



TEXAS A&M UNIVERSITY
School of Public Health
Annual Research Report
Calendar Year 2020

Prepared by the Texas A&M University School of Public Health Office of Research

The Office of Research is committed to providing efficient and effective administration and support for the research activities of the faculty and staff of the Texas A&M University School of Public Health.

public-health.tamu.edu

Message from our Associate Dean for Research Dean

Welcome

The year 2020 provided an abundance of unexpected challenges and opportunities for public health research. Here at the Texas A&M School of Public Health (SPH), our researchers were continuously engaged in a variety of new and ongoing initiatives that leveraged our cross-disciplinary research expertise and public health acumen to generate new knowledge and support the public health response to COVID-19 at local, national, and global levels. While many of us immediately think about epidemiology, particularly how to limit disease spread, as a critical role of public health in pandemic response, our SPH researchers were also creatively engaged in assuring resilience of communities and were applying their research to design safer spaces for campus and community events, conducting ergonomic assessments to support remote office worker safety, and strategic planning for healthcare leaders who were facing unprecedented demands for healthcare resources.

Among the highlights for SPH during 2020:

- SPH welcomed a new permanent Dean, Dr. Shawn G. Gibbs. Dean Gibbs arrived just as most Texas A&M's campus operations were moving to remote locations; his research expertise in industrial hygiene and interrupting highly infectious diseases was particularly fortuitous as SPH was quickly asked to lead many of the campus and community response efforts!
- 65 new external grants and contracts were awarded to SPH researchers, totaling \$7,421,288.
- Despite the pandemic, our researchers continued to present their research in scholarly forums, including 54 poster and 79 conference presentations
- SPH faculty and student research awards were presented to recognize exceptional research contributions, with our 15th annual Jean Brender Student Poster Contest and Symposium quickly moved to an on-line format to accommodate COVID-19 protocols



SPH Research Statistics	Calendar Year	
	2019	2020
Total Research Expenditures	\$ 6,767,963	\$ 7,847,891
Total Grants and Contracts	119	114
Federal	72	70
State	18	16
Internal (TAMU/SPH)	8	8
Foundations/Private	10	9
Contracts	11	11
Peer-Reviewed Publications	201	201
Presentations	154	54
Posters	106	79
SPH Faculty*	48	49

*Count of all tenured, tenure-track and research-track faculty



Texas A&M University School of Public Health COVID-19 Response

Translating Public Health Research into Practice

- Drs. Angela Clendenin and Rebecca Fischer led the COVID-19 operations center, which provided contact tracing, outbreak monitoring, and operationalized testing resources to support continuity of University operations. Many SPH students were able to gain practical experience through their work in the operations center
- Drs. Hongwei Zhao, Murray Cote, Tiffany Radcliff, Rebecca Fischer, and Marcia Ory formed a "Public Health Modeling Group" that included researchers from multiple components of Texas A&M and the Texas A&M System. They used publicly-reported data to track and predict COVID-19 cases and hospitalizations in local areas. Their work culminated in an automated dashboard that remains active even as vaccinations increase and hospitalizations and fatalities decline.
- Drs. Mark Benden, Angela Clendenin, Shawn Gibbs, Rebecca Fischer and Tiffany Radcliff worked with campus leaders to adjust seating, cleaning, air exchange, quarantine and other protocols to facilitate safety on campus
- SPH faculty (too many to list here!) provided quick turnaround interviews and commentaries based on their expertise that were disseminated in *The Conversation* and other popular media outlets

COVID-19 Conversations

SPH launched the "COVID Conversations" series, which highlighted the role of public health tools in understanding and responding to the pandemic.



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SPH Welcomes Shawn G. Gibbs as new Dean in 2020

The Texas A&M University School of Public Health certainly had an eventful 2020. TAMU SPH helped lead the COVID-19 response for Texas A&M and were valued partners to the Texas A&M System and many surrounding communities.

Upon his arrival in May 2020, Dean Shawn Gibbs was appointed by the Provost at TAMU to lead numerous TAMU response efforts including a wastewater sampling program at Texas A&M to monitor and predict COVID-19 hotspots on campus and serving on a committee for the SEC's COVID-19 response for athletic events, and then was appointed TAMU COVID-19 response lead when Provost Fierke departed. "The SPH has risen to the occasion in the past year, I can't speak highly enough of the COVID-19 response efforts from our students, faculty and staff," Gibbs said. "About a third of our faculty at the School of Public Health pivoted to COVID-19 response efforts to help our university, our community and our state navigate the pandemic. Tons of our students, staff, and faculty volunteered to run vaccination and testing events. I was there with them, collecting saliva, wiping down tables and directing traffic. They all worked incredibly hard." Our Faculty, Staff, and Students worked diligently to protect others within our communities and the nation throughout the pandemic, and through it all we continued to push forward our Scholarship. During 2020, for TAMU SPH has also had many non-COVID-19 related successes. SPH completed our strategic planning process, moved forward on many new research initiatives extending beyond pandemic response, including new investments to strengthen research support structures, graduate student support, and incentives for the School. Faculty within SPH had great success this past year in a variety of initiatives, including nutritional interventions in South Texas, engaging Spanish speaking communities in their community mental health, preparing for natural disasters, and investigation of Medicaid waivers. The SPH fiscal situation has also greatly improved providing us funds to invest in our people, new people, and new initiatives.



New Research in 2020



Grow It Yourself: The Effect of Hydroponic Vegetable Gardening on Improving Quality of Life in Cancer Patients and Their Caregivers

Can indoor hydroponic vegetable gardening improve the quality of life in cancer patients and their caregivers? Taehyun Roh, PhD received the Center for Health and Nature Innovation Award to examine, for the first time, the feasibility of the hydroponic vegetable gardening as an intervention strategy in cancer patients. Twenty-five patients and their caregivers from the outpatient infusion center at the Houston Methodist Cancer Center will be provided hydroponic vegetable gardening systems to grow lettuce and grape tomatoes for 12 weeks. During the 12 weeks the level of depression, health-related quality of life, pain management and vegetable consumption will be assessed through questionnaires.

Read more:



Lasting Change: Researchers Study Long Term Effectiveness of School-Based Intervention to Reduce Mental Illness Stigma

Attitudes toward mental illness and stigmatizing behavior typically develop at a young age and efforts to fight stigma in schools by improving knowledge, attitudes and behaviors about mental illness are vital. Melissa J. DuPont-Reyes, PhD, MPH, and colleagues are analyzing long-term changes in mental illness knowledge, attitudes, and behaviors over a two-year period after delivering an anti-stigma intervention to students in the sixth grade. The researchers tested three approaches to increasing knowledge and positive attitudes about mental illness and treatment options. Reyes and her colleagues found that the curriculum intervention was associated with a significant knowledge and positive attitudes toward people with mental illness, a notable decrease in exclusion behaviors and an increased likelihood of seeking treatment for mental health issues if needed.

Read more:

<https://vitalrecord.tamhsc.edu/lasting-change-researchers-study-long-term-effectiveness-of-school-based-intervention-to-reduce-mental-illness-stigma/>



Applying the positive deviance approach to promote lifetime mental disorder and the utilization of specialty mental health services among older traumatized Asian immigrants in the United States

The positive deviance approach, first developed in 1976, is defined as a process of social and behavioral change that highlights uncommon social practices. This approach is based on the premise that some individuals and communities can overcome constraints and attain better health outcomes than their peers who are living in similar, low-resource environments. Researchers led by Ping Ma, PhD, are applying the positive deviance approach to explore resilience-promoting factors and uncommon adaptive strategies and behaviors among older Asian Americans who have experienced trauma.



Be the Hero

Sé el Héroe (Be the Hero) aims to reduce the infection and transmission of SARS-CoV-2 among community health workers, farmworkers, food service providers, and their families in limited resource communities. The project, led by Joseph Sharkey, PhD, MPH, will develop, implement, and evaluate curricula in response to unique resources, cultural traditions, family practices, and other factors.

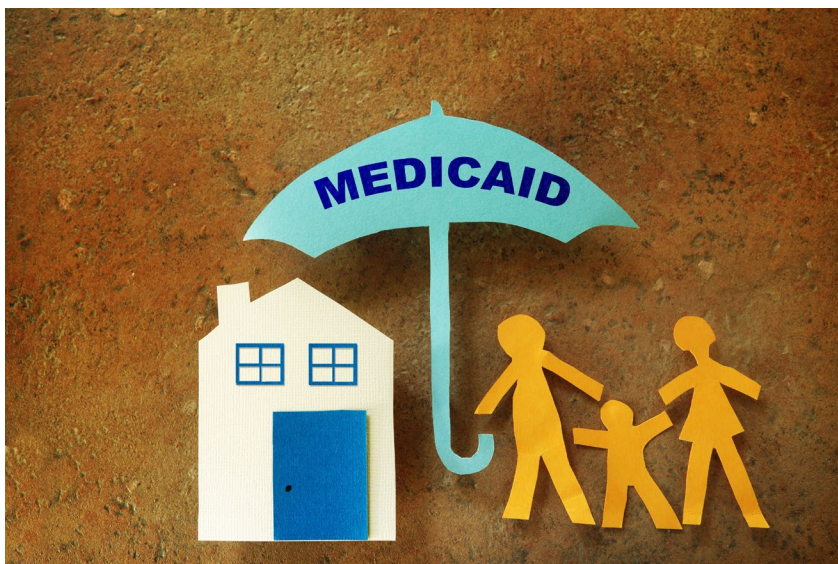


Evaluation of the 1115 Medicaid Waiver Demonstration Renewal in Texas

A team of Texas A&M investigators led by Hye-Chung Kum (PI) is evaluating the 1115 Medicaid Waiver in Texas after receiving an over \$5 million, 5-year contract. The aim of Texas' 1115 Medicaid Waiver has been to improve efficiency and control costs while maintaining access to quality care for low-income Texans. The 1115 Medicaid Waiver allowed Texas to continue expanding its Medicaid Managed Care (MMC) program and to implement Uncompensated Care (UC) pools and a Delivery System Reform Incentive Payment (DSRIP) program designed to promote health care system innovations with a focus on value-based care.

The evaluation team includes a number of professors from the Texas A&M School of Public Health, including David Washburn, Ben Ukert, Bob Ohsfeldt, and Qi Zheng; graduate students Nikita Wagle, Laura Benavides, Sophia Anyatonwu, Geng Zhang and program coordinator Abby Spiegelman. Additional collaborators include Eva Shipp and Amber Trueblood at the Texas Transportation Institute, Todd Leroux and Chad Smith at Stonewall Analytics, and Michael Morrisey.

The Centers for Medicare & Medicaid Services (CMS) mandates that Medicaid 1115 Waivers granted to states are reviewed by external evaluators, and the Texas A&M-led team is proud to serve in this role. The research team is conducting several studies within this project, making use of a variety of methodologies including surveys, claims data analysis, and additional analyses of administrative and health related data provided by the state of Texas. The interim report of the evaluation will be submitted to CMS in the fall of 2021, with the final report due in 2024.



Problem Solving Training (PST) for English- and Spanish-speaking Care Partners of adults with Alzheimer's and Alzheimer's-related dementia

Caregivers of individuals with Alzheimer's disease and related dementia rarely get the preparation or training they need to manage their caregiving responsibilities and to successfully balance their own self-care and their caregiving roles. As a result, caregivers often experience caregiver burden, emotional distress, and substance abuse. Dr. Matthew Lee Smith is part of a team studying problem solving training (PST) to support the emotional and social functioning of caregivers to improve their health and well-being and to prevent caregiver burden and poor coping. PST is an evidence-based approach that teaches and empowers individuals to solve emergent problems contributing to their depressive symptoms, helps improve coping skills and increases self-efficacy.



Mitigating the Impacts of Excessive Industrial Pollutants Following Natural Disasters

Garett Sansom, DrPh, and a team of researchers are using a U.S. Environmental Protection Agency (EPA) grant to study the changing environmental conditions impacting pollutants released from chemical facilities following a natural disaster such as a hurricane or flood. Typically, the pollutants released increase, and many vulnerable communities, such as the Galena Park community located north of the Houston Ship Channel, see the impacts on public health intensify. The researchers will use a combination of tools to accomplish their long-term goal to improve the resilience of the community to hurricane/flood-induced releases of metals and volatile organic compounds. Read more: <https://vitalrecord.tamhsc.edu/mitigating-the-impacts-of-excessive-industrial-pollutants-following-natural-disasters/>



“Checking the Pulse” On Diabetes Disparities

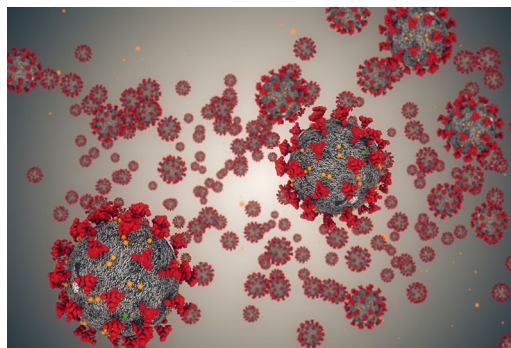
An alarming 10 percent of the United States population has diabetes. While many are able to manage their symptoms and avoid hospital care, certain individual and place-based factors can affect diabetes management, which may lead to costly emergency department visits and hospitalizations. The extent to which emergency departments and hospitals across the nation are used for diabetes-related treatment is not fully known. Alva O. Ferdinand, DrPh, JD, and her colleagues investigated which individuals and place-based factors most significantly affect the likelihood of seeking emergency care and subsequently being hospitalized for a diabetes-related issue.

Read more: <https://vitalrecord.tamhsc.edu/checking-the-pulse-on-diabetes-disparities/>



Addressing COVID-19: Disaster Planning

Barbara Quiram, PhD, is developing a survey and coordinating and facilitating a working group to address disaster planning related to COVID-19. The Texas Department of State Health Services (DSHS) enlisted Quiram, who is an expert in her field and is well known for her ability to oversee and coordinate emergency technical assistance and disaster mitigation. Quiram will assist DSHS in identifying community defined solutions to address community identified concerns related to planning for and responding to the Coronavirus. Quiram’s expertise will be used to quickly tackle, and address disaster planning and mitigation related to the public health threat.





Centers & Programs

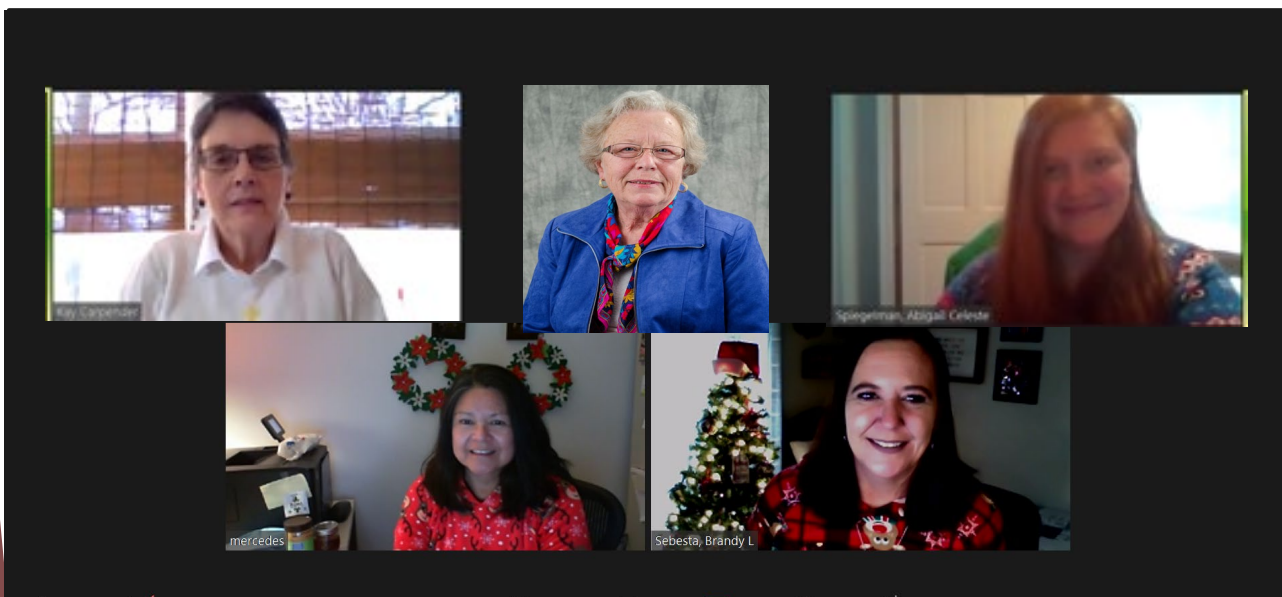
Center for Community Health Development

The Center for Community Health Development (CCHD) was formed to establish a research, education, and experience base for improving population health status in a cost-effective manner. The center also provides invaluable research, education, and training experience for master's and doctoral students of the Texas A&M University School of Public Health, the Texas A&M University Health Science Center, and The Texas A&M University System.



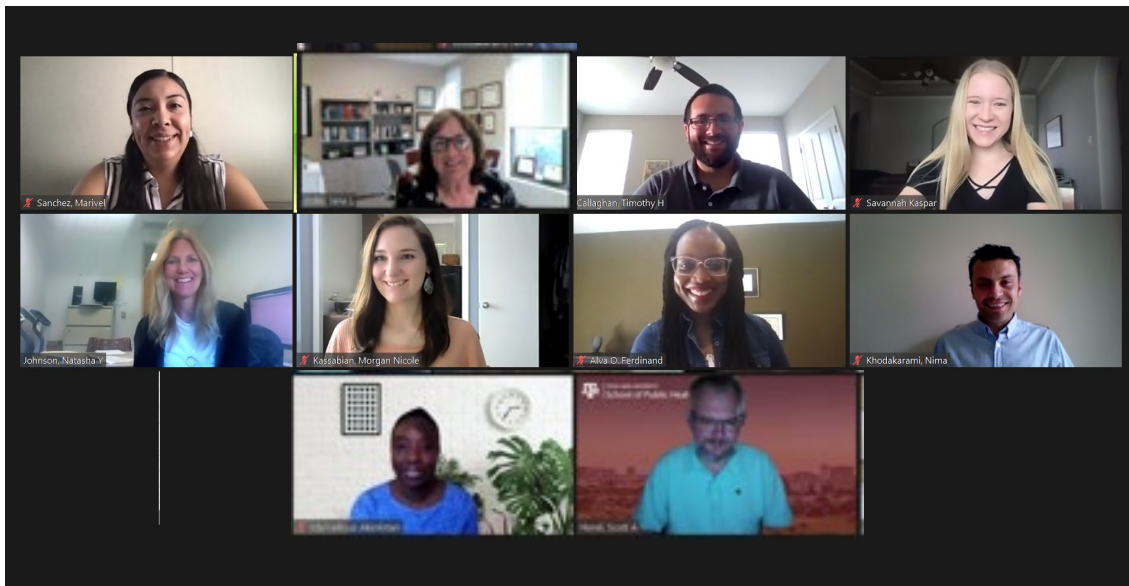
USA Center for Rural Public Health Preparedness

The USA Center for Rural Public Health Preparedness is designed to ensure public health professionals are able to respond to threats to the nation's public health. The USA Center at the Texas A&M University School of Public Health is the only center with a specific rural focus and is charged with supporting and developing the skills and competencies of emergency responders in rural areas of the United States.



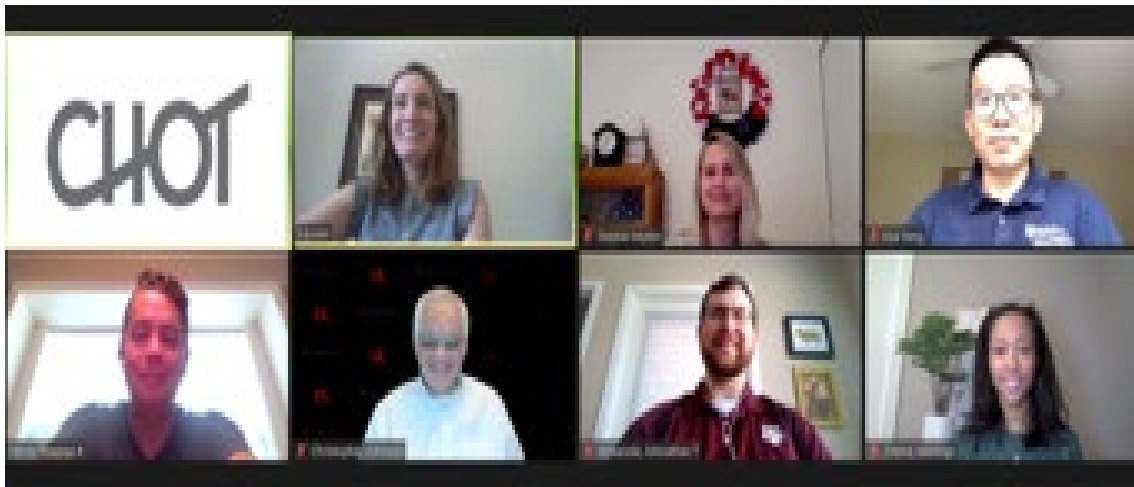
Southwest Rural Health Research Center

The Southwest Rural Health Research Center (SRHRC), established in 2000, is one of only nine federally-funded research centers by the Health Resources and Services Administration's Federal Office of Rural Health Policy. The center focuses on conducting policy-relevant research on meeting the needs of special rural populations, minority populations and health disparities (including border populations), and rural systems building.



Center for Health Organization Transformation

The Center for Health Organization Transformation. (CHOT) is an industry-university cooperative research center funded by the National Science Foundation and health organizations to conduct research supporting major management, clinical, and information technology innovations in healthcare. The Texas A&M University School of Public Health faculty and graduate students, team with health system professionals to pursue various research projects.



Ergonomics Center

The mission of the Texas A&M Ergonomics Center is to help industry and healthcare partners increase their competitiveness by improving worker performance, reducing workplace injuries and illnesses, and designing unique products and applications to combat the negative impacts of aging and obesity.



Center for Population Health and Aging

The Center for Population Health and Aging (CPHA) promotes population health and successful aging through innovations in research, education, and practice that examines social, behavioral, economic, environmental, and technological solutions linking academic and real-world clinical and community settings. Research focuses on evidence-based programs, health communities, and interactions between health, aging, and technology.

2019 Recipients of the Redefining American Healthcare Award by the Healthcare Leadership Council



Texas A&M School of Public Health Programs

Asthma Research and Education

The Program on Asthma Research and Education (PARE) facilitates environmental research and education focused on asthma, addressing underserved and minority populations.

Director: Genny Carrillo, MD, ScD



Environment and Sustainability

The Program on Environment and Sustainability (PES) goals are to develop and lead a vibrant Environmental and Sustainability network and to build a model research program with a multi-disciplinary approach that also encompasses education and outreach.

Director: Virender Sharma, PhD



Global Health Research

The Program on Global Health Research engages in cutting-edge transdisciplinary research and teaching that reduces the burden on disease and improves lives in international settings.

Director: Brian Colwell, PhD



Texas A&M School of Public Health Programs (cont.)

Health Law & Policy

The Program on Health Law & Policy aims to become a nationally recognized center noted for its rigorous analysis of state health laws and in-depth training of empirical health law researchers, analysts, and policy advocates.

Director: Cason Schmit, JD



Health & Nature

The Program on Health & Nature facilitates research and educational activities focused on the relationship between human health and nature. Research foci span from the community, the role of industry and the health care system. It also serves as the Texas A&M home for the joint Center for Health and Nature, a collaborative effort between Houston Methodist Hospital, Texas A&M University and Texan by Nature.

Co- Director: Jay Maddock, PhD, FAAHB & Bitia Kash, PhD, MBA, FACHE



Reproductive & Child Health

The Program on Reproductive and Child Health focuses on the study of environmental and occupational etiological determinants of reproductive and child health and the education and training of future leaders in this highly critical area of public health.

Director: Shaida Kalbasi, PhD



Awards & Recognition

The image features a collection of gold stars of various sizes scattered on a dark, reflective surface. The stars are three-dimensional, casting shadows. On the right side, there is a dark red, semi-transparent geometric overlay with sharp, angular shapes. The overall composition is clean and professional, suitable for a report or presentation on awards and recognition.

Texas Monthly “2021 Best Things in Texas”

Rebecca Fischer

Congratulations to Infectious Disease Expert Dr. Rebecca Fischer named to Texas Monthly’s 2021 Best Things in Texas. Fischer along with colleagues Dr. Peter Hotez of Baylor College of Medicine and Dr. Lauren Ancel Meyers of UT Austin were recognized for their efforts to give Texans - and the rest of the world - accurate guidance on the pandemic.

Read more:

<https://www.texasmonthly.com/news-politics/the-best-things-in-texas-2021/>



2020 Faculty Research Excellence Award



2020 Faculty Excellence Award Recipient

Alva Ferdinand DrPH, JD

Dr. Ferdinand's research primarily focuses on disparities in health outcomes, state and federal regulation of health care delivery and the effectiveness of laws aimed at improving public health. In addition to being an Associate Professor in the Department of Health Policy & Management at SPH, she serves as the Director of the Southwest Rural Health Research Center.

Dr. Ferdinand is most widely known among policymakers, motor vehicle insurance personnel, roadway safety advocates, and editors and readers of the *American Journal of Public Health*, for her work on the impact of texting-while-driving bans on reducing roadway injuries and deaths. She has been consistently funded by federal agencies including the National Science Foundation, Patient Centered Outcomes Research Institute, and Health Resources and Services Administration.

2020 Student Research Excellence Awardees

Doctoral

Theodoros Giannouchos

PhD Candidate, Health Services Research

Advisor: Dr. Hye-Chung Kum

“The Effect of Medicaid Expansion on Emergency Department Utilization in New York”



Graduate

Kathleen Aarvig

MPH candidate, Environmental Health

Advisor: Dr. Garrett Sansom

“Polycyclic Aromatic Hydrocarbons (PAH) Surface Soil Pollution in Somerville, Texas”



Undergraduate

Nariko Nakachi

BSPH candidate

“Investigating the Needs of Low-Income, First-Generation College Students at a Large Public University”

Advisor: Dr. Robert Garcia



15th Annual Jean Brender Student Research Poster Awards: Graduate

1st Place

Association between Ambient Air Pollution and Hospital Length of Stay among Children with Asthma in South Texas

Juha Baek

DrPH student, Epidemiology and Environmental Health

Concentration: Environmental Health



Association between Ambient Air Pollution and Hospital Length of Stay among Children with Asthma in South Texas

Juha Baek^{1,2}, MPSA; Bria A. Kash^{1,2}, PhD, MBA, FACHE; Xiaohai Xu¹, PhD; Mark Benden¹, PhD, CPE; Jon Roberts³, MD, FCCP; Genry Carrillo³, MD, ScD

1. Texas A&M University School of Public Health 2. Center for Outcomes Research, Houston Methodist Research Institute 3. Children's Hospital



BACKGROUND

- Hospital length of stay (LOS) is a significant determinant of overall healthcare expenses in the United States.
- Previous studies have identified factors that affect LOS to improve healthcare and promote effective use of limited resources.
- Despite the significant public health burden of pediatric asthma hospitalization, there are limited studies that investigate the association between air pollution and LOS for pediatric asthma in the U.S. setting.

OBJECTIVE

To examine the short-term effects of ambient air pollution exposure on LOS among children with asthma in South Texas.

STUDY SETTING

A total of 711 children aged 5-18 years old who were admitted to a children's hospital in South Texas due to asthma between January 1, 2010 and December 31, 2014



METHODS

- Data sources: hospital's electronic database, Centers for Disease Control and Prevention (CDC), and Texas Commission on Environmental Quality (TCEQ)

Exposure variables

Ambient air pollution (PM_{2.5} and Ozone)

The daily mean (median) concentration of PM_{2.5} and Ozone concentrations from admission day to 14 days after (and the maximum for each patient were collected (Lag0-14)).

Note: We used median (mean) for exposure assessment.

Outcome variables

Number of nights spent in the hospital (LOS) and the 30-day rate of re-hospitalization.

Number of days between the admission day and the 30-day rate of re-hospitalization.

Number of days between the admission day and the 30-day rate of re-hospitalization.

Number of days between the admission day and the 30-day rate of re-hospitalization.

- The multivariate binomial logistic regression analyses were performed to determine the association between each air pollutant and LOS on the admission day (Lag0) and cumulative several days prior to the admission day (Lag0-14-Lag7), controlling for several confounders.
- Stratified analyses by age, gender, and season were conducted to evaluate the effect measure modification.

RESULTS

Table 1. Descriptive Statistics of Study Population (N=711)

	Mean	SD	Min	Max
Gender				
Male	71.1%			
Female	28.9%			
Age (continuous)	9.2 ± 3.2	3.2	5	18
Age (5-11 years old vs 12-18 years old)	34.2%			
Season				
Spring	40.9%			
Summer	41.8%			
Fall	17.4%			
Winter	11.4%			
Public insurance	44.7%			
Private	28.8%			
Self-pay	2.5%			
Other insurance type	23.9%			
Yearly hospitalization	15.5%			
Previous LOS	49.5%			
Admission to another pediatric hospital	22.2%			
Weekend (Monday-Friday)	74.4%			
Weekend (Friday-Sunday)	25.6%			
Spring (March-May)	24.2%			
Summer (June-Aug)	42.3%			
Fall (September-November)	23.8%			
Winter (December-January)	10.2%			

Table 2. Results of associations between air pollution and hospital LOS (≥2 days) in single- and two-pollutant models

	Single-pollutant models			Two-pollutant models		
	PM _{2.5}	Ozone	p-value	PM _{2.5}	Ozone	p-value
Lag0	1.02 (0.95, 1.09)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag1	1.01 (0.94, 1.07)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag2	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag3	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag4	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag5	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag6	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag7	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047

Note: Adjusted for age, gender, race/ethnicity, family history of asthma or respiratory disease, type of insurance, use of medication, experience of asthma education, season, admission day, and outdoor temperature. * p < 0.05.

Table 3. Results of associations between air pollution and hospital LOS (≥2 days) stratified by age in single- and two-pollutant models

	5-11 years old (PM _{2.5} , Ozone)			12-18 years old (PM _{2.5} , Ozone)		
	PM _{2.5}	Ozone	p-value	PM _{2.5}	Ozone	p-value
Lag0	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag1	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag2	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag3	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag4	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag5	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag6	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047
Lag7	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047	1.01 (0.94, 1.08)	1.07 (1.00, 1.14)	0.0047

The multivariate logistic regression model showed

the ozone level was significantly associated with increased LOS in the single- and two-pollutant models. The PM_{2.5} level did not have a significant effect on LOS in the models.

However, in the age-stratifying subgroup analyses, both PM_{2.5} and ozone were found to be positively significant with hospital LOS among the group of children aged 5-11 years old while no significant results were found among those aged 12-18 years old.

DISCUSSION & CONCLUSIONS

- This is the first study to date that revealed the adverse effects of ambient air pollutants on hospital LOS for pediatric asthma in South Texas.
- Hospital leaders will be able to understand that outdoor air pollution could be an important indicator for identifying pediatric patients with asthma who have a risk for longer LOS.
- The findings also suggest that the importance of outdoor air pollution on asthma control and management should be emphasized in asthma education for pediatric patients.

15th Annual Jean Brender Student Research Poster Awards: Graduate

2nd Place

Borderline Methicillin Resistant Staphylococcus Aureus, An Underappreciated Emerging Public Health Threat

Oluwakemi Alonge
MPH candidate, Epidemiology



BORDERLINE METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS, AN UNDERAPPRECIATED EMERGING PUBLIC HEALTH THREAT

Oluwakemi D. Alonge^a, Rebecca S.B. Fischer, PhD MPH DTM&H^{b,c}, Eric L. Brown, PhD^a

^a Texas A&M University Health Science Center, School of Public Health, College Station TX USA; ^b Baylor College of Medicine, Department of Pediatrics, Section of Tropical Medicine, Houston TX USA; ^c The University of Texas Health Science Center School of Public Health, Houston TX USA

TEXAS A&M UNIVERSITY
School of Public Health

BACKGROUND AND MOTIVATION

- Borderline Methicillin Resistant Staphylococcus aureus (BORSA) were first described as hyperproduction of normal staphylococcal penicillinase.¹
- Unlike other strains of *S. aureus*, BORSA cannot be classified as truly methicillin-resistant or truly methicillin-susceptible strains. However, they are frequently misidentified, which poses an obvious epidemiological and therapeutic threat.²
- Borderline-resistant strains of *S. aureus* have been reported to be associated with both nosocomial and community-acquired infections and have been isolated from various infection sites, including skin, surgical wounds, respiratory samples, abscesses, and blood.¹
- The epidemiology and clinical presentation of BORSA infections seem to be similar to those for methicillin-resistant *S. aureus* (MRSA). Treatment of severe infections caused by BORSA may be ineffective, even with larger doses of oxacillin.
- The available evidence suggests that BORSA represent a frequently neglected problem, and their emergence in new environments implies that they need to be monitored and accurately distinguished from MSSA and MRSA.³

METHODS

Samples: Thirty-eight (38) samples collected from nasal swabs of well-visit outpatients at Princess Marina Hospital in Gaborone (the largest in Botswana public urban tertiary referral hospital) and Bamaletse Lutheran Hospital in Ramotswa (nearby rural district hospital).

Testing: Antibiotic susceptibility test using the Kirby-Bauer disc diffusion method was used to determine resistance to specific antibiotics, some of which are commonly used as drugs of choice for treatment of *S. aureus* infections. A suspension of the isolates were prepared to a particular McFarland standard of Optical Density (approximately 0.430 – 0.530), then spread evenly onto an appropriate agar (Müller-Hinton agar) in a Petri dish. Discs impregnated with various defined concentrations of six (6) antibiotics were placed onto the surface of the agar plates. After incubation (16–24 h at 35 °C), zones of growth inhibition around each of the antibiotic discs were measured to the nearest millimeter.

PURPOSE

Given the gap in knowledge of BORSA and the increased risk of serious infections due to ineffectiveness of antibiotics in the treatment of BORSA, we sought to characterize borderline methicillin resistant *Staph. aureus* in high risk communities in Botswana by defining antibiotic susceptibility phenotypes.

RESULTS

Fig 1: Antibiotic Resistance of *S. aureus* isolates by disc diffusion testing (n=38)

84% of isolates were susceptible to Doxycycline, 82.1% were susceptible to Cefuroxime, 81.62% were susceptible to Trimethoprim-sulfamethoxazole. Penicillin had the highest resistance rate of all isolates (76.3%), 18.4% of isolates exhibited multi-drug resistance.

Fig 2: Relative abundance of BORSA strains, nontypable MSSA, and new strains of *S. aureus* isolates.

19 (37.2%) of the isolates were BORSA, 19 (31.2%) isolates were non typable by standard Methods spa type but were confirmed as *S. aureus* by PFGE. Non-typable strains were more likely to be MRSA or BORSA than MSSA (p<0.01).

27 (83.1%) of Penicillin-resistant isolates were β -lactamase producers; 2 (6.9%) isolates were non β -lactamase producers.

Fig 3: Phenotypic expressions of important antibiotic resistance mechanisms in Penicillin-resistant isolates.

PREVIOUS FINDINGS

- From an initial isolation of *S. aureus* from nasal swabs of 529 outpatients at two hospitals in the South-East district of Botswana, 4.6% (23) isolates were identified as Methicillin Resistant *Staph. aureus* (MRSA).
- An additional 5.0% (25) exhibited an uncommon phenotype wherein they showed intermediate susceptibility to methicillin and were designated as Borderline Oxacillin-Resistant *S. aureus* (BORSA).
- BORSA, a rarely reported phenomenon with a yet unknown mechanism, was as frequent as MRSA.

IMPLICATIONS

- BORSA, a rarely reported phenomenon, may present an emerging health threat since disease often arises from endogenous carriage sources. The highest antibiotic susceptibility of BORSA were seen in Doxycycline and Cefuroxime making them drugs of choice for treatment of BORSA infections.
- Trimethoprim-sulfamethoxazole is widely used in HIV-infected patients who are at risk for opportunistic infections. Since the study population was predominantly HIV patients, it is important to highlight that BORSA strains still showed a high susceptibility (81.6%) to this antibiotic, indicative of no on-going resistance.
- Continuous monitoring of antibiotic resistance of BORSA is warranted to evaluate over time, the efficacy of drugs of choice used in the treatment of BORSA infections such as Cefuroxime and Doxycycline.

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15th Annual Jean Brender Student Research Poster Awards: Graduate

3rd Place

Designing A Gestational Diabetes Curriculum for Community Health Workers in The Texas-Mexico Border: A Culturally Competent, Community-Based Approach



Maria Roque

DrPH student, Public Health Sciences

Concentration: Health Promotion & Community

DESIGNING A GESTATIONAL DIABETES CURRICULUM FOR COMMUNITY HEALTH WORKERS IN THE TEXAS-MEXICO BORDER: A CULTURALLY COMPETENT, COMMUNITY-BASED APPROACH

Maria T. Roque, MPH; Lory Cabrera-Corner, MPH, CHW; Hala Sheik, BBS, DDS; Geney Carrillo, MD, PhD; Maria Perez-Patron, PhD

Table 1: CHW Focus Group Themes

Background

- GDM is a common pregnancy complication, and it is more prevalent in minority populations, such as Hispanic women (Comstock, Linder, & Cooke, 2010).
- The Rio Grande Valley (RGV) counties along the Texas-Mexico border have one of the highest rates of diabetes, and the majority of participants live in a rural, underserved area.
- Limited English skills, a cultural and historical population, and a rural location make it difficult to disseminate health information. Thus, it is a key role in disseminating health information, but research for CHWs to address CHW knowledge, attitudes, and beliefs is needed.
- Health interventions, such as nutrition and physical activity, are not used by women who receive standard prenatal care in underserved areas.
- Prenatal visits often emphasize the importance of providing culturally competent information and education to pregnant women. Culturally competent interventions acknowledge the unique values, attitudes, perceptions, and preferences of pregnant women (Parks, Beach & Cooper, 2008).

Methods

- We conducted 12 focus groups with women in the community, including both English and Spanish.
- The discussion was then transcribed, coded into four topics: CHW knowledge and beliefs, physical activity, nutrition, and nutrition assessment.

Results

- 100% of all participants with the pre- and post-test.
- 28 participants (50%) improved in nutrition, 18 (28%) correct the weight and 100% had no energy drinks.
- All correct use of the gestational diabetes care guide implemented.
- Table 2, Table 3, health assessment knowledge of CHWs vs. health. Had a 2% drop in correct responses. This was due to the women's preference to receive the manual as only 40% of participants preferred to receive the manual.
- 90% of the total improved from 0% to 100% change for gestational care performance based on 12% of participants selected correct answers on the post test. This manual correct health care recommendations for women with GDM.
- The highest performing item with 100% of participants selecting correct answers on the post-test was item 7, which asked about frequency of monitoring for women with GDM.
- Overall, CHWs performed well on the post-test. Scored correct 4 correct before and 100% on the post-test. Scored correct 4 correct before and 100%.

Conclusion

- CHWs in the Texas-Mexico border are familiar with type 2 diabetes, but interventions designed for this underserved population are not available in the community.
- Cultural and linguistic barriers are a high level of concern in this region.
- The manual that we created is better suited to the context of the population.
- When creating testing instruments, we should consider the community's level of education, literacy skills, and health literacy.
- Language and other cultural barriers may be important when creating interventions for CHWs working with underserved populations.

Acknowledgments

- This study was conducted with support from the Border Community of Education, Research and Training, a fund from awarded by the Texas A&M Institutional Review Board (IRB000196).

Table 2: GDM Pre- and Post-Test Results (n=44)

Item	Pre-Test	Post-Test	% Change
1. GDM is a disease	50.0% (22)	47.7% (21)	-4.7%
2. Physical activity recommendations	72.7% (32)	50.0% (22)	15.7%
3. GDM is a disease	72.7% (32)	50.0% (22)	8.8%
4. Recommendations to screen pregnant with GDM	50.0% (22)	100% (44)	22.7%
5. Nutrition recommendations	50.0% (22)	50.0% (22)	5.7%
6. Health assessment	72.7% (32)	50.0% (22)	16.7%
7. How often to monitor blood sugar levels with GDM	72.7% (32)	50.0% (22)	12.7%
8. Physical activity recommendations	72.7% (32)	50.0% (22)	15.7%
9. Weight gain during pregnancy	72.7% (32)	50.0% (22)	15.7%
10. Complications of GDM	72.7% (32)	47.7% (21)	15.7%
Mean	68.2%	48.9%	12.8%

La diabetes gestacional afecta 1 de cada 10 embarazos.

Alimentos que se deben limitar

¿Que Contiene mi licuado?

Si se puede prevenir y controlar la diabetes gestacional

15th Annual Jean Brender Student Research Poster Awards: Undergraduate

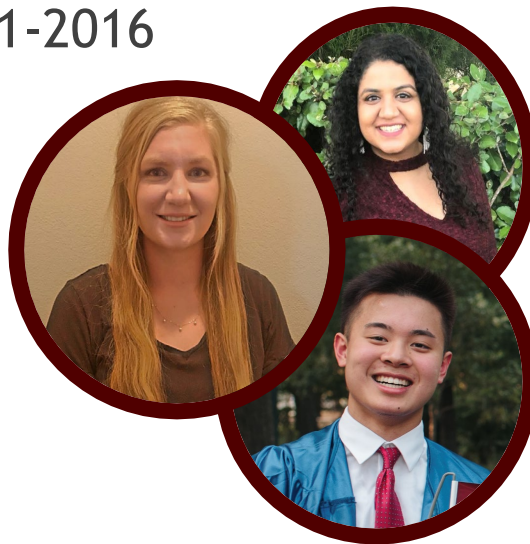
1st Place

Assessing the Social Determinants of Health Insurance in Ethiopia, 2011-2016

Natalie Freeman

Sanam Maredia

Allen Nguyen



DeBAKEY EXECUTIVE RESEARCH LEADERSHIP

Assessing the Social Determinants of Health Insurance in Ethiopia, 2011-2016

ARP Scholars: Natalie N. Freeman, Sanam Z. Maredia, Allen H. Nguyen
 ARP Leader/Instructor: Eniola A. Olatunji MPH, Advisor: David J. Washburn ScD, SM

TEXAS A&M UNIVERSITY
 School of Public Health

Background & Objectives

- Ethiopia launched the Health Extension Program in 2003 with the goal of achieving UHC by 2030 as well as improving health infrastructure.
- Governmental programs such as the Health Extension Program (HEP) and the Pharmaceutical Fund and Supply Agency have been established in order to expand health care resources to rural areas.
- The purpose of this research is to assess and compare the social determinants of health insurance and the relationship between media exposure and health insurance in Ethiopia between 2011 and 2015-16.

Sunburst Chart of Respondent Characteristics 2011

Sunburst Chart of Respondent Characteristics 2016

Frequency of Media Exposure in Ethiopia, 2011 and 2016

Methods

- The Ethiopia Demographic Health Survey (EDHS) for 2011 and 2016 were used for this study. The EDHS is a nationally representative survey based on multi-stage cluster sampling units across the regions which were stratified into urban and rural residence. The 2011 one sampled 14,110 males ages 15-59 years and 16,515 females ages 15-49 years. The 2016 one sampled 12,688 males ages 15-59 years and 15,683 females ages 15-49 years.
- This research used Pearson Chi-square test for bivariate relationships and multivariate logistic regression to demonstrate how these socio-demographic factors influence health insurance status.

Results

- In 2011, males were 42% significantly likely to be covered by health insurance whereas in 2016 males were 25% significantly less likely to be covered compared to females.
- When compared to urban residence, rural residence was statistically significantly likely to be covered (AOR=1.52) in 2011 with a p-value of 0.000 but was not statistically significant (1.14) in 2016 with a p-value of 0.274.
- Frequency of radio exposure did not show any association with health insurance coverage across years and within categories of exposure.

Discussion

- Ethiopia experienced improvement in health insurance coverage, in the five year period examined. Insurance coverage was 1.48% in 2011 and rose to 4.89% in 2016.
- There exist rural-urban difference as well as gender difference but this was not clear and consistent in the years studied.
- Across both years examined, higher education, higher age-group, professional and manual workers, wealth, exposure to newspaper and exposure to television were associated with health insurance coverage.

Results

Multivariate Analysis for Associations between Health Insurance Coverage and Explanatory Variables

Variable	2011	2016	2011	2016
Gender				
Female	1.00	1.00	1.00	1.00
Male	1.42***	0.88	0.75***	0.68
Type of Residence				
Urban	1.00	1.00	1.00	1.00
Rural	1.52***	1.14	1.14	1.14
Education				
No education	1.00	1.00	1.00	1.00
Primary	2.28***	0.80	0.75***	0.80
Secondary	2.28***	0.80	1.00	0.75
High school	1.52***	0.80	1.52***	0.80
Age group in years				
15-24	1.00	1.00	1.00	1.00
25-34	1.52***	0.80	1.52***	0.80
35-44	1.52***	0.80	1.52***	0.80
45 and above	2.28***	0.80	1.52***	0.80
Marital Status				
Never married	1.00	1.00	1.00	1.00
Currently married	1.52***	0.80	0.80	0.75
Living with partner	1.52	0.80	0.75	0.75
Partner/never married	1.00	0.80	1.00	0.75
Occupation				
Unemployed	1.00	1.00	1.00	1.00
Professional	1.76***	0.80	1.52***	0.80
Agricultural	1.52	0.75	1.52***	0.80
Manual	2.28***	0.80	2.28***	0.80
Wealth				
Poor	0.80	0.75	1.52***	0.80
Low	1.00	0.75	1.00	0.80
Medium	1.52***	0.80	1.52***	0.80
Rich	1.52***	0.80	1.52***	0.80
Frequency				
Not at all	1.00	1.00	1.00	1.00
Low	1.52***	0.80	1.52***	0.80
Medium	1.52***	0.80	1.52***	0.80
High	1.52***	0.80	1.52***	0.80
Very High	1.52***	0.80	1.52***	0.80

Conclusion

- In order to achieve UHC in Ethiopia, particular attention needs to be paid to people with lower socioeconomic status, especially considering factors such as education, residence, and wealth.

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15th Annual Jean Brender Student Research Poster Awards: Undergraduate

2nd Place

The relationship of weather trends and incidence of zoonotic and vector-borne diseases: a literature review on the U.S.

Tesha Landry



The relationship of weather trends and incidence of zoonotic and vector-borne diseases: a literature review on the U.S.

Alysa McNulty, MPH¹, Brittany Beasley², Samuel Karsky³, Santiago Canal Soris⁴, Shea Reuter⁵, Tesha Landry⁶, Rebecca Fischer, PhD, MPH, DTMH^{1,6}
¹Department of Epidemiology and Biostatistics, School of Public Health, Texas A&M University; ²College of Veterinary Medicine & Biomedical Sciences, Texas A&M University; ³College of Geoscience, Texas A&M University; ⁴School of Public Health, Texas A&M University; ⁵Department of Pediatrics, Baylor College of Medicine and Texas Children's Hospital



Objective

- Phase 1: Perform a literature review of six zoonotic and vector-borne diseases and their relationship to weather trends.
- Phase 2: Analyze incidence data and compare with weather variables.

Background

- Zoonotic diseases are infectious diseases that can be passed from animal to human.
- Zoonotic diseases are very common, making 60% of all known diseases and 75% of all new emerging diseases.
- Most of transmission involves direct contact with animals, indirect contact with infected areas, food/beverage, fecal contact with infected food, bit by a vector, drinking water contaminated with animal feces.
- This research looked at Cryptosporidiosis, Giardiasis, Salmonellosis, Shigellosis, Rocky Mountain Spotted Fever, and West Nile disease (Stomach and intestinal Nematode infections).

Hypothesis

Fluctuations in weather parameters associated with temporal and spatial trends in infectious diseases. Weather variables can affect disease activation and infectivity in zoonotic and vector-borne diseases.

Methods

- Correlations between weather variables and zoonotic/vector-borne diseases in published literature were studied.
- Incidence data was obtained from the Nationally Notifiable Diseases Surveillance System.
- TAMU Virtual Open Access Labs (VOAL) with State 6 and Excel were used for data analysis and graph generation.
- All resources used by project members were stored in a Zotero database.

Figure 1



Figure 1 (in the left): Incidence of zoonotic and vector-borne diseases in 2009 and 2010. The incidence of zoonotic and vector-borne diseases in 2009 and 2010. The incidence of zoonotic and vector-borne diseases in 2009 and 2010.

Figure 2 (in the right): This graph was created by NOAA using incidence data from the Nationally Notifiable Diseases Surveillance System on the CDC website.



Figure 2 (in the right): This graph was created from an article depicting weather trends associated with precipitation trends and zoonotic and vector-borne diseases. Each dot in this article around it represents one outbreak associated with zoonotic and vector-borne diseases.

Source for Figure 2: Campbell, C., Patel, J. A., Ross, J. B. & Soto, S. (2011). The Association Between Human, Pesticide, and Weather. *Journal of Environmental Health*, 119(1), 119-120.

Discussion

- The variables we focused on were temperature, water temperature, rainfall, precipitation, and humidity.
- Both temperature and precipitation have the largest positive correlation out of the diseases we analyzed.
- Based on this information, as temperature and precipitation levels increased, the number of cases increased.

The ongoing situation

- Cryptosporidiosis:**
 - Droughts and ambient water temperature related to Cryptosporidium oocysts
 - Humidity, flooding and seasonality associated to Cryptosporidium incidence

- Giardiasis:**
 - Association between humidity and Giardiasis transmission
 - As well as it's related to Giardiasis concentration
 - Temperature of natural bodies of water and Giardiasis concentration

- Salmonellosis:**
 - Humidity and Salmonellosis concentration
 - Temperature as if precipitation on fecal contamination and shedding of Salmonella
 - Water temperature and humidity associated to concentrations in soil, water, and plants

- Shigellosis:**
 - Relationship of humidity and Shigellosis incidence

- Spotted Eye or Rickettsiosis:**
 - Association between temperature and humidity

- West Nile Virus:**
 - Recent status regarding New York reported low cases
 - Changes in temperature, population, or other fly traps
 - Relationship of humidity to WNV incidence

Team lead: Alysa McNulty, MPH
 Contact: a.mcnulty@tamuhhs.tamu.edu

Research Publications

A close-up, shallow depth-of-field photograph of a person's hands holding a thick stack of papers. The person is wearing a dark jacket and a light-colored shirt. The background is a soft, out-of-focus blue and white. The text 'Research Publications' is overlaid in the top left corner.

Appendix A

- (1) Adetunji SA, Ramirez G, Ficht AR, Perez L, Foster MJ, Arenas-Gamboa AM. Building the Evidence Base for the Prevention of Raw Milk-Acquired Brucellosis: A Systematic Review. *Frontiers in Public Health* 2020;8:76.
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Appendix A

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Appendix A

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Research Presentations



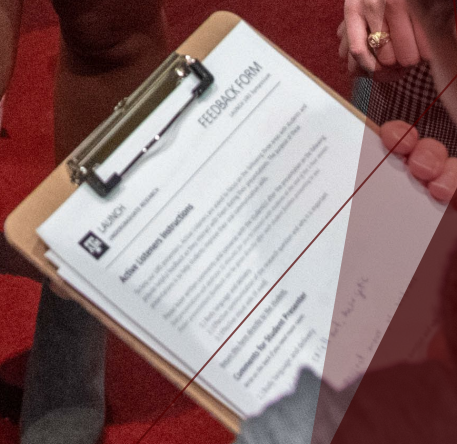
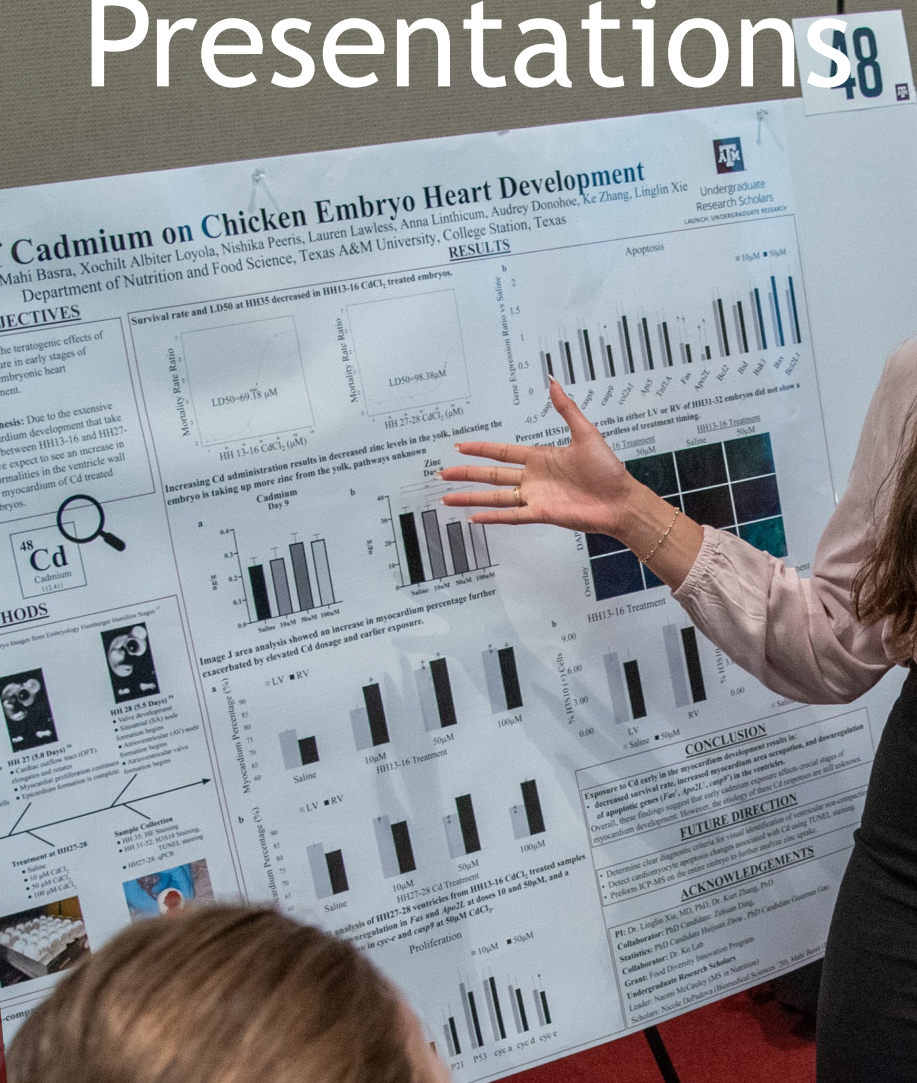
Appendix B

- (1) Ahenda P, Washburn D, Colwell B, Lee S, Gwarzo I, Kellstedt DK and Maddock J. Targeted Prevention Efforts and Shifts in the Social Determinants of Vitamin A Supplementation among Children Under Five in Kenya, 2003-2014. 2020 American Association for Health Behavior Annual Meeting, Virtual. June 28 - July 1, 2020.
- (2) Alonzo J, Ory MG, Lee D, McCord C, Ellis M, Pullium C and Nsobundu C. Interprofessional Student Integration into the Texas A&M Opioid Overdose Education & Naloxone Administration Training Public Health Initiative. Interprofessional Education and Research Conference 6 Symposium, Virtual. November 18, 2020.
- (3) Aly N, Casillas G, Luo Y, McDonald T, Wade T, Chiu W and Rusyn I. Environmental Impacts of Hurricane Florence Flooding in Eastern North Carolina: Temporal Analysis of Contaminant Distribution and Potential Human Health Risks. NIEHS Superfund Research Program Annual Meeting, Virtual. December 14-15, 2020.
- (4) *Baek J, Kash B, Xu X, Benden M, Roberts J and Carrillo G. Association between Ambient Air Pollution and Hospital Length of Stay among Children with Asthma in South Texas. American Public Health Association 2020 Virtual Annual Meeting and Expo. October 24-28, 2020.
- (5) Camargo K, Foster M, Buckingham B, McDonald T and Chiu W. Historical Spatial and Temporal Distribution of Legacy Contaminants in Galveston Bay and the Houston Ship Channel (GB/HSC) - a Systematic Evidence Map. NIEHS Superfund Research Program Annual Meeting, Virtual. December 14-15, 2020.
- (6) Clendenin AG. Cultural Competence: Developing Educational Opportunities and Collaborations with International Partners as an Extension of the Classroom Experience. 2020 Association of Schools and Programs of Public Health Annual Conference, Virtual. Spring 2020.
- (7) Cordova A, Roman-Hubers A, Valdiviezo A, McDonald T, Chiu W and Rusyn I. Developing Passive Dosing Methods to Enable in Vitro Testing of Environmental Samples and Complex Mixtures. NIEHS Superfund Research Program Annual Meeting, Virtual. December 14-15, 2020.
- (8) Du Y, Morrisey M and Ohsfeldt R. Behaviors of Private Insurers and ACA Marketplace Competition: A Two-Step Approach in Two States. 9th Annual American Society of Health Economists Conference, Virtual. June 7-10, 2020.
- (9) Fang V and Xu X. Association between Obesity Exposure and Insomnia in the U.S. Population. 23rd Annual Meeting American College of Epidemiology. September 21-23, 2020.
- (10) Fawkes L, Washburn DJ, Maddock J and Colwell B. An Analysis of women's Empowerment using the SWPER Index in India. 2020 Interdisciplinary Association for Population Health Science, Virtual. September 30-October 2, 2020.
- (11) Han G. Telomere Length, Acculturation, and Preterm Birth in Mexican-Origin Women. 65th American College of Nurse-Midwives Annual Meeting, Virtual. May 30 - June 1, 2020.
- (12) Han G. Sentinel Lymph Node Biopsy is Prognostic in the Thickest Melanoma Cases and should be Performed for Thick Melanomas. SSO 2020 - International Conference on Surgical Cancer Care, Boston, Massachusetts. March 25-28, 2020.
- (13) Han G. Stress, Acculturation, and Preterm Birth in Mexican-Origin Women. 65th American College of Nurse-Midwives Annual Meeting, Virtual. May 30 - June 1, 2020.
- (14) Hasan NT, Shah NC and Roh T. Phthalate Exposure and Respiratory Diseases among Adults and Children: The US NHANES 2007-2016. 2020 International Society for Environmental Epidemiology Annual Conference, Virtual. August 24-27, 2020.
- (15) Ilangovan G, Ramezani M and Kum HC. A Benchmarking System to Evaluate the Effectiveness and Efficiency of Machine Learning Algorithms for Record Linkage. American Medical Informatics Association 2020 Annual Symposium, Virtual. November 14-18, 2020.
- (16) Jang S, McDonald T, Bhandari S, Rusyn I and Chiu W. Spatial and Temporal Distribution of Surface Water Quality Contaminants After the Intercontinental Terminal Company Fire. NIEHS Superfund Research Program Annual Meeting, Virtual. December 14-15, 2020.
- (17) Jani S, Lee S, Smith ML and Ory MG. Moderate to Vigorous Physical Activity Engagement among Persons with Diabetes: NHANES 2015-16. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (18) Karim M, Nabil AK, Khodakarami N, Kum HC, Foster MJ and Ohsfeldt RL. Economic Evaluation of Epidermal Growth Factor Receptor - Tyrosine Kinase Inhibitor (EGFR-TKI) Drugs in Non-Small Cell Lung Cancer (NSCLC) Treatment: A Systematic Review of Recent Studies. International Society for Pharmacoeconomics and Outcomes Research 2020, Virtual. May 18-20, 2020.
- (19) Karim M, Ohsfeldt RL, Singal AG and Kum HC. Out-of-Pocket Expenditure, Probability of Underinsurance and Health Services Utilization among Non-Elderly Cancer Survivors. American Association for Cancer Research Annual Meeting, Virtual. June 22-24, 2020.
- (20) Kaur R, Regan A and Callaghan T. Immunization Against Influenza and Pertussis among Pregnant Women in Rural and Urban Areas of the United States. Society for Epidemiological Research Annual Meeting, Virtual. December 16-18 2020.
- (21) Kaur R, Callaghan T and Regan A. "Immunization Against Influenza and Pertussis among Pregnant Women in Rural and Urban Areas of the United States. Annual Meeting of the American Public Health Association, Virtual. October 24-28 2020.
- (22) Kellstedt D, Washburn D and Maddock J. Household Motor Vehicle Ownership and Obesity among Indian Women and Men: 2005-2016. Active Living Conference Annual Meeting, Orlando, Florida. February 2-5, 2020.
- (23)* Lau C, Shore R, Pendleton D, Behlen J, Mustapha T, Garcia-Rhodes D, Myers A, Brar A, Vargas T, Secret J, Li Y, Zhang R, Rodrigues Hoffmann A, Harvey N and Johnson NM. A Mouse Model of in Utero Ultrafine Particulate Matter Exposure and Infant Respiratory Syncytial Virus Disease. 2020 Society of Toxicology Annual Meeting, Anaheim, California. March 15-19, 2020.
- (24) Lee SD, Ory MG, Wilson AD, Aguirre A, Reuter K, Geltman JN, Hilsabeck R and Smith ML. Coordinated Approaches to Protecting Vulnerable Populations in Technology-Driven Dementia Care Research: Lessons Learned from Multi-Site Institutional Review Board Compliance. Texas Alzheimer's Research and Care Consortium Investigators Symposium, Austin, Texas. January 30, 2020.
- (25) Lee WC, Hutchison R, Lin S and Kuo Y-F. Opioid Usage Patterns. 2020 Data Blitz Symposium at Prairie View A&M, Prairie View, Texas. February 2020.
- (26) Lee S, Washburn D, Colwell B, Gwarzo I, Kellstedt DK, Ahenda P and Maddock J. Social Determinants of Undiagnosed Diabetes in Namibia and South Africa. 2020 American Association for Health Behavior Annual Meeting, Virtual. June 28 - July 1, 2020.
- (27) Maddock J, Neufeldt S and Kellstedt D. Content Analysis of Active Living Themes in State of the City Speeches among Large US Cities. Active Living Conference Annual Meeting, Orlando, Florida. February 2-5, 2020.
- (28) *McBee D, Behlen J, Mustapha T, Pendleton D, Drury N, Lau C, Shore R and Johnson NM. Targeting Nrf2 through Lactational Transfer of Sulforaphane: Implication for Respiratory Syncytial Virus Severity in a Neonatal Mouse Model. 2020 Society of Toxicology Annual Meeting, Anaheim, California. March 15-19, 2020.

Appendix B

- 29) *McNulty A, Landry T, Beasley B, Soria SC, Karsky S, Reuter S and Fischer RSB. The Association between Weather and Incidence of Zoonotic & Vector-Borne Diseases in the U.S. High Impact Practices in the States (HIPS) National Conference, College Station, Texas. February 18-21, 2020.
- 30) **Mendoza-Sanchez I** and Perez-Valdespino A. Impact of Flooding on Antibioticresistance in Soils from Public Parks. NIEHS PEPH 2020 Annual Meeting: Past, Present, and Future, Durham, North Carolina. February 12-13, 2020.
- (31) Merianos AL, Sherman LD, Goidel RK, Mahabee-Gittens EM and **Smith ML**. Current Tobacco Product use Patterns and overall Health Status among U.S. racial/ethnic Minority Men with Chronic Health Conditions. Society for Research on Nicotine and Tobacco Annual Conference, New Orleans, Louisiana. March 11-14, 2020.
- (32) Motta M, and **Callaghan T**. The Pervasiveness and Policy Consequences of Medical Folk Wisdom in the U.S. Annual Meeting of the Society for Personality and Social Psychology Annual Convention, New Orleans Louisiana. February 27-29 2020.
- (33) *Mustapha T, Drury N, Liu Y, **McDonald TJ** and **Johnson NM**. Direct Quantification Method for S-Phenyl Cysteine Benzene Oxide Hemoglobin Adduct. 2020 Society of Toxicology Annual Meeting, Anaheim, California. March 15-19, 2020.
- (34) Myint WW, **Washburn DJ** and **Maddock J**. Awareness of Male Condoms as a Contraceptive Method among Women in Four Southeast Asian Countries. Houston Global Health Collaborative Annual Conference, Houston, Texas. February 25, March 4, 2020.
- (35) Nabil A, **Ohsfeldt RL** and Barry A. Vaping: Predictors of Actual and Perceived use Behavior among u.s. College Students. American Academy of Health Behavior, Napa, California. March 8-11, 2020.
- (36) Primm K, **Callaghan T**, **Ferdinand A**, Akinlotan M, Khodakarami N and **Bolin J**. Urban-Rural Trends in HIV and Opioid Related Mortality in the United States, 1999-2018. AcademyHealth Annual Research Meeting, Virtually. July 28 - August 6, 2020.
- (37) Prochnow T, Umstatt Meyer MR, Delgado H, Johnson C, Gomez L and **Sharkey J**. Promotora Partnerships in the Creation of the ¡Haz Espacio Para Papi! Program to Engage Mexican-Heritage Youth and Fathers. Active Living Conference Annual Meeting, Orlando, Florida. February 2-5, 2020.
- (38) **Roh T** and **Carrillo G**. Arsenic Exposure and Measles Antibody Titers in US Children: NHANES 2003-2004 and 2009-2010. 32nd Annual Conference of the International Society for Environmental Epidemiology, Virtual Meeting. August 24-27 2020.
- (39) Roman-Hubers A, Cordova A, Rhode A, **McDonald T**, Baker E, Lloyd D, Wright F, Chiu W and Rusyn I. Identification of Polycyclic Aromatic Hydrocarbons (PAHs) in Complex Mixtures using Non-Target High Throughput Analysis using Ion Mobility Spectrometry-Mass Spectrometry (IMS-MS). NIEHS Superfund Research Program Annual Meeting, Virtual. December 14-15, 2020.
- (40) Shah NC, Hasan NT and **Roh T**. Trends in Arsenic Exposure among the US Population: Findings from the National Health and Nutritional Examinations Survey, 2007-2016. 2020 International Society for Environmental Epidemiology Annual Conference, Virtual. August 24-27, 2020.
- (41) *Shore R, Lau C, Mustapha T, Pendleton D, Drury N, Harvey N, Li Y, Zhang R, Rodrigues Hoffmann A and **Johnson NM**. The Role of Long Non-Coding RNA, MALAT1, in Regulation of Oxidative Stress and Inflammation in a Mouse Model of Infant for Respiratory Syncytial Virus Infection. 2020 Society of Toxicology Annual Meeting, Anaheim, California. March 15-19, 2020.
- (42) **Smith ML**, Barrett ME, Eagle LA and Lachenmayr S. Associations of Psychiatric Disorders and Social Isolation Risk among Community-Dwelling Older Adults in the United States. 2020 Federation of European Neurosciences Societies Forum of Neuroscience, Virtual. July, 11-15, 2020.
- (43) **Smith ML**, Barrett ME, Eagle LA, Lachenmayr S and Vieira ER. Associations of Frailty Indicators and Social Isolation Risk among Community-Dwelling Older Adults in the United States. International Conference on Frailty and Sarcopenia Research, Toulouse, France. March 11-13, 2020.
- (44) **Smith ML**, Bergeron CD, Barrett ME, Eagle LA and Lachenmayr SB. Influence of Driving and Transportation Access on Social Isolation Risk among Older Adults. Gerontological Society of America Annual Meeting, Virtual. November 4-7, 2020.
- (45) **Smith ML**, Sherman LD, Cauley DA, Badillo BE and Goidel RK. Pneumococcal Pneumonia Vaccination among Older African American and Hispanic Men with Chronic Conditions. Gerontological Society of America Annual Meeting, Virtual. November 4-7, 2020.
- (46) **Smith ML**, Steinman LE, Barrett ME, Eagle LA, Lachenmayr S and Belza B. Associations of Depression and Social Isolation Risk among Adults Age 60 and Older. Gerontological Society of America Annual Meeting, Virtual. November 4-7, 2020.
- (47) *Son C, **Peres SC** and Sasangohar F. New Wine in New Cups: Measuring Operator Performance for Safety-II Perspective. 16th Global Congress on Process Safety, Virtual. August 17-21, 2020.
- (48) *Son C, Sasangohar F and **Peres,S.C.,Moon,J.**. Characteristics of Resilient Incident Management Teams during an Extreme Event: A Case Study of Hurricane Harvey. 2nd Texas Disaster Management Symposium, College Station, Texas. February 12, 2020.
- (49) Spruance L, Bennion NG,G. and **Maddock J**. An Effective Educational Intervention for Improving the Youth Sports Food Environment. Active Living Conference Annual Meeting, Orlando, Florida. February 2-5, 2020.
- (50) *Uwak I, Ramani T, **Johnson NM**, Jaikumar R, Aguilera J, Ramirez I, Whigham L, Li W and Vallamsundar S. Exposure Assessment of Traffic-Related Air Pollution in El Paso, Texas, using Personal and Ambient Monitoring. 2020 Society of Toxicology Annual Meeting, Anaheim, California. March 15-19, 2020.
- (51) **Washburn D**, **Callaghan T**, **Schmit C**, Martinez D, Thompson E and LaFleur M. Community Health Worker Integration with Other Health Professionals in Rural and Urban Settings in the United States. AcademyHealth Annual Research Meeting, Virtually. July 28 - August 6, 2020.
- (52) Yoshikawa A, **Smith ML** and **Ory MG**. Associations between Social Engagement and Physical Activity among Community-Dwelling Older Adults with Dementia. Annual Conference of the Gerontological Society of America, Virtual. November 4-8, 2020.
- (53) **Zanwar P**, Horner-Johnson W, Davis M and Quinones A. Disparities in Evidence-Based Cervical Cancer Screening in Younger and Middle-Aged Women: By Disability and Race-Ethnicity. AcademyHealth Annual Research Meeting, Virtually. July 28 - August 6, 2020.
- (54) **Zanwar P**, Wood E and Gimm G. Examining Access & Factors for Preventive Service use in Community-Dwelling Older Adults with Cognitive Disability. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.

Poster Presentations



Appendix C

- (1) *Ajayi K, Giannouchos T and Ma P. Age Differences in the Association between Pregnancy and Depression among the US Reproductive-Aged Women. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (2) *Akinlotan M, Ferdinand A, Bolin J, Primm K and Khodakarami N. Rural-Urban Differences in Travel Burdens for Medical and Dental Care: Analysis of the 2017 National Household Travel Survey. American Public Health Association 2020 Virtual Annual Meeting and Expo. October 24-28, 2020.
- (3) Akinlotan M, Khodakarami N, Primm K., Callaghan T, Valdi M, Bolin J and Ferdinand A. Trends in Hospitalization for Human Immunodeficiency Virus (HIV) and Opioid use Disorders Along the Urban-Rural Continuum. National Rural Health Association Annual Conference, Virtual. June 17-19, 2020.
- (4) Alonzo JP, Lopez J, Smith ML and Ory MG. Feasibility of an Emergency Mass Prophylaxis Strategy using a Mixed Point of Dispensing (POD) Units Augmented by POD Units in Rural Texas. Texas Emergency Management Conference, Virtual. May 18-21, 2020.
- (5) Andreyeva E and Kash BA. The Effect of Rural Hospital Closures on Healthcare Access and Health Outcomes. 2020 APPAM Fall Research Conference, Virtual. November 11-13, 2020.
- (6) *Baek J, Kash BA, Xu X, Benden M, Roberts J and Carrillo G. Profile of High Utilizers in Pediatric Asthma Hospitalization: Identifying Individual and Environmental Characteristics. American Public Health Association 2020 Virtual Annual Meeting and Expo. October 24-28, 2020.
- (7) *Baek J, Kash BA, Xu X, Benden M, Roberts J and Carrillo G. Effect of Ambient Air Pollution on Hospital Readmission for Pediatric Asthma in South Texas: A Case-Crossover Study. American Public Health Association 2020 Virtual Annual Meeting and Expo. October 24-28, 2020.
- (8) Bergeron CD, Goltz HH and Smith ML. Factors Associated with Four Sexual Behaviors among married/partnered Women Age 60 and Older. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (9) Beverly J and McMaughan D. Individuals with Autism Spectrum Disorders and Contact with Law Enforcement. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (10) Callaghan T, Schneider M and Sylvester S. The Development of Politicized Collective Identity and Consequences for Participation. Annual Meeting of the Southern Political Science Association, San Juan, Puerto Rico. January 9 - 11 2020.
- (11) Callaghan T, Haeder S and Sylvester S. Surprise! Understanding American Experiences with Surprise Medical Bills. Annual Meeting of the American Political Science Association, Virtual. September 10-13, 2020.
- (12) Callaghan T, Haeder S and Sylvester S. Surprise! Understanding American Experiences with Surprise Medical Bills. Association for Public Policy Analysis and Management Annual Meeting, Virtual. November 11-13 2020.
- (13) Carrillo G. Integrated Education in Children with Asthma in Corpus Christi, Texas. Driscoll Children Hospital, Corpus Christi, Texas. February 15, 2020.
- (14) Cheng KJ, McMaughan DK and Smith ML. The Mediating Role of Optimism on Relationship of Activities of Daily Living and Wellbeing among Older Adults. Gerontological Society of America Annual Meeting, Virtual. November 4-7, 2020.
- (15) Clendenin AG. Putting the "Prepared" in Public Health Preparedness: A Team-Based Learning Approach to Public Health Emergency Preparedness. Association of Schools and Programs of Public Health Annual Conference, Virtual. April 3, 2020.
- (16) DuPont-Reyes MJ, Villatoro AP, Phelan JC, Painter K and Link BG. Estimating School race/ethnic Enrollment Effects on Student Mental Health: Density Versus Diversity as a Risk Or Protective Factor. 2020 American PsychoPathological Association Annual Meeting, Virtual. March 5-7, 2020.
- (17) Fan Q, Ma P, Hossain MM, Tasnim S, Guo B, Shah N and Jin X. Prevalence and Correlates of Mental Illness and Suicidal Thoughts and Behaviors among US Young Adults. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (18) Fazlul I, Courtemanche C, Yelowitz A, Ukert B, Zapata D and Marton J. Five Year Impact of ACA on Insurance Coverage. 9th Annual Conference of the American Society of Health Economists, Virtual. June 7-10, 2020.
- (19) Feng K, Zanwar P, Behzadan AH and Chaspari T. Exploring Speech Cues in Web-Mined COVID-19 Conversational Vlogs. 28th ACM International Conference on Multimedia, Virtual. October 12-16, 2020.
- (20) Ferdinand A, Primm K, Callaghan T, Akinlotan M, Khodakarami N, Valdi M and Bolin J. Opioid use Disorder and Human Immunodeficiency Virus (HIV)-Related Mortality: Evidence from the CDC WONDER Database. National Rural Health Association Annual Conference, Virtual. June 17-19, 2020.
- (21) Griffith JM. "the Rest of the Story..." Connecting Core Concepts to News Stories. Lilly Evidence-Based Teaching and Learning Conference, Austin, Texas. January 9-11.
- (22) Han D and Han G. Factors Predicting Survival in Thick Melanoma: Do all Thick Melanomas have the Same Prognosis? American College of Surgeons Oregon/Washington Annual Meeting, Virtual. September 26-26, 2020.
- (23) Han D, Han G, Leong SP, Kashani-Sabet M, Vettol J, White R, Schneebaum S, Pocka B, Mozzillo N, Sondak VK and Zager JS. Factors Predicting Survival in Thick Melanoma: do all Thick Melanomas have the Same Prognosis? 15th Annual Academic Surgical Congress - Orlando, Florida. February 4-6, 2020.
- (24) Han G. Quantification of Heterogeneity from Pathologists in the Assessment of the PD-L1 Assay in Breast Cancer and Lung Cancer. 2020 Statistical Practice in Cancer Conference, Tampa, Florida. February 28-29, 2020.
- (25) Hatten CF, DuPont-Reyes MJ, Gonzalez T, Murillo R, Echeverria S and Vasquez E. Job Strain and Mental Health among Older Adults: Results from the National Health Interview Survey. The Gerontological Society of America 2020 Annual Scientific Meeting, Virtual. November 4-7, 2020.
- (26) *Hossain MM, Fan Q, Nuzhath T, Tasnim S, Chakraborty S, Rahman MS, A., Ma P, McKyer EL and Ramirez G. Prevalence and Risk Factors of Maternal Depression in Low and Middle-Income Countries: An Umbrella Review of Systematic Reviews and Meta-Analyses. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (27) *Hossain MM, Tasnim S, Rahman M, Chakraborty S, Nuzhath T, Fan Q, Ma P and McKyer EL. Interventions for Preventing Female Genital mutilation/cutting: An Umbrella Review and Realist Synthesis of Global Evidence. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (28) *Hossain MM, Tasnim S, Sultana A, Fan Q, Tomar A, Purohit N, McKyer EL, Ramirez G and Ma P. Applications of Artificial Intelligence Technologies in Opioid Research and Practice: An Evidence-Based Systematic Review. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (29) Jacobs W, Fajayan A, Cabral K, Montgomery L, Smith ML and Merianos AL. E-Cigarette and Marijuana use and Injury and Violent Behaviors among Adolescents Nationwide: Results from the 2017 Youth Risk Behavior Survey. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.

Appendix C

- 30) Karim M, Ohsfeldt RL, Singal AG and Kum HC. Out-of-Pocket Expenditure, Probability of Underinsurance and Health Services Utilization among Non-Elderly Cancer Survivors. American Association for Cancer Research Annual Meeting 2020, Virtual. April 27-28, 2020 and June 22-24, 2020.
- 31) Karim M, Ohsfeldt R, Khodakarami N, Kum HC and Simon K. Association of Sociodemographics with Out-of-Pocket Expenditure (OOP) and Underinsurance in Skin Cancer Survivors. 9th Annual Conference of the American Society of Health Economists, Virtual. June 7 - 10, 2020.
- 32) Karim M, Ohsfeldt R, Khodakarami N and Kum HC. Association of Sociodemographics with Out-of-Pocket Expenditure (OOP) and Underinsurance in Skin Cancer Survivors. 9th Annual American Society of Health Economists Conference, Virtual. June 7-10, 2020.
- 33) Kellstedt D, Spengler J, Bradley K and Maddock J. Comparing Objective and Perceived Measures of Bikeability on a University Campus. Active Living Conference Annual Meeting, Orlando, Florida. February 2-5, 2020.
- 34) Lachenmayr S, Eagle LA, Barrett ME and Smith ML. Identifying Upstream Risk for Social Isolation and Taking Steps for Prevention. National Association of Area Agencies on Aging (n4a) Conference and Tradeshow, Virtual. July, 11-15, 2020.
- 35) Lachenmayr S, Eagle LA, Barrett ME and Smith ML. Take Action Now: How to Identify and Reduce Social Isolation in Older Adults. National Association of Area Agencies on Aging (n4a) Conference and Tradeshow, Virtual. July, 11-15, 2020.
- 36) Lachenmayr S, Eagle LA and Smith ML. Multiple Strategies to Reach Community-Dwelling Older Adults Who may be at Risk of Malnutrition. National Association of Area Agencies on Aging (n4a) Conference and Tradeshow, Virtual. July, 11-15, 2020.
- 37) Lee S, Ory MG, Vollmer Dahlke D, Shubert T, Popovich S and Smith ML. Conservation of Resources Theory: Technology and Caregiver Strain. Annual Conference of the Gerontological Society of America, Virtual. November 4-8, 2020.
- 38) Lee S, Smith ML, Vollmer Dahlke D, Shubert T, Popovich S and Ory MG. Technology use Patterns and Device Adoption among Caregivers and Care Recipients. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- 39) Li W, Lee C, Xu M, Lee S, Zhong H, Won JW, Towne SD, Zhu X and Ory MG. Using Spatio-Cultural Strategies to Recruit Health Research Participants: Lessons from a Natural-Experiment Study in El Paso, Texas. Active Living Research Annual Conference, Orlando, Florida. February 2-5, 2020.
- 40) Lin S and Skrla S. Let Me show You how! using Video to Promote Active Learning. Lilly Conference on Evidence-Based Teaching & Learning, Austin, Texas. January 9-11, 2020.
- 41) Ma P, Fan Q, and Hossain MM. Prevalence and Correlates of Substance use and Co-use among Women of Reproductive Age in the United States: 2008-2018. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- 42) Ma P, Fan,Q, and Hossain,M.M. Examining Substance-Impaired Driving among a US Nationally Representative Sample Aged 16 Years and Older, 2016-2018. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- 43) Ma P, Fan,Q, Hossain,M.M., Roque M and Chen LS. The Prevalence and Determinants of Substance use among Asian Americans: Evidence from National Survey of Drug use and Health. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- 44) Ma P, Fan,Q, Hossain,M.M., Roque M and Chen LS. Mental Health and Specialty Mental Health Service Utilization among Asian Americans in the United States: 2008-2018. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- 45) Ma P, Fan Q, Nuzhath T and Colwell B. Tobacco use & Substance use Co-use among Pregnant Adolescents & Young Adults in the United States, 2008-2018. 2020 Society for Research in Nicotine & Tobacco Annual Meeting, Virtual. March 11-14, 2020.
- 46) Maddock J. Developing Health Behavior Change Scales for Health and Nature. 2nd Annual Health & Nature Symposium, Virtual. October 7, 2020.
- 47) Mitchell A, Yeskey K, Jaitly N and Gibbs SG. Infectious Disease Training Technical Workshop. A Vision for 2025. Training Program Looking to the Future Virtual Conference. September 22-24, 2020.
- 48) Moreno-Rangel AB,J, Roh T, Cabrera-Conner L and Carrillo G. Household Intervention to Improve Indoor Air Quality and Health of Children with Asthma in the US-Mexico Border: A Pilot Study. American Public Health Association 2020 Virtual Annual Meeting and Expo. October 24-28, 2020.
- 49) Motta M, and Callaghan T. The Pervasiveness and Policy Consequences of Medical Folk Wisdom in the U.S. Annual Meeting of the Southern Political Science Association, San Juan, Puerto Rico. January 9 - 11 2020.
- 50) Motta M and Callaghan T. The Pervasiveness and Policy Consequences of Medical Folk Wisdom in the U.S. Annual Meeting of the American Political Science Association, Virtual. September 10-13, 2020.
- 51) Nsobundu C, Nmada Y, Wagle N, Foster M, Burdine J, Ory MG, McKyer L and Sherman L. Process Evaluations of Traditional, Group-Based Diabetes Self-Management Education Programs: A Systematic Review of the Literature. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- 52) Nuzhath T, Fan Q, Hossain MM, Ma P and Colwell B. Prevalence, Sources and Associated Risk Factors of Prescription Opioid Misuse among Adolescents and Young Adults in the United States, 2015-2018. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- 53) Ory MG. Applications of Technology to Dementia Prevention, Treatment and Care. Texas Alzheimer's Research and Care Consortium Investigators Symposium, Austin, Texas. January 30, 2020.
- 54) Ory MG, Lee S and Jani S. Impact of COVID-19 on University-Based Aging Research. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- 55) Ory MG, Towne SD, Yoshikawa A, Zhu X, Lu Z, Xu M and Lee C. Impact of COVID-19 on Caring for Persons with Dementia: Interactions with the Community Environment. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- 56) Pentecost R, Maddock J and Lee C. Design 4 Health. September 14, 2020. Annual Symposium for the College of Architecture, Texas A&M University, Virtual.
- 57) Peres SC. Is Attentional Shift the Problem (Or Something Else) with Hazard Statement Compliance? an Experimental Investigation using Eye-Tracking Technology. 2020 Mary Kay O'Connor Process Safety Symposium, Virtual. October 19-21 2021.
- 58) *Primm K, Garney W, Ferdinand A, Barry A, McCord C and Patterson M. Impacts of the Dependent Coverage Provision on Access to and Utilization of Substance use Disorder Treatment: An Urban Rural Comparison. American Public Health Association 2020 Virtual Annual Meeting and Expo. October 24-28, 2020.
- 59) *Primm K, Garney W, Ferdinand A, Barry A, McCord C and Patterson M. Examining the Impact of the ACA's Dependent Coverage Provision on Utilization of Mental Health Treatment among Urban and Rural Populations. American Public Health Association 2020 Virtual Annual Meeting and Expo. October 24-28, 2020.

Appendix C

- (60) Prochnow T, Delgado H, Patterson MS, **Sharkey J** and Umstatted Meyer MR. Associations between Child Play Networks, Sedentary Time, and Moderate-to-Vigorous Intensity Physical Activity in Mexican-Heritage Colonias. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (61) Prochnow T, Delgado H, Patterson MS, **Sharkey J** and Umstatted Meyer MR. Child Play Network Influences on Physical Literacy in Mexican-Heritage Colonias. 2020 Conference on the Value of Play, Virtual. March 29-April 1, 2020.
- (62) Rahn RN, **Clark HR** and Sherman LL. Investigating Obesity Perceptions in College Students Majoring in Health and Health-Related Fields: Pilot Study Results. Texas A&M University and Prairie View A&M University 2020 Data Blitz Symposium, Waller, Texas. January 2020.
- (63) ***Regan AK**, Uppuluri M, Kaur R and **Fischer RSB**. Maternal Morbidity & Mortality Associated with Dengue Virus Infection during Pregnancy: A Systematic Review. 8th Annual Houston Global Health Collaborative Conference, Houston, Texas. March 6-7, 2020.
- (64) **Roh T**. Grow it Yourself: The Effect of Hydroponic Vegetable Gardening on Improving Quality of Life in Cancer Patients and their Caregivers. 2020 Center for Health and Nature Symposium, Virtual. October 7, 2020.
- (65) **Schmit C**, **Washburn D**, LaFluer M, Martinez D, Thompson E and Callaghan T. State Law Frameworks for CHW Funding, Payment, and Reimbursement. Interdisciplinary Association for Population Health Sciences Annual Meeting, Virtual. September 30-October 2, 2020.
- (66) **Smith ML**, Barrett ME, Eagle LA, Lachenmayr S and Washington TR. Contextualizing Social Isolation Risk among Informal Caregivers Age 60 and Older. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (67) **Smith ML**, Sherman LD, Mingo CA, Washington TR, Lee S and Goidel RK. Adherence to Referrals from Healthcare Providers to Attend Disease prevention/management Programs among African American and Hispanic Men with Chronic Conditions. National Association of Area Agencies on Aging (n4a) Conference and Tradeshow, Virtual. July, 11-15, 2020.
- (68) ***Son C**, **Peres SC** and Sasangohar F. Two Views of Evaluating Procedural Task Performance: A Transition from Safety-I to Safety-II Approach. 2020 Mary Kay O'Connor Process Safety Symposium, Virtual. October 19-21 2021.
- (69) Towne SD, **Ory MG**, Li W, Xu M, Bian J and Lee C. Social and Structural Determinants of Forgone Medical Care among Potentially Vulnerable Populations Residing Along the US-Mexico Border. American Public Health Association 2020 Annual Meeting, Virtual. October 24-28, 2020.
- (70) Towne S, Lee S, **Smith ML**, **Han G**, Du D, Yoshikawa A and **Ory M**. Differential Intervention Effects Tied to Place of Residence: Greater Returns on Investment among Rural Residents. Active Living Research Annual Conference, Orlando, Florida. February 2-5, 2020.
- (71) Towne SD, Li W, **Ory MG**, Xu M, Zhu X, Bian J and Lee C. Factors Associated with Adequate Weekly Moderate-to-Vigorous Physical Activity among Lower Income Hispanic Adults Residing Near the US-Mexico Border. Active Living Research Annual Conference, Orlando, Florida. February 2-5, 2020.
- (72) Turcott RJ, Butler N and **Smith ML**. Finding Foreigners: Examining U.S. College Basketball Coaches' International Recruitment Strategies. 2020 North American Society for Sport Management Conference, Virtual. May 27-30, 2020.
- (73) Villatoro AP, **DuPont-Reyes MJ**, Pinedo M, Parra-Cardona R and Link BG. Preventing Stigma and Promoting Services for Substance use Problems: A Research Agenda. 2020 American PsychoPathological Association Annual Meeting, Virtual. March 5-7, 2020.
- (74) Wilson MG, DeJoy DM, Vandenberg RJ, Padilla HM, Haynes NJ, Zuercher H, Corso PS, Lorig K and **Smith ML**. Six-Month Benefits from Workplace CDSMP Participation among Employees with Chronic Conditions. National Association of Area Agencies on Aging (n4a) Conference and Tradeshow, Virtual. July, 11-15, 2020.
- (75) Woodruff S, Portney K, **Sansom G**, Hannibal B and Feiock R. Comparison of Resilience Policies and Programs Across U.S. Cities. Southern Political Science Association Annual Conference, San Juan, Puerto Rico. January 9-11, 2020.
- (76) Xu M, Lee C, Li W, Bian J, Zhu X, Towne SD and **Ory MG**. The Effect of Bus Rapid Transit on Walking, BMI, and Physical Activity. Active Living Research Annual Conference, Orlando, Florida. February 2-5, 2020.
- (77) Xu M, Zhu X, Lee C, Towne SD, Lu Z and **Ory MG**. Assessing the Market Demand of Walkable Neighborhoods. Active Living Research Annual Conference, Orlando, Florida. February 2-5, 2020.
- (78) **Zheng Q**. Let Master of Public Health Students Experience Statistical Reasoning. 22nd Annual International Conference on Education, Virtual. May 18-21, 2020.
- (79) **Zheng Q**. Improving the Teaching of Biostatistics in an Online Master Degree Program in Epidemiology. 5th International Conference on Distance Education and Learning, Virtual. May 22-25, 2020.

Active Research Faculty



Epidemiology & Biostatistics

Clendenin, Angela Ph.D Instructional Assistant Professor Risk Communication; Decision Analysis; Emergency Management and Emergency Communications; Cultural/Social Influences on Communication/Decision Making; Public Health Preparedness and Response for Refugee Populations; Communications Measurement and Assessment; Teaching as Research.

DuPont-Reyes, Melissa Ph.D Assistant Professor Childhood Violence Victims and Psychological and Developmental Repercussions of Childhood Violent Crimes or Events. Spanish Media and Health Outcomes.

Fischer, Rebecca Ph.D Assistant Professor Tropical Diseases/Viruses. Parasitic Diseases (not vaccine-preventable). Defining Trends & Epi. Infectious Diseases. Leptospirosis. Field Epidemiology of Disease.

Gorman, Dennis Ph.D Professor Alcohol and Drug Availability and Violence; Alcohol and Drug Prevention Policies; System Methodologies; Science and Pseudoscience in Public Health Research.

Han, Daikwon Ph.D Associate Professor Spatial Epidemiology; GIS & Spatial Analysis Methods; Environmental Health/Exposure Science; Environmental Justice and Health Disparities; Healthcare Access; Population Studies/Spatial Demography.

Han, Gang Ph.D Associate Professor Biostatistics. Personalized Medicine and Development of Methods. Survivor Analysis. Trial Design for Clinical Trial Methods. Time to Event Data Analysis. Economically and Ethically Reduce Time of Clinical Trials.

Kalbasi, Shaida Ph.D Instructional Assistant Professor Health Disparities, Women's Health, Quality of care for Immigrants, and Racial Minorities, Effect of Discrimination, and Race Relations on Health outcomes.

Perez-Patron, Maria Ph.D Research Assistant Professor Secondary Data Analysis. Minority & Immigrant Health. Demographics Population Analysis (Rural & Urban). Fertility & Mortality. Gestational Diabetes (Interventional).

Regan, Annette Ph.D Assistant Professor Vaccine Epidemiology, Vaccine Safety, Respiratory Infections. Maternal, Infant and Child Health, Birth Spacing, Preterm Birth & Stillbirth, Digital Health Tools.

Roh, Taehyun Ph.D Assistant Professor Arsenic and Water pollution of water supplies. Clean Water Access in Rural Populations. Toxicology and Environmental Health.

Taylor, Nicholas Ph.D Assistant Professor Molecular Epidemiology of Cancer - Melanoma and Breast Cancer; Study Design and Conduct.

Xu, Xiaohui Ph.D Department Head, Associate Professor Air pollution epidemiological studies. Susceptible population to environmental exposures modified by genetics, pre-existing health conditions, and coexposure to other factors, etc. Maternal and child health. Environmental exposure assessment. Spatial epidemiology.

Zhao, Hongwei Ph.D Professor Survival analysis and longitudinal data analysis, Quality-adjusted lifetime estimation, and costeffectiveness analysis conducted with censored data, Problems arising from correlated data from longitudinal studies, and multilevel epidemiological studies.

Zheng, Qi Ph.D Professor Mathematical Modeling of Biological Processes. Applied Statistical Processes. Application of Computer Algebra. Microbial Mutation Rates & Methods for Analysis.

Environmental & Occupational Health

Appiah, Bernard Ph.D Assistant Professor
Public Health Communication/Writing,
Global Health, Public Health Research
Methods, Patient/Health Advocacy. Public
Engagement; Communication; mHealth
and Mass Media Interventions for Behavior
Change; Global Health; Knowledge
Dissemination; Design, Implementation,
and Evaluation of Socio-behavioral
Interventions; Social Network Analysis;
Mixed Methods.

Benden, Mark Ph.D Department Head,
Associate Professor Human Factors, Safety
Engineering, Process Safety Management,
and Ergonomics Office worker obesity,
classroom ergonomics and childhood
obesity, medical device development and
testing, and rehabilitation engineering.

Carrillo, Genny M.D., Sc.D Associate
Professor
Border Environmental Health Risk
Management and Communication. Public
health and US-Mexico Border Health issues
with a special interest in interactions of
human health and the environment,
asthma in school children, and home
safety and healthy homes.

Cizmas, Leslie Ph.D Instructional
Assistant Professor
Basic Environmental Toxicology, Global
Health.

Gibbs, Shawn PhD, MBA, CIH Dean
Ebola, antibiotic resistance, highly
infectious disease management,
biocontainment, industrial hygiene,
personal protective equipment

Johnson, Dennis MPH, CIS, CPH.
Graduate Program Manager
Crisis Management/Emergency Response,
HSE Leadership and Management Systems,
Accident Investigation and Prevention,
Exposure Assessment, and Control.

Johnson, Natalie Ph.D Associate Professor
Environmental & Occupational Diseases,
Environmental Health & Toxicology,
Mechanisms of Disease Prevention.
Environmental carcinogens; Environmental
health disparities; Exposure to foodborne
(aflatoxins) and environmental
carcinogens (polycyclic aromatic
hydrocarbons); Chemoprevention;
Development of biomarkers of exposure to
traffic-related air pollution; Prenatal
exposure to air pollution and associated
epigenetic changes; Dietary interventions
to prevent environmentally-induced
asthma; Population-based animal models
of allergic airway disease.

Maddock, Jay Ph.D Professor
Health, Wellness, and Physical Activity,
Diet, SocialEcological Approaches to
Increasing Physical Activity; Nutrition,
Tobacco Use, and Global Health.

McDonald, Thomas Ph.D Regents
Professor
Environmental Measurements/Chemistry.
Environmental chemistry, petroleum
geochemistry, and general organic
chemistry.

Environmental & Occupational Health

Mendoza-Sanchez, Itza Ph.D Assistant Professor Mathematical and Experimental Models for Assessing Transport; Organics Trapped and absorbed in Soils as a Source Zone of Groundwater Contamination; Water Balance Modeling. Environmental Engineering. Models of Contaminants in Groundwater. Antibiotics in Food Production & Groundwater. Antibiotic Resistance.

Ory, Marcia Ph.D Regents & Distinguished Professor / Associate Vice President for Strategic Partnerships (TAMHSC) / Public Health Interventions. Aging and Health promotion. Chronic Disease Management; Health Technology and Community Engagement. Translational research.

Peres, S. Camille Ph.D Associate Professor Human Factors, Research Methods, Alternative Displays. Biomechanics of Human-computer interactions, Design guidelines for auditory displays, and usability of home health care technology. Worker safety, human systems integration, human systems engineering, ergonomics, procedures, engineering psychology, occupational safety.

Pickens, Adam Ph.D Instructional Assistant Professor Occupational Safety, Industrial Hygiene, Ergonomics, and Biomechanics. Ergonomic tool development; Occupational safety screening/tool development, Upper extremity modeling; Manual materials handling, and Occupational biomechanics.

Antonio Rene Ph.D Associate Professor Occupational/Environmental, Chronic Disease Epidemiology.

Sansom, Garret Ph.D Research Assistant Professor Environmental health policy and planning, Community Resilience, Sustainable development, and public health, Field research methods, Community engagement strategies.

Sharma, Virender Ph.D Professor Environmental, Physical, Analytical Chemistry. IronBased Oxidants (Ferrates and Ferrites), Kinetics and Mechanism of High-Valant Transition Metals, Advanced Oxidation Methods, Solar-Based Photoactive Materials in Water Treatments, Green Synthesis of Nanoparticles, Formation, Fate, and Toxicity of Nanoparticles in the Aquatic Environment.

Smith, Matthew Ph.D Associate Professor. Health Risk Behaviors Across the Life Course; Evidence-based Programming for Older Adults; Program Evaluation; Measurement; Survey Research Methodology. Public health systems and service research; Rural health, health policy, and vulnerable populations; Nutrition, physical activity, obesity, and related conditions; Educational pedagogy, particularly around writing skills in health professions.

Health Promotion & Community Health Sciences

Burdine, James Ph.D Interim Department Head / Professor Community Health Development; Community Organization and Assessment; Community Health Status Assessment. Measurement of factors influencing community capacity for population health improvement and community health development strategies, particularly community health needs assessment.

Clark, Heather DrPH Director of Public Health Practice / Research Associate Professor
Building Community Capacity to Solve Problems. Grassroots Causes. Social Norms & Values, Partnerships with Community. Rural Access to Care. Physical & Mental Health. Diabetes & Opioid Abuse.

Colwell, Brian Ph.D Professor Social Ecology and Health Behavior; Seminar on Alcohol, Tobacco, and Other Drugs. Adolescent smoking cessation; school health education; youth smoking prevention; adolescent mental health and substance abuse.

Delgado-Rendon, Angelica Ph.D Instructional Assistant Professor Entertainment education projects such as telenovelas and fotonovelas to educate communities about various health topics.

Flores, Krystal Ph.D Instructional Assistant Professor Maternal and Child Health, Border Health (Rio Grande Valley, TX), Adolescent Pregnancy Prevention along the Texas - Mexico Border, Health disparities among vulnerable populations (including Latinas, adolescents, and immigrant children).

Garcia, Robert Ph.D Instructional Assistant Professor Community-based approaches to cancer prevention in Latino populations (the US and abroad), Development of culturally appropriate and relevant interventions for diverse populations, Creation of community, academic, and government collaborations to improve health outcomes, Tobacco regulatory science, Tobacco use disparities, Cancer disparities.

Jones-McKyer, Elisa Ph.D Associate Dean for Climate & Diversity / Professor Minority health issues and health disparities; Parental influences on child health behaviors and outcomes; Socioecological factors of health behaviors.

Ma, Ping Ph.D. Assistant Professor Maternal & Child Health Issues. Health Disparities in Vulnerable Populations. Smoking Cessation. Children's Injury Prevention.

Mier, Nelda Ph.D Instructional Assistant Professor Chronic Disease Prevention, Quality of Life through Behavioral Change in Mexican Americans of all ages living in Texas-Mexico border region, Physical Activity Among Mexican Americans, Intervention Research to Enhance Physical Activity Patterns, Diabetes Prevention Among Children and Adults in Border Region, Promotoras Model (Community Health Workers) in Border Regions.

Health Promotion & Community Health Sciences

Sharkey, Joe Ph.D Professor

Social and Behavioral Research Methods; Program Evaluation; Mixed-Methods Research; Environment and Policy Assessment. Food access and food choice in underserved areas, food insecurity and hunger, childhood obesity, and effects of structural and individual characteristics on nutrition, physical activity, and health outcomes, promotora empowerment, community-engaged approached to population health.

Spengler, John Ph.D, J.D. Professor

Active living policy and obesity prevention, Legal and policy issues around injury prevention, physical activity, and the built environment. Risk management policy and implementation in sport and recreation.

Stasi, Selina DrPH Instructional Assistant Professor

Access to and physical activity promotion within underserved communities and communities of color, through community-based research, asset mapping, and GIS analysis. Research regarding physician-based physical activity counseling, prescription and referral, and youth engagement and empowerment to combat disparities in physical activity and health. Linkages between community, clinic, and church, and the role public health practitioners play to leverage resources between them all.

Tai-Seale, Tom DrPH Instructional

Associate Professor Social and Behavioral Determinants of Health; Program Planning; Program Evaluations; The Biology of disease. Local health systems development and community empowerment of chronic disease prevention; program planning and evaluation for the prevention and control of chronic disease; health behavior coaching.

Health Policy & Management

Andreyeva, Elena Ph.D Assistant Professor

Health economics, Spatial nature of the healthcare market, Urban/regional/rural economics, Health Insurance effects on policies of healthcare delivery, Risky health behaviors.

Bolin, Jane Ph.D, J.D., R.N Professor.

Health Law and Ethics, Regulatory Compliance; Cancer Screening and Prevention; Diabetes Self- Management; Chronic Disease Management; Interdisciplinary and Translational Research; Rural Health Research.

Callaghan, Timothy Ph.D Assistant Professor

Health Policy & Politics, Rural Health. State Level Decisions on Health Policy & Access to Care. Autism, Disability, Motivations of Personal Issue to Public Policy Change. Surprise Medical Bills. Medicaid Work Requirement. Antibiotic Resistance.

Carrino, Gerard Ph.D Instructional Professor

Evaluation: Program, Process, Outcomes, Economic; Nonprofit Sector in Health Care; Health Care Philanthropy and the Social Sector; Prematurity, Birth Defects, Infant Mortality; Public Health Finance.

Côté, Murray Ph.D Program Director/ Associate Professor Operational Analysis. Health Services Delivery Methods (Tele/Drone). Project Management in Rural Hospitals. Information Asymmetry in Doctor/Patient Encounters.

Ferdinand, Alva Ph.D, J.D. Assistant Professor

Impact of laws and other policies relative to public health outcomes such as roadway safety, obesity, and access to care. Other interests include state and federal regulation of health care and community health development.

Griffith, Jennifer. DrPH Associate Dean for Academic Affairs/ Instructional Associate Professor

Public Health Emergency Preparedness and Response; Intervention Implementation, Management, and Evaluation.

Hatala, Jeffrey. Ph.D Program Director/ Instructional Associate Professor

Public health systems and service research; Rural health, health policy, and vulnerable populations; Nutrition, physical activity, obesity and related conditions; Educational pedagogy in health professions.

Kash, Bitu MBA, Ph.D Professor

Organizational capacity for change and transformation; Change implementation in healthcare; Healthcare strategic planning and marketing; Quality and Cost of Care.

Kum, Hye-Chung, Ph.D Associate Professor

Data science for health care; population and health informatics; analysis of big data; decision support systems for health policy and management. Machine Learning.

Health Policy & Management

Lin, Sherry Ph.D Instructional Assistant Professor
Preventive Care Services; Disabilities Research; Vulnerable Populations.

Ohsfeldt, Robert Ph.D Regents Professor
Cost-Effectiveness and Cost Models; Economics of Health Behavior; Impact of Health Sector Regulation.

Quiram, Barbara Ph.D Professor
Public Health Infrastructure; Health System Service Quality; Public Health Workforce Development; Rural Community Health System Planning and Development; Rural Community Disaster Planning.

Radcliff, Tiffany Ph.D Associate Dean for Research / Professor
Health Economics; Health Policy; Health Services Research; Improving Quality of Care in Long-term Care; Access to Care for Rural and Other Underserved Populations; Improving Care, Processes and Outcomes; Disaster Preparedness and Response; Veterans Healthcare; Economic Evaluation.

Schmit, Cason J.D. Research Assistant Professor
Law as a Social Determinant of Health; Health Information Technology; Health Information Exchanges; Privacy, Confidentiality, and Security of Health Information; Public Health Reporting and Surveillance; Pharmacists' Vaccination Authorities.

Tomaszewski, Lesley Ph.D Instructional Assistant Professor
Social Learning and Identity Formation; Gender in the Workplace; Andragogy and Curriculum Development.

Washburn, David Sc.D Assistant Professor
Global Health; Health Policy; Health Systems Analysis; Strategic and Capital Planning; The Diffusion of Innovations; Decision-Making Behavior; Access to Care.

Texas A&M University School of Public Health Research Sponsors

American Diabetes Association

Cancer Prevention and Research Institute of Texas

Coastal Bend Health Education Center

DHHS-Administration for Community Living

DHHS-Centers For Disease Control and Prevention

DHHS-Health Resources and Services Administration

DHHS-Office of the Assistant Secretary for Preparedness and Response

Department of Veterans Affairs

Environmental Protection Agency

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Hogg Foundation

Houston Methodist Cancer Center

Houston Methodist Hospital

International Atomic Energy Agency

National Academies

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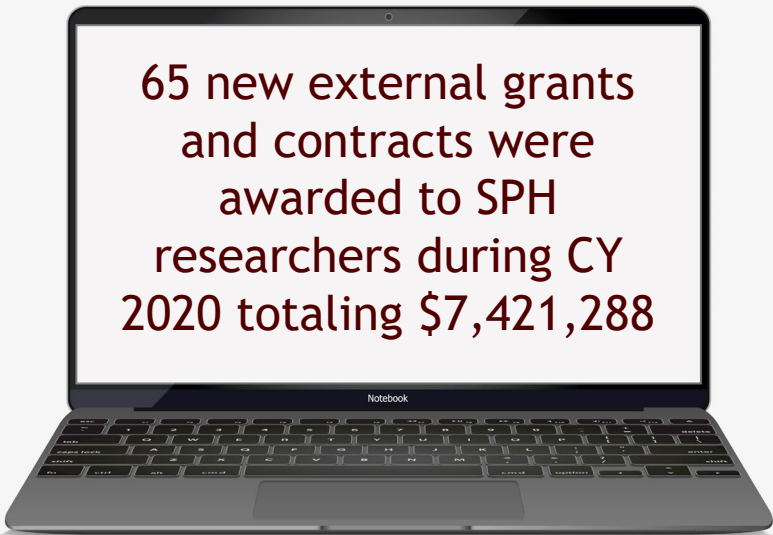
Texas Alzheimer's Research and Care Consortium

Texas Department of State Health Services

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USDA-National Institute of Food And Agriculture

Walmart Foundation



65 new external grants and contracts were awarded to SPH researchers during CY 2020 totaling \$7,421,288

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SPH's mission is to provide education, conduct research, and partner with communities and organizations to improve the health of populations. The school views health as a human right and has a special commitment to improving health in cities, eliminating health disparities, and promoting health in all policies.

The Texas A&M University is a Council on Education for Public Health (CEPH) accredited institution.

Contact Us:

Texas A&M University School of Public Health
212 Adriance Lab Road
1266 TAMU
College Station, TX 77843-1266



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