

AUGUST 2021

Epidemiology & Environmental Health

NEWSLETTER



EEH Faculty and Staff pose for a fun photo outside of Farber Hall on UB's South Campus.

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100th EEH Anniversary



EEH Graduate Students



EEH Community



EEH Faculty

The EEH Chair's Corner

Pauline Mendola, PhD



Coming home...

When I thought about applying for the Chair position in Epidemiology and Environmental Health, it was clear that it was a great opportunity for me, both professionally and personally. On the professional side, I've had leadership positions in the government (EPA, CDC/NCHS) and in scientific societies, but had not exercised those skills in academia – an interesting challenge. On the personal side, my husband and I are both native Buffalonians and after nearly 25 years away – we were ready to come home.

I was thrilled to receive the offer and make plans to return. I retired from my role as a Senior Investigator in the Epidemiology Branch at the Eunice Kennedy Shriver National Institute of Child Health and Human

Development and joined the EEH Department in October of 2020.

But, there is a bit more to the story – it was a homecoming in other ways as well! In 1981, I was a clerk in the Department (then Social and Preventive Medicine) where I worked coding diet interviews for Dr. Saxon Graham's studies of diet and cancer. With lots of encouragement from the faculty, I got my masters (1990) and PhD (1994) from the department – working closely with Drs. Germaine Louis and John Vena. I stayed on as Project Coordinator with the NYS Angler Study and served as a Research Instructor (1994-96) and Assistant Professor (1996-98) before leaving to work at the EPA in Chapel Hill, NC. Coming back to serve as chair in the department where I trained was a special homecoming and definitely an honor.

While the learning curve is steep and everything over the past 18 months has been challenged by the global pandemic – we have managed to stay safe and to thrive in this new environment. EEH is a fabulous place to be. We have a dedicated and highly skilled faculty and staff who are meeting the challenges of the times with enthusiasm and good humor. As a reproductive/perinatal epidemiologist, I am excited to build research and educational opportunities in maternal and child health in our EEH programs. Our PhD program is growing with 8 new students joining us for fall of 2021. We are poised to grow our research programs and add to our faculty in the coming year as well. I am very happy to be “back” and looking forward to a bright future!

Exiting EEH Chair

Jo Freudenheim, PhD



As you likely know, as of October of 2020, Dr. Pauline Mendola became the chair of EEH and I completed my time as chair. I had had the privilege of serving as chair or interim chair of our department for 16 years, starting in 2003 when the School of Public Health and Health Professions was established and the department moved from the School of Medicine and Biomedical Sciences to SPHHP. (There was a one year hiatus around 2013 when I was not chair.)

In the time that I have served, a great deal has happened. I would like to share some of the highlights. We have established two divisions within the department: The Division of Health Services Policy and Practice and The Division of Environmental Health. Both of those divisions are growing in a multitude of ways and are making important contributions with both their research and teaching. We have put together a great team in EEH-

almost all of the current faculty and staff in the department were hired during the time that I was chair. We, as faculty and staff, have had the incredible opportunity to work with a large number of wonderful and really talented students who are now contributing to public health in their research and public health practice, or are in the process of learning to do those things. The three EEH MPH programs have grown and developed and the MS and PhD programs have thrived. For example, I am particularly aware that the T32 training program in cancer epidemiology is well recognized both within UB and throughout the US for exceptionally skilled graduates.

Departmentally, we have made important contributions with our research, with high impact papers that have important translation to public health. In 2019, the department celebrated its 100th anniversary, highlighting the amazing work that has been done in epidemiology at UB. These accomplishments all took place while I was chair but they are all the result of the incredible work of an amazing team that included the other EEH faculty and administrators.

Being a chair is not without complications- dealing with problems, crises and making difficult choices. When I started, I was told that the chair position was a half time position. In reality, I was never not the chair. I have learned a huge amount in my time in this role. And I am incredibly grateful to all who have worked with me to move things forward- the innumerable contributions of other faculty, staff, administrators and students. I am thrilled that Dr. Mendola is now the chair. She has a wealth of great ideas and new directions for the department. For myself, I am looking forward to this new stage in my career. I will now be taking on new roles- both at the school and university level. I am hoping too to have more time for both my research and for teaching and mentoring.

EEH Faculty & Staff Highlights



See a list of our team here:

<http://sphhp.buffalo.edu/epidemiology-and-environmental-health/faculty-and-staff.html>

SPHHP Awards



Katia Noyes

SPHHP Senior Researcher of the Year Award

Katia keeps an incredible number of research efforts moving forward successfully while maintaining a strong MPH program and providing service to our community as well as the profession. She leads the Division of Health Services, Policy and Practice with vision and outstanding scholarship. Her exceptionally strong research funding, cross-disciplinary connections and forward-thinking leadership are evidence of the importance and relevance of her work to the overall mission of the School of Public Health and Health Professions.



Jennifer Forgnone

SPHHP Outstanding Staff Leadership Award

Jen is an outstanding administrator. She is the key to our successful onboarding of new personnel, has often picked up extra duties to cover vital services as staff members depart, and her expert judgement has been invaluable to our new chair. She brings an impressive range of skills to the job and clearly demonstrates distinction in supporting our academic programs and an exceptionally strong commitment to the SPHHP mission.



Kasia Kordas

SPHHP Dean's Award for Community Service

Kasia's work globally, nationally and locally is a model of blending community service with public health research and training. The impact of her work clearly advances the SPHHP community service mission both locally and globally. By leveraging her expertise in global health, work on nutrition and the environment, conveying vital public health messages to vulnerable populations, and efforts to remediate health disparities - she epitomizes the goals of SPHHP to improve the health of populations, communities and individuals through her community service.

UB Blue Sky Coin Winners



Katarzyna
Kordas



Xuefeng Ren



Heather
Ochs-Balcom

John Violanti



Jean
Wactawski-
Wende



SPHHP internal funding awards

5000 Bronze coins earned by each of our faculty to be used for research

Dr Tia Palermo

Tia Palermo joined EEH in August 2019 as an Associate Professor. She conducts research examining the impacts of social protection programs on population health. In 2020, she received funding from Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) under the umbrella of the P4H Health Financing Network to conduct a mixed method study examining the impacts of the COVID-19 pandemic on adolescent health and well-being in Tanzania. At UB, Tia serves as co-lead for the Global Child Team at the Community for Global Health Equity and co-founded the Buffalo HealthCast, a podcast by the students, staff and faculty of SPHHP.

Prior to joining UB, she was a Social Policy Manager for Social Protection at UNICEF, where she led research examining linkages between social policy, poverty, and health, with a focus on children and adolescents. She has substantial expertise conducting mixed method impact evaluations in Sub-Saharan Africa, including studies of large-scale cash transfer programs in collaboration with national governments, and implementation research in Latin America. Tia previously worked for international NGOs, including Ipas and Family Care International. She is co-Principal Investigator on four studies examining impacts of social protection programs for The Transfer Project and is also a member of the following Research Consortia: SPARKS Network for Health and Social Protection and The Cash Transfer and Intimate Partner Violence Research Collaborative. She holds a Ph.D. in Public Policy and a Master's in Health Economics from the University of North Carolina at Chapel Hill and completed postdoctoral training in Demography at the CUNY Institute for Demographic Research.



Dr Gauri Desai

Gauri Desai joined EEH in 2020 as a Clinical Assistant Professor in the Undergraduate Public Health Program following her graduation from the department the year prior. She now teaches undergraduate courses related to epidemiology, global health, and nutrition.

Within the general area of global environmental health, her research focuses on understanding the impact of environmental toxins on children's health. She has investigated the associations between arsenic and lead exposures and child development in Uruguay and the U.S. Her experience also includes a multidisciplinary project to improve sanitation for people with disabilities in low- and middle-income countries, which contributed to establishing a novel framework at UNICEF to evaluate sanitation access.

Student Highlights



EEH values and is proud of the achievements of its students.

Read more about the exciting work of our students here:

<http://sphhp.buffalo.edu/epidemiology-and-environmental-health/about-us/our-students.html>

Spring 2021 PhD graduates

Zhonzheng (Jason) Niu

My dissertation is entitled “Air pollution, telomere length, and cardiovascular disease: a life-course study”. I examined the association of preconception/ prenatal exposure to air pollution with newborns’ telomere length at birth and, if such association exists, when is the sensitive window. Then I examined the association of birth TL and prenatal and childhood exposure to air pollution with cardiovascular disease risk in middle age. The last part of my dissertation examines whether air pollution and short telomere length might increase cardiovascular disease mortality. I have successfully defended my three-cohort dissertation in May. I will continue studying the associations and mechanisms of early life environmental insults in relation to cardiovascular disease development. My long-term goal is to prompt population-wide cardiovascular health by identifying and controlling early life risk factors of cardiovascular diseases.



Amy Shaver, PharmD

Amy started as a postdoctoral research associate at EEH in the Fall of 2018 after completing her Doctor of Pharmacy degree earlier that year. She also earned her MPH in 2017 when she was inducted into the Delta Omega Honor Society. During her time as a student, Amy worked on a number of research projects with colleagues in both epidemiology and pharmacy. Most recently she was invited to the American Society of Preventive Oncology’s New Investigator Workshop. Amy’s research to date has focused on resilience, transitions of care, patient safety, and care delivery in an aging population. This August Amy will continue her research in geriatric oncology career as a Postdoctoral Fellow in the Medical Oncology Department at Thomas Jefferson University. Amy likes to spend time with her family in the outdoors, both gardening and hiking, as well as relaxing indoors with her cats and dog reading, baking and watching movies.



Student Achievements

Lindsey Mattick, MPH

Lindsey is a 3rd year PhD student. She completed her bachelor's degree in biological sciences at UB and went on to obtain her master's in epidemiology from the University of Texas Health Science Center at Houston. Early in her PhD program she received a fellowship to evaluate downstaging of cervical cancer in women in Dar es Salaam, Tanzania. Upon completing that project, her research interests pivoted to primarily focus on the epidemiology of aging. Recently she was the recipient of a Ruth L. Kirschstein Predoctoral Individual National Research Service Award (F31) by the National Institute on Aging (NIA) to fund her dissertation work entitled "Follicle-Stimulating Hormone and Bone Loss in Postmenopausal Women". Additionally, she's involved in projects investigating endogenous hormones and body composition within the Women's Health Initiative with Dr Heather Ochs-Balcom.



Jen Mongiovi, MPH

Jen is one of EEH's most promising PhD candidates. She was recently selected as a 3-minute Thesis Finalist. Here is what she has to say about this experience:

"Trying to put years of work into three minutes is quite the challenge, but it really makes you stop and think about why you're doing the research you are. The obvious reason is to graduate with a PhD (and maybe get some publications along the way), but this is true for everyone participating in the 3MT competition. This experience helped me to define my dissertation and long-term research goals and also be able to communicate to a broad audience why these goals are so important to me, as well as the scientific community and general population. While the competition may be over, I know that this skill will continue to be incredibly useful in numerous other ways - giving presentations, connecting with other scientists at conferences, convincing grant reviewers why my proposed research is so crucial, advocating for science with policy makers, and being able to share this work that I'm so passionate about with family and friends."

Student Achievements

MPH (Epidemiology)
Culminating Project Award

Madison Cooper, MPH



MPH (Health Services Administration)
Culminating Project Award

My culminating project, titled “Pharmacists’ Perceptions and Attitudes of Community Pharmacy-directed Opioid Interventions in Western New York” was a multi-sector collaborative study involving input from community educators from the ECDOH and professors from D’youville and UB Schools of Pharmacy. Community pharmacists are one of the most accessible, but underutilized healthcare professionals in the opioid crisis. Using a 93-question survey instrument, we assessed respondents’ perceptions on the sale and dispensing of Naloxone under standing order, the sale and dispensing of Buprenorphine-containing products, opioid-specific counseling and safe medication disposal techniques. As a public health pharmacist, I aspire to work in a point-of-care pharmacy, seeking ways to identify and mitigate the social determinants of health at the community level.

Zakiya M. Rhodie, MPH
PharmD student

Student Achievements

ORISE Fellow

Throughout my public health experiences, both domestic and abroad, I began to recognize a passion for population health. Given my interest in outbreak control, public health preparedness, and health research, I always imagined pursuing a CDC Epidemiology fellowship. My completion of a Public Health BS and an Epidemiology MPH from the University at Buffalo in four and a half years illustrated my drive, zeal, and devotion to public health. When COVID-19 emerged in Western New York, I was the first recruited Epidemiology MPH student to assist with the region's pandemic response. In my new role at CDC as an Epidemiology and Health Science fellow, I will support the Water, Food, and Environmental Health Services Branch and their efforts on recreational water, small drinking water systems and Legionella prevention and control.

Justin J. Rokisky Jr.
MPH Epidemiology



Presidential Management Fellow

I've been dead set on having a career dedicated to public service, especially in health and health care. I want to make it my life's mission to increase health access and decrease health disparities and inequities for people who have been pretty consistently left behind. This fellowship is going to get me in the door to having a career in public service in the federal government, and I hope it's going to help me be the best agent of change in society that I can be.

Peter Farruggia, MPH
JD/ MBA student
2021 Presidential Management Fellow

Student Achievements



Nadia Koyratty, MS PhD candidate

Received an NSF Travel Award for the 2021 Natural Hazards Engineering Research Infrastructure (NHERI) Summer Institute for Early-Career Faculty to be held at the University of Texas, San Antonio from June 16-17



Ndeye Dieye (Licka) MS student

Selected by One to World to represent Fullbright Scholars in New York State and Senegal at the annual Naval Academy Foreign Affairs Conference from April 6 to 8, 2021



Grace Ayoub, MPH (HSA) student

Selected to represent public health on the UB Inter-Professional Education (IPE) Student Advisory Board student advisory board



Jennifer Dukat MS student

Selected for induction into the public health Delta Omega Honorary Society, Gamma Lambda Chapter at UB

EEH Alum in Focus

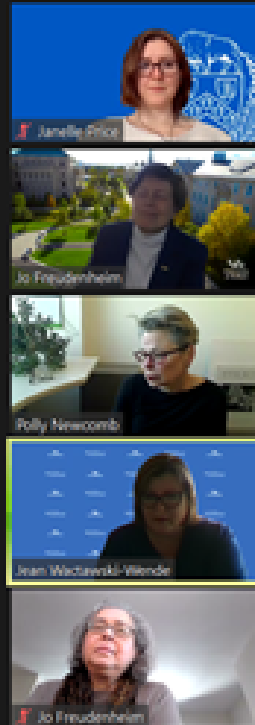


David Jacobs, PhD

David, one of EEH's PhD graduates, has been awarded a K-23 award on a project entitled "Integrative informatics approach to predict re-admissions and improve outcomes in Chronic Obstructive Pulmonary Disease (COPD)". Dr Jacobs is also currently a faculty in the UB School of Pharmacy and Pharmaceutical Sciences.

Cannabis and Cancer: Lessons Learned and Future Paths

Polly Newcomb, PhD
Saxon Graham Memorial Lecture
March 12th, 2021



Saxon Graham Memorial Lecture

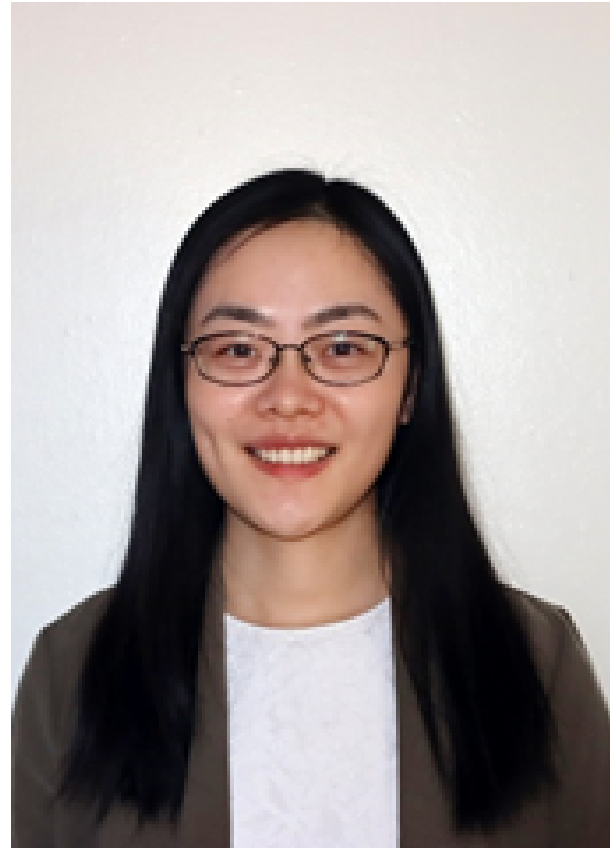
The Saxon Graham Lectureship honors the life and legacy of a man known as one of the fathers of U.S. chronic disease epidemiology. The annual lecture features a distinguished speaker in epidemiology. This year's lecture was delivered online by Dr Polly Newcomb. Dr Newcomb is a cancer epidemiologist who focuses on cancer genetics, etiology, screening and survival. Her work, which has been continuously funded by the National Institutes of Health for over 30 years, has advanced through many long-term collaborations, large, multi-site case-control studies, the establishment of cohorts and biorepositories, and participation with consortia such as the Colorectal Cancer Family Registry Cohort.

Saxon Graham Research Awards

Kexin Zhu

Kexin will be using her award for her dissertation work on to explore the role of placental metabolic profiles in the development of GDM.

"I plan to use untargeted metabolomics approach to analyze placenta tissues that were collected from mother-newborn pairs in the Beijing Birth Cohort Pilot Study. The placental metabolites will be compared between women who developed GDM and healthy pregnancy controls. My work will contribute to a better understanding of metabolic alternations associated with GDM and have the potential to identify novel indicators for the mechanisms and prognosis of GDM and related pregnancy complications." explains Kexin. In addition to the Saxon Graham Research Award, Kexin has also won the spring 2021 Art Goshin Global Health Award for her project investigating connections between long-term exposure to ambient air pollution and mental health during the COVID-19 pandemic-related quarantine.



Seth Frndak

"The award will be applied towards educational courses in machine learning to aid in the completion of my first dissertation chapter: predicting child blood lead levels. This will fulfill two important research gaps. First, predictive modeling of child blood lead has often relied on only one data source, choosing between the individual, the household and the neighborhood. I plan on harnessing all three data sources to determine which variables best predict child blood lead levels. Second, while many have focused on predicting elevated blood lead ($>5\mu\text{g/dL}$), low levels of lead ($<2\mu\text{g/dL}$) still impact child development. Low lead levels may have unique sources of exposure yet to be explored in a predictive framework. It is because of this award that I will be able to implement and evaluate the predictive performance of my machine learning model," explains Seth.

Saxon Graham Dissertation Award

Zeinab Farhat, PhD 2020 EEH Alum

Zeinab, a recent PhD graduate from our department, is now a postdoctoral fellow in the Metabolic Epidemiology Branch at NIH, National Cancer Institute. She is currently investigating modifiable risk factors, particularly diet, for colorectal cancer using an integrated omics approach to better understand the impact of human and microbial metabolism on diet-cancer associations. Her dissertation was focused on the association between garlic intake and cancer.



If you wish to honor Dr Saxon Graham's legacy by further supporting the work of our students, please make a gift to our department:

https://ubfoundation.buffalo.edu/giving/?custom=0448&gift_allocation=9332505432&type_page=0448

J. Warren Perry Poster Day Awards

Holger Schunemann Best Student Research Award*

Association between long-term exposure to ambient air pollution and lesion ischemia in atherosclerotic patients.

Nadia Koyratty, PhD candidate

*Funded by a generous donation from Dr. Holger Schünemann, former EEH faculty and UB alum, and now Professor in the Department of Health Research Methods, Evidence and Impact at McMaster University.

Association between long-term exposure to ambient air pollution and lesion ischemia in atherosclerotic patients

Nadia Koyratty¹, Dilas Hsu¹, Congcong Zhang¹, Bin Lu¹, Ming Wang¹
¹Department of Epidemiology and Environmental Health, University at Buffalo, Department of Radiology, Penn State Hershey, Chinese Academy of Medical Sciences, Beijing, China

Background Long-term exposure to ambient air pollution is associated with cardiovascular disease (CVD) and long-term studies suggest an association between ambient air pollution and CVD. However, the underlying mechanisms are not fully understood. This study aims to investigate the association between long-term exposure to ambient air pollution and lesion ischemia in atherosclerotic patients.

Objective To investigate the association between long-term exposure to ambient air pollution and lesion ischemia in atherosclerotic patients.

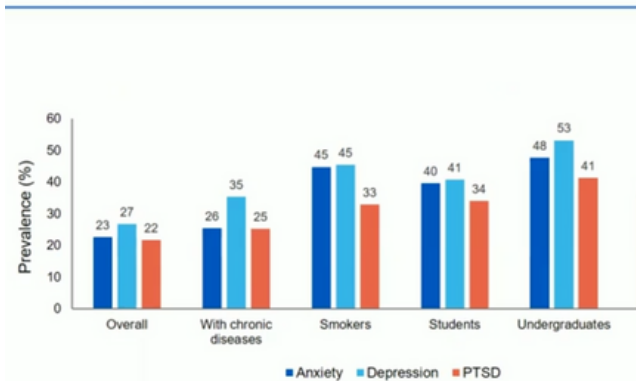
Methodology Atherosclerotic lesions from a subset of the multi-center CRESTION study in Beijing, China were analyzed. The prevalence of lesion ischemia was assessed using a validated scoring system. Long-term exposure to ambient air pollution was assessed using a validated scoring system. The association between long-term exposure to ambient air pollution and lesion ischemia was investigated using multivariable logistic regression models.

Results The prevalence of lesion ischemia was significantly higher in patients with long-term exposure to ambient air pollution compared to those without long-term exposure to ambient air pollution. This association remained significant after adjusting for potential confounders.

Conclusions Long-term exposure to ambient air pollution is associated with lesion ischemia in atherosclerotic patients.

References

Results



Prevalence of mental health symptoms overall and among sub-populations
 Anxiety: GAD-7 score ≥ 10 ; Depression: PHQ-9 score ≥ 10 ; PTSD: PC-PTSD score ≥ 3

2nd place EEH Poster Award

COVID-19 related symptoms of anxiety, depression and PTSD among US adults.

Joint poster
 Kexin Zhu, PhD student
 Yihua Yue, PhD student

Contribution of Household Drinking Water to Arsenic, Lead, and Cadmium among Uruguayan Schoolchildren

Environmental Health, University at Buffalo

Outcome Measurement

- Urinary concentrations of As and Cd measured from first morning void urine samples, adjusted for urinary specific gravity.
- Blood lead levels measured from fasting blood samples.

Statistical Analyses - Triangulation Approach

- Analyze drinking water intake with regular drinking water intake and measured exposure (Sample A, n=100).
- Analyze drinking water intake with irregular drinking water intake and measured exposure of parents (Sample B, n=100).
- Analyze drinking water intake with irregular drinking water intake and measured exposure of parents (Sample C, n=100).

Results

Element	Unit	Mean (SD)	95% CI
As	µg/L	11.15 (2.32)	10.97 (4.8, 28.6)
Pb	µg/L	3.10 (0.69)	3.0 (0.7, 7.8)
Cd	µg/L	0.08 (0.01)	0.08 (0.01, 0.12)

Figure 1: Arsenic, Lead, and Cadmium Intake from Drinking Water in Sample A when Exposure is Calculated on the Basis of the Drinking Water Concentration and Drinking Water Intake.

Element	Unit	Mean (SD)	95% CI
Primary Arsenic	µg/L	1.19 (0.2)	1.1 (0.22, 0.47)
Secondary Arsenic	µg/L	0.97 (0.1)	0.93 (0.22, 0.47)
Primary Lead	µg/L	0.17 (0.1)	0.13 (0.22, 0.47)
Secondary Lead	µg/L	0.08 (0.02)	0.08 (0.02, 0.12)

EEH MPH/MS Perry Post Award

Contribution of household drinking water to arsenic, lead and cadmium exposure among Uruguayan school children.

Jennifer Rowan, MPH student

J. Warren Perry Poster Day Awards

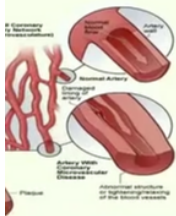
Racial/ethnic prevalence:

- hypertension in black women
- diabetes mellitus among Hispanic women

Presence of **gender bias** in treatment and **gender disparities** in vascular flow and structure may further add to increased morbidity and mortality, **racial disparities** (Figure 2).

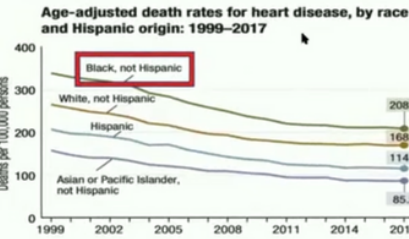
mainly derived from men

ic CVD presentation



Retrieved April 13, 2021, from <https://www.cdc.gov/ncbddd/heartdisease>

Figure 2. Age Adjusted Mortality by Race/Ethnicity

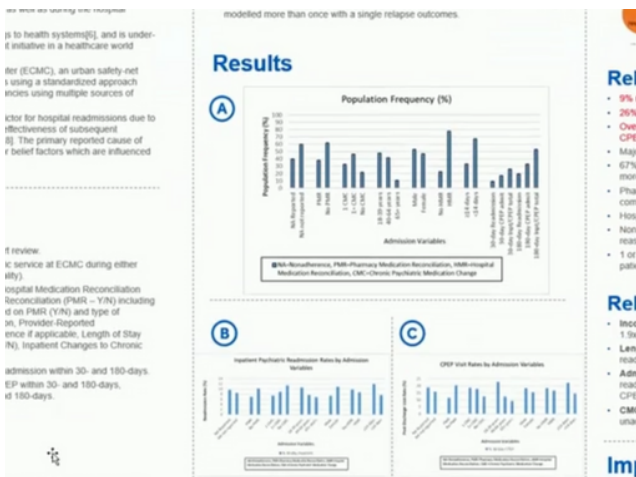


Health, United States Spotlight Racial and Ethnic Disparities in Heart Disease. (2019, April). Retrieved April 13, 2021, from https://www.cdc.gov/nchs/hus/spotlight/HeartDiseaseSpotlight_2019_0404.pdf

EEH MPH/MS Perry Post Award

Cardiorespiratory fitness, Framingham risk score, and cardiovascular events in asymptomatic women.

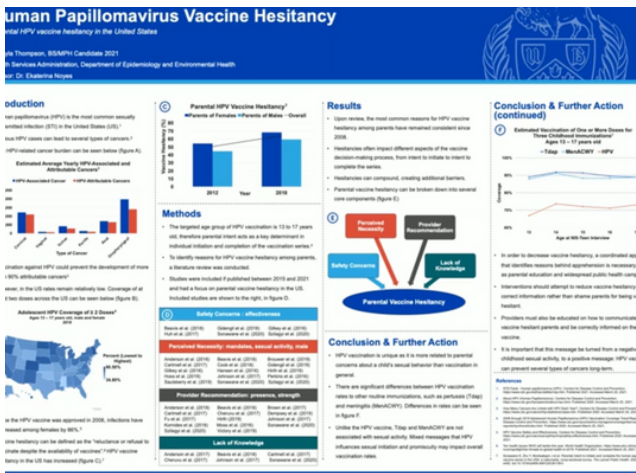
Joint poster
Wonhee Cho, MPH student
Brittany Cantor, MPH student



EEH MPH/MS Perry Post Award

A case-control analysis at safety-net hospital Erie county medical center (ECMC) in Buffalo, NY.

Jamie Light, MPH student



EEH MPH/MS Perry Post Award

Human Papillomavirus vaccine hesitancy: Parental HPV vaccine hesitancy in the United States.

Mikayla Thompson, MPH student

Second place and MPH/ MS poster awards were funded by generous donations from EEH alumni and previous faculty during the 100th anniversary celebrations.

EEH 100th anniversary celebrations in pictures





Contact us

<http://sphhp.buffalo.edu/epidemiology-and-environmental-health/about-us.html>

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