sit writing this from a home office where, like many of you, I’ve been stuck for the past eight weeks due to the threat of COVID-19. During this time many things have changed, and we’ve had to learn to pivot in many significant ways. I’ve been asking myself the questions, How is our center—one based on significant community engagement and face-to-face interaction—being present for our vulnerable tribal and rural community partners, now and into the foreseeable future? How can our projects adapt? How can we be most useful to MSU and the state?

Some answers have come due to our unique position and existing partnerships, but as COVID-19 is teaching us many lessons, we still have much to learn.

CAIRHE faculty Selena Ahmed, Ph.D., Stephen Martin, Ph.D., and I have been highly engaged in working with an amazing group of campus faculty in the basic sciences on understanding this pandemic from many angles. These groups are working on COVID-19 testing strategies, epidemiology, modeling, gene sequencing, and much more. Getting to know our colleagues in microbiology, virology, engineering, mathematics, and other disciplines has been fantastic and a real blessing.

We’ve also been doing what I call “community engagement on steroids” as we work to connect basic scientists, clinicians and clinics, hospital systems, and public health agencies in work to enhance testing capacity and commence important research studies. Many of these collaborations are new and exciting, but this hurried pace is definitely not our usual way of engaging with partners! Such community-engaged work would normally take a year of discussions, joint planning sessions, and in-person visits.

Instead, our recent intensive partnership-building feels like sewing the parachute once we’ve jumped out of the plane. It will continue to be a wild ride as we watch the scientific, local, and national news daily on this rapidly changing and challenging situation. Still, we remain hopeful that our work in serology testing with our most vulnerable communities will provide not only scientific insights, but also informed public health strategy for these communities as we deal with COVID-19 into the next year.

You can read about these testing efforts, and CAIRHE’s many outreach activities during the pandemic, in our feature story on p. 2.

On a personal note, here are some of the lessons I’m learning now: how to have more patience—and more gratitude; how to do more with less; and how to adapt to changing timelines and let go of planning too far into the future. I’m also reminded of the importance of building new bridges and connections. And I’m getting better at waiting for “yes” while preparing for when “yes—we’re ready to collaborate!” comes.

Moments of reflection and sharing are critical in this time of uncertainty. I’m learning that CAIRHE’s goal of a robust Health Equity Network where public health agencies, clinical entities, communities, and researchers are all connected and collaborating is absolutely critical if we’re to face and manage challenges such as pandemics and climate change in the future. And I’m leaning into the question, How can we more intentionally apply the lessons we’re learning now to build a better and more equitable future for all?

Alexandra Adams, M.D., Ph.D.
Director and Principal Investigator

For Healthy Communities Under the Big Sky
CAIRHE responds to COVID-19 crisis through intensified engagement

We are at a time of crisis in Montana, where concern is one concern has been not only for our faculty and staff, but also the safety of our most vulnerable community partners,” Adams said. “Our commitment to health equity research is stronger than ever, but with COVID lurking, we have to go about our work thoughtfully, responsibly, and in new, creative ways.”

As a center founded on community-based participatory research, CAIRHE is always forging new connections through its faculty, its Community Engagement Core, and its statewide Health Equity Network. But with the COVID-19 pandemic leapfrogging by the hour, Adams and the Center found themselves convening meetings—fast—that wouldn’t have seemed necessary, or even possible, before. Adams calls it “community engagement on steroids.”

Very early in the university’s response to the crisis, she was among a handful of campus leaders who encouraged faculty help for local COVID-19 testing efforts, as well as the survey and collection of campus lab supplies that could be used by local health providers. By mid-April, MSU had repurposed instrumentation for testing at Bozeman Health Deaconess Hospital, greatly expanding statewide capacity for testing.

With support from the university and Montana INBRE, CAIRHE acquired 10,000 serology test kits, and the Center is now working with Bridger Orthopedic Urgent Care and Gallatin County Public Health to validate the kits for upcoming studies, including one to be led by Stephen Martin, Ph.D., director of CAIRHE’s Translational Biomarkers Core Lab. That pilot study, which would examine serology-related inflammation in older adults infected by SARS-CoV-2, will begin as early as September, pending National Institutes of Health approval.

CAIRHE is also collaborating with Salish Kootenai College and the St. Luke clinical testing effort in Missoula to help with blood collection in anticipation of a serology testing study there, to be led by Selena Ahmed, Ph.D., Adams, Martin, and local partners. In eastern Montana, the Center has partnered with Big Horn Valley Health Center, which serves several tribes and the Crow Indian Reservation in the Belcourt area to conduct serology testing and collect serum samples in the Belcourt Indian Reservation in the first half of the state, for testing in the coming months.

“COVID-19 is going to be with us well into 2021,” Adams said, “so in many ways this fight is only getting started.”

New challenges, new opportunities

Other CAIRHE faculty, facing disruptions in their research due to COVID-19, have adapted their work to examine research questions related to the pandemic.

Research Project Leader Carmen Byker Shanks, Ph.D., was unable to collect data this spring at this project’s two partnering food banks due to safety concerns for her participants. The skyrocketing demand for food banks due to the economic downturn has also made it difficult for clients to collaborate as before.

Seeing an opportunity, Byker Shanks and her team created a statewide survey to assess how COVID-19 has impacted Montanans’ health, particularly food security. With thousands of responses so far, the survey is open to everyone in Montana and runs through June. (Take the survey here.)

“Our research team is interested in how the food accessed and consumed has changed since the COVID-19 pandemic began in early March in Montana,” she said, “along with other related factors that might impact food patterns, such as physical activity and stress.

Byker Shanks is partnering with several county and state agencies around the state to provide tailored county data from the survey that can be used to increase food security in the future. “We’re also conducting this survey in four other states to understand the differences between urban and rural places nationwide,” she added.

Her upcoming paper in the American Journal of Public Health also addresses food insecurity during COVID-19.

CAIRHE investigators Cara Palmes, Ph.D., and Benjamin Osterhuff, Ph.D., who currently lead separate Developmental Mini-Grant projects at the Center (see p. 5), found themselves unable to travel and meet with new community partners when closures to the state. Instead, they shifted to a virtual world in isolation—made easier by the fact that they’re married—to administer multiple waves of youth surveys about COVID-19 across three different participant groups. To date, they’ve surveyed roughly 1,800 adolescents and young adults using the survey.

Among other findings, they determined that youth attitudes related to COVID-19 severity, social responsibility values, social trust, and self-interest were associated with news monitoring, social distancing, and inaccurate beliefs. Teens who reported stronger belief in the seriousness of COVID-19, less social responsibility and social trust, and valuing their own self-interest over others also reported more hoarding at stores.

Their first paper on the findings has been accepted, and a second paper, “Adolescents’ Motivations to Engage in Social Distancing during the COVID-19 Pandemic: Associations with Mental and Social Health,” is forthcoming in the Journal of Youth and Adolescence.

When Adams and her own research team wanted to do something to support Native families coping in isolation, they produced a new video for their website, Turtle Island Tales, called “Making it Work: COVID-19 and Your Health.”

Keekee Roberts, Ph.D., an assistant professor in nutrition and food sciences, among other projects, has designed a program for modifiable operations when research is deemed essential per guidelines,” Carter wrote at the time. MSU remained at Level 2 until May 18, when it transitioned down to Level 1. While some CAIRHE faculty were fortunate to be between data collection phases in their projects this spring, others dependent on reservation visits, public school operation, or close personal contact with research participants have encountered delays in data collection, or missed opportunities.

Meanwhile, during March, the national wave of cancellations affecting travel and academic conferences of all types radically altered CAIRHE’s events calendar.

First, organizers of the 2020 Montana Healthy Communities Conference (see Fall 2019 issue), originally scheduled for April 28-30 in Helena, announced the postponement of that event. As a co-sponsor, CAIRHE had been involved in planning the content and agenda, and the Center also was to host both a pre-conference session on public health research and a research poster session. A shortened version of the Helena gathering is now being rescheduled for November, with several innovative online components planned during the preceding months.

CAIRHE also was forced to postpone Promoting Indigenous Research Leadership (PIRL), its three-day workshop originally scheduled for June 8-10 in Bozeman (see Fall 2019 issue). That event, held in partnership with the National Institutes of Health, is designed to promote the research careers of Indigenous and other early-career faculty working with Indigenous communities. By the time the event was postponed, CAIRHE and its NIH partners had already selected the cohort of 19 junior faculty participants from across the United States.

“We’re still assessing our options for rescheduling PIRL toward the end of 2020,” said CAIRHE Program Coordinator James Byker Shanks. “So much depends on the COVID-19 outlook in Montana, and that’s cloudy at best. We’re also finding that a lot of individuals are going to be reluctant to travel until there’s a vaccine, which could be well into 2021.”

For now, in spite of compassion and diligence from so many to sustain life and work in Montana’s communities, an invisible virus still seems firmly in control.
RESEARCH HIGHLIGHTS

Here’s a summary of what CAIRHE’s faculty investigators have been working on, even amid the disruption of COVID-19.

Carmen Byker Shanks, Ph.D., RDN (The Unprocessed Pantry Project [UP3]), and her team worked during Fall 2019 to develop the protocol for implementing this time the two participating food pantries collaborated on changes to their food supplies that resulted in more unprocessed foods and less ultra-processed foods. Recruitment for the trial began in January, with the study occurring in January through April, with several modifications put in place for participant safety during the start of the COVID-19 pandemic. Because food security concerns have risen sharply statewide due to the pandemic, the study’s participating food banks and its community advisory board continue to operate under unprecedented stress; but the outlook for the project and future research remains bright once normal operations can resume. Byker Shanks and her team recently submitted three manuscripts based on UP3 work, with one already accepted.

Monica Skewes, Ph.D. (Development and Pilot Test of Indigenous Reflexive Prevention Program [IP3]), has continued collaboration with her team’s community advisory board (CAB) and community partners to refine and their culturally adapted relapse prevention intervention. Using data from a survey of 198 tribal members who self-identified as struggling with substance use problems, as well as focus group data from the community, she has incorporated strategies into the curriculum that include: enhanced coping skills, reducing stress and coping with a lateral violence; reframing personal and historical trauma from a resilience perspective; coping with stress from racism and unfair treatment; forgiving self and others for previous harms; and re-engaging with healthy people and agencies on the P spills. The team also conducted follow-up interviews with a subset of participants who went through a trial run of the intervention last summer to find out what they liked or didn’t like about it and what they learned that was most helpful. Working together with the CAB, they refined and reorganized the intervention materials and discussed upcoming plans for pilot-testing the new curriculum. Among other acronyms.

A pair of CAIRHE investigators and their community partner who work to improve health on the Fort Peck Indian Reservation were recognized in January with Gianforte’s Spirit of Montana Award.

SKEWES AND RINK WIN “SPIRIT OF MT” AWARD READ BEFORE U.S. HOUSE

A pair of CAIRHE investigators and their community partner who work to improve health on the Fort Peck Indian Reservation were recognized recently by U.S. Rep. Greg Gianforte of Montana. Adriann Ricker from Fort Peck, Community College and MSU faculty members Monica Skewes, Ph.D., and Elizabeth Rink, Ph.D., MSW—both longtime CAIRHE investigators—were recognized in January with Gianforte’s Spirit of Montana Community Award. The three plan to use the program to collaborate with Fort Peck community members and lawmakers to develop effective, compassionate, and health-promoting policies that acknowledge the multiple sources of trauma affecting Fort Peck tribal members. — MSU News Service

BAKER SHANKS FEATURED IN GQ ARTICLE ON RISKS OF ULTRA-PROCESSED FOODS

CAIRHE investigator Carmen Byker Shanks, Ph.D., RDN, and her Unprocessed Pantry Project (UP3) were featured in a recent GQ article on the health consequences of certain processed foods.

“Through her work on the CAIRHE project and in MSU’s Food and Health Lab, which she leads with Selena Ahmed, Ph.D., Byker Shanks has emerged as a national expert on the health risks of so-called ultra-processed foods. In partnership with two Montana food banks, UP3 aims to improve dietary quality by influencing the food supply through organization-wide nutrition policies, modifying the food environment with minimally processed foods, and encouraging patrons toward healthier food options.”

In discussing the benefits of unprocessed foods, including weight loss, the GQ article says, “Shanks notices similar benefits in her UP3 participants. ‘If you get people interested in the food itself and the nutrition policies, modifying the food environment with minimally processed foods, and encouraging patrons toward healthier food options’

SIX FACULTY RECEIVE FIRST CAIRHE DEVELOPMENTAL MINI-GRANTS

CAIRHE introduced a new program at the end of 2019 to help MSU junior investigators establish partnerships with a community, public health agencies, or clinical organizations, or to help a community find a faculty investigator partner. The “Developmental Mini-Grants,” made possible through funding from the office of Jason Carter, Ph.D., MSU Vice President of Research, Economic Development, and Graduate Education, are designed to strengthen the pipeline of multidisciplinary investigators who seek support from the Center. “It’s our hope that by helping faculty lay the groundwork for community-based research, we can set them up for greater success in the years ahead as CAIRHE investigators,” said CAIRHE Program Coordinator James Burroughs.
Applications for the first Mini-Grants, in amounts up to $10,000 each, were due December 2, 2019, with six grants awarded in early 2020. The recipients are:

- **Edward Gamble, Ph.D., MBA, Jake Jabs College of Business & Entrepreneurship**
- **Angela Jukkala, Ph.D., R.N., College of Nursing** (Great Falls Campus)
- **Benjamin Oosterhoff, Ph.D., Department of Psychology**
- **Cara Palmer, Ph.D., Department of Psychology**
- **Julie Ruff, Ed.D., M.S., College of Nursing** (Bozeman Campus)
- **Emily Tomayko, Ph.D., R.D., CAIRHE**

Although funding for the Mini-Grants had been slated to expire June 30, an extension approved by Carter due to COVID-19 disruptions will allow research spending through December 31.

**COMMUNITY ENGAGEMENT CORE COMPLETES WEBINAR SERIES**

CAIRHE and its partners Montana INBRE and the American Indian/Alaska Native Clinical and Translational Research Program recently completed their 2019-20 Webinar Series. Organized and hosted by Sue Higgins, MS, community research associate in the Center’s Community Engagement Core, the webinars examined a variety of issues important to faculty involved in community-based research. The four events were:

- **“Tips for Writing Research Proposals to the NIH,” featuring Alex Adams, M.D., Ph.D. (CAIRHE) and Elizabeth Rink, Ph.D., MSW (CAIRHE).**
- **“Financial Management Toolkit for NIH-Funded Health Researchers,” featuring Maya Bronston (CAIRHE), Jennifer Hodges (AVAN CTRP), and Cori Huttinga, (Montana INBRE).** December 11, 2019.
- **“Best Practices in Community-Based Participatory Research and Community Advisory Board Development,” featuring Ann Bertagnola, Ph.D. (Montana INBRE), Colter Ellis, Ph.D. (CAIRHE), Monica Skewes, Ph.D. (CAIRHE), and Emily Salois, MSW (CAIRHE/Montana INBRE).** February 10, 2020.
- **“Primer on MSU Extension. Bridging Health Research and Rural Community Outreach,” featuring Cody Stone, Ph.D. (Director, MSU Extension), Brianna Routh, Ph.D. (MSU Extension), and Matthew Chaves, Ph.D. (MSU, Health and Human Development).** April 28, 2020.

The fourth webinar in the series, in April, had the largest audience yet, Higgins said. “ Roughly 100 people attended, and our panelists fielded questions on topics including the COVID-19 response in rural and Native Montana,” she said.

All four webinars are available as videos on CAIRHE’s website.

**CHALLENGES THROUGH THE LENS:**

Higgins also participated in a webinar offered by MSU Extension for its agents and specialists on April 29, when she offered information on CAIRHE’s new website pages, produced with Montana INBRE, providing COVID-19 information and resources for Native communities.

**NUTRITIONAL SCIENTIST EMILY TOMAYKO JOINS CAIRHE AS RESEARCH FACULTY**

In January Emily Tomayko, Ph.D., R.D., joined CAIRHE as an assistant research professor.

An established health researcher who previously served as an assistant professor at Oregon State University, Tomayko hopes to use her community-based research experience and nutrition content knowledge to address childhood obesity disparities and promote obesity prevention initiatives.

She will be working with Emily for nearly eight years as a fellow nutritional scientist, so I knew how well-aligned her scholarship and career goals are with CAIRHE and our state,” said CAIRHE Director Alex Adams, M.D., Ph.D. “We’re delighted to have her at MSU, where she will no doubt establish herself as a research leader in her field and as a valuable colleague.”

Already Tomayko is getting down to work. Currently she is awash in applications for a grant from the Emma Kennedy Shriver National Institute of Child Health and Human Development, an arm of the National Institutes of Health. That grant could start as early as July.

In addition, Tomayko has received a CAIRHE Mini-Grant (see pp. 5-6) and is waiting for decisions on other grant proposals submitted to the Montana Healthcare Foundation, MSU’s American Indian/Alaska Native Clinical and Translational Research Program, and the Spencer Foundation.

“I can feel the momentum building within the Center to be a real hub for community-centered health research,” Tomayko said. “I think CAIRHE could be very helpful to a part of a team of researchers working creatively to continue serving the needs of communities during this challenging time.”

Emily Tomayko, Ph.D., R.D., joined CAIRHE as an assistant research professor.

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**LORI LINDGREN: CAIRHE’S STAFF ASSISTANT**

Lori Lindgren, an MSU graduate student originally from Memphis, Tenn., joined CAIRHE in October 2019 as the Center’s part-time staff assistant.

A master’s student in the Department of Health and Human Development’s Community Health program, Lindgren assists Grants Management Specialist Maya Bronston with various fiscal tasks, including P-card reports, correspondence with PI’s and assisting faculty with the transition to the new Chrome River expense software.

“Lori continues to be an important contributor to our work,” Bronston said. “We’re lucky to have her involvement while she finishes her studies, and our team has quickly learned to rely on her for help.”

Lindgren was a McNair Scholar at MSU as an undergraduate student, graduating with her bachelor’s degree in Community Health in May 2019. She plans to complete her master’s degree in May 2021, with her project examining advocacy for health care access, particularly in relation to diabetes management.

“I love working for CAIRHE,” Lindgren said. “I appreciate Mayas’ willingness to teach me, and I enjoy learning about the various research projects. Knowing that I have a little part to play in helping our researchers do their work to reduce health disparities is very satisfying.”

Scott Montfort, Ph.D., Department of Mechanical and Industrial Engineering
Monica Byker, Ph.D., Department of Psychology
Andres Thorman, Ph.D., Jake Jabs College of Business and Entrepreneurship
Maggie Thorman, Ph.D., Department of Sociology and Anthropology
Emily Tomayko, Ph.D., R.D., Center for American Indian and Rural Health Equity

**CAIRHE MENTORS**

Suzanne Held, Ph.D., Department of Health and Human Development
Elizabeth Reh, Ph.D., MSW, Department of Health and Human Development
Sue Higgins, Ph.D., R.D., University of North Dakota
Donald Warne, M.D., MPH, University of North Dakota

**COMMUNITY RESEARCH ASSOCIATES**

Emily Matt Salois, MSW
Suzan Higgins, M.S.

**EXTERNAL ADVISORY COMMITTEE**

Dennis Domench, Ph.D., Professor Emeritus, University of Washington
John M. Walls, Ph.D., MPH, Robert Graham Center

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Lori Lindgren, CAIRHE