phone with social bridging calls to increase social connection, access to tools for connection, and support in connecting to NCCare360 and 211 for help with addressing the social determinants of health.

Project Activities and Timeline	J	J	A	S	O	N	D
Convene 3 leadership teams—Back-to-College Challenge, Social Bridging Initiative, and Research and Evaluation--for planning, collaboration, and coordination (weekly in June and bi-weekly thereafter)	x	x	x	x	x	x	x
Recruit health ambassadors, undergraduate researchers, and community volunteers	x	x	x				
Create a Student Health Ambassador Guide and training protocol	x	x					
Train health ambassadors to do COVID-19 education, health communication, assist with tracking cases, and social support at UNC Asheville using virtual training events	x	x	x		x		
Update Social Bridging Initiative Guide, tracking methods, and training protocol	x						
Train Social Bridging team members (8-hour training offered 3 times in Jun and July with weekly huddles for team members all 6 months)	x	x					
Host on-going training ECHO's (3 times/week in late June and early July; weekly thereafter to update project teams and community members on new information, project progress, community wide efforts and outcomes)	x	x	x	x	x	x	
Social Bridging team members engage in making social connection and resource support calls to older adults and other socially-isolated individuals		x	x	x	x	x	x
Health Ambassadors engage in COVID-19 response, education, health communication and socially support isolated individuals (on campus and in WNC communities)		x	x	x	x	x	x
Trained UNCA ambassadors with professional project coordinators to train ambassadors on other WNC campuses		x	x				
Develop peer-to-peer health communication materials (responsive to changing landscape)	x	x	x	x	x	x	x
Develop project evaluation plan including data collection strategies for Back-to-College Challenge and finalize research plan for Social Bridging Initiative	x						
Trained UNCA teams adapt evaluation plan for Back-to-College Challenge to other campuses		x	x				
Collect data for evaluating project outcomes (both)		x	x	x	x	x	x
Report on impact of project components				x			x

Research and Evaluation Plan

The NC Center for Health and Wellness (NCCHW) at UNC Asheville will lead the research and evaluation elements of this project with collaboration from the UNC Asheville faculty lead for the Applied Social Sciences program and Associate Professor, Sociology, Dr. Lyndi Hewitt, PhD, an epidemiologist at MAHEC, Dr. Sherri Denslow, PhD, MPH, and undergraduate researchers from health and wellness, sociology, political science, economics and statistics. Other supporters include: Nicolle Miller, MPH, RD, Director of State and Community Collaborations and Director of Healthy Aging NC, Dr. Amy Lanou, PhD, Executive Director of the NCCHW and Co-director, UNC Gillings MPH program in Asheville.

The North Carolina Center for Health and Wellness (NCCHW) at UNC Asheville aims to develop healthy North Carolina communities with equitable opportunities, with particular focus on addressing health disparities in the prevention and treatment of chronic health conditions. Consistent with our mission, the NCCHW serves as a state hub for the coordination and promotion of healthy-living initiatives that work to prevent chronic conditions and reduce disability among all North Carolinians. We strive to reach our goals through our two primary initiatives: Healthy Aging NC (HANC) and Culture of Results™ (COR). As North Carolina's statewide resource center for evidence-based health programs, HANC: connects people to the programs and agencies that improve community health; increases the capacity of agencies to deliver these programs; maintains the www.healthyagingnc.com website with current program information and online registration systems; and collects and analyzes data to report results. COR provides evidence-based training and technical support to agencies and initiatives across NC, applying key aspects of empowerment evaluation—providing evaluation as part of an ongoing planning process to support client self-determination and empowerment and organizational capacity building. Agencies and initiatives are able to develop the skills and capacity to evaluate their own services to adapt, improve, expand, and communicate the impact of their work and their contribution to the health and wellbeing of the population.

Outcomes and Evaluation Methods

Our **objectives** include: 1) engaging WNC college campus communities in rapidly adopting safe, evidence-based practices to maintain a culture of safety and health; 2) reducing social-isolation among older adults in WNC; and 3) improving health outcomes among campus community members and WNC communities.

Anticipated **outcomes** include: 1) reduced higher risk transmission behaviors by college community members; 2) increased knowledge how to stay safe, increase resilience, and improve wellness while physically distancing; 3) increased understanding of the social connection and technology needs of isolated older adults in WNC; 4) reduction in barriers to using telehealth, NC Care360 and other virtual connection services; 5) increased availability and use of evidence-based tools for staying well and socially connected while physical distancing. These anticipated outcomes may be further refined as stakeholders engage in inclusive planning and evaluation processes to develop meaningful performance measures.

NCCHW employs a training and technical assistance program called Culture of Results (COR), which supports NCCHW and our partners in measuring their impact and improving results. NCCHW staff engage partners in learning and using Results-Based Accountability (RBA). RBA is an evidence-based framework for community improvement and program planning and evaluation. NCCHW applies RBA to track the quality and efficacy of programs and continuously improve. RBA leads stakeholders through the process of starting with the results desired and working backwards towards the means (or the strategies) to achieve them. Data is critical to the process, both in terms of performance measures and community indicators.

Statewide Comorbidity Analysis

UNC Asheville faculty will team up with the Chair of Research at MAHEC, Dr. Jacquie Halladay to collaborate with research teams at UNC-CH and other campuses to get access to the needed data on individuals who die from COVID-19 from the period March 2020 through September 2020. We anticipate that the most accessible data with sufficient information about co-morbidities is from the major hospital systems (Wake, Duke, UNC, Mission, Atrium and Vident), however, other data sources will be explored including state held data, Medicare data, among other sources. We will immediately pursue Institutional Review Board approval and data sourcing efforts upon notification of award.

The primary analysis will use Cox proportional hazard regression models to determine the co-morbidity risk factors associated with death and survival. The Cox proportional hazard regression model will assess the potential impact of hypertension, diabetes, coronary artery disease, immunodeficiency disease, chronic obstructive pulmonary disease, malignancies, renal diseases, and smoking status on outcome from COVID-19. The primary outcome of this project will be the determination of whether one, or a combination of, co-morbidities most predicts death as an outcome of COVID-19. Secondary analyses, on one or more subsets of data will evaluate the relationships of certain blood markers of health (fasting blood glucose, HbA1c, cholesterol, and triglycerides), health behaviors (stress, alcohol use, activity levels, and diet), socioeconomic status, height and weight, to death as an outcome of COVID-19.

Reports on this information will be provided to the NC Policy Collaboratory in report form in December and as at least two manuscripts submitted for publication in rapid response sections in peer reviewed medical and public health journals. In addition, through these same data sources we hope to acquire records on all those being treated or hospitalized with COVID-19 to study the factors that increase the likelihood of recovery from a COVID-19 infection. If available, these additional analyses could significantly impact public health and medical leaders to support messaging and programing to reduce risk of dying to this viral infection.

Projected Costs		Salary Request	Fringe Benefits	Requested Subtotal
Project Coordination (MAHEC)--1.0 FTE Nurse/Clinical \$66K 0.5 FTE Training and Volunteer Coordination (\$45,000) 5% Chair Community Initiatives and Public Health for 8 months		33,000 11,250 8100	8580 2,925 2106	41,580 14,175 10,206
Project Coordination (UNCA)— 3 staff members at 0.5 FTE at average salary of \$55,000 1 staff member at 0.25 FTE project coordinator comorbidity study Healthy Campus, Department Health and Wellness, Campus Rec and/or Health and Counseling		13,750 13,750 13,750 6,875	4,400 4,400 4,400 2,200	18,150 18,150 18,150 9,075
Evaluation and Research Teams-- 0.2 FTE MAHEC statistician (\$111,000) UNCA faculty member (Hewitt) \$82,000/9 mos (1 mo summer) 0.3 FTE NCCHW Culture of Results director (Olson) \$66,000/annual UNCA faculty member (Wingert)\$86,000/9 mos (1 mo summer) UNCA faculty member (Rote) \$75,000/9 mos (1 mo summer) UNCA faculty member (Stats) \$76,000/9 mos (1 mo summer) UNCA faculty member (BioStats) \$88,000/9 mos (1 mo summer) MPH Student or recent MPH grad 0.5 FTE MPH student/recent grad (20 hours/week for 6 months@ 20/hour)		11,100 9,111 9,900 9555 8333 8444 9,778 12,000	2,886 2915 3,168 3058 2667 2702 3129 3120	12,918 12,026 13,068 12,612 11,000 11,146 12,907 15,120
Data Sourcing for Comorbidity Analysis (\$12,500/ data request from 5 hospital systems + collaborative work with UNC-CH teams to identify existing data sources + \$9657 support from SHEPS experts for requesting data)				72,157
UNC Asheville Student Ambassadors (10 hours/week for 16 weeks X \$12/hour) = \$1920/student	40	76,800	5875	82,675
Student Ambassadors at 1 area institution (WCU (20+) @ (10 hours/week for 12 weeks X \$12/hour) = \$1440/student (Seek funding support for 4 other consortium colleges-- Mars Hill (7), Montreat (7), Brevard (7), and Warren Wilson (7) elsewhere)	20	28800	2203	31003
Data collection and research support—UNCA Undergraduate Researchers (10 hours/week for 14 weeks X \$12/hour) = \$1680/student	14	23,520	1,799	25,319
Social Bridging Initiative Leadership (5% FTE Pharmacy Faculty: 5% MPH Faculty)		7,000 5,691	2,240 1,992	9,240 7,683

Social Bridging Project Coordination (1.0 FTE Jeff Jones-UNCA grad, \$40,000), 0.5 FTE MPH student/recent grad (20 hours/week for 6 months@ 20/hour), 0.5 FTE Community member (20 hours/week for 6 months@ 20/hour)		20,000	6,400	26,400
		12,000	3120	15,120
		12,000	3120	15,120
Materials for marketing, communication and signage (Digital signage-\$16,000; incentives--logo masks; printing, laminating, mass texting, email newsletters)				5,000
Technology Support—adapting self-tracker, setting-up contract tracing, web support, hand held devices, other				40,000
Webinar and ECHO development (expert and support staff time)				15,000
Seed money for Infrastructure surveillance and testing-- thermal imaging technology \$12,000, tents, PPE, training staff for collection, biowaste management, etc.				35,000
Total				\$610,000