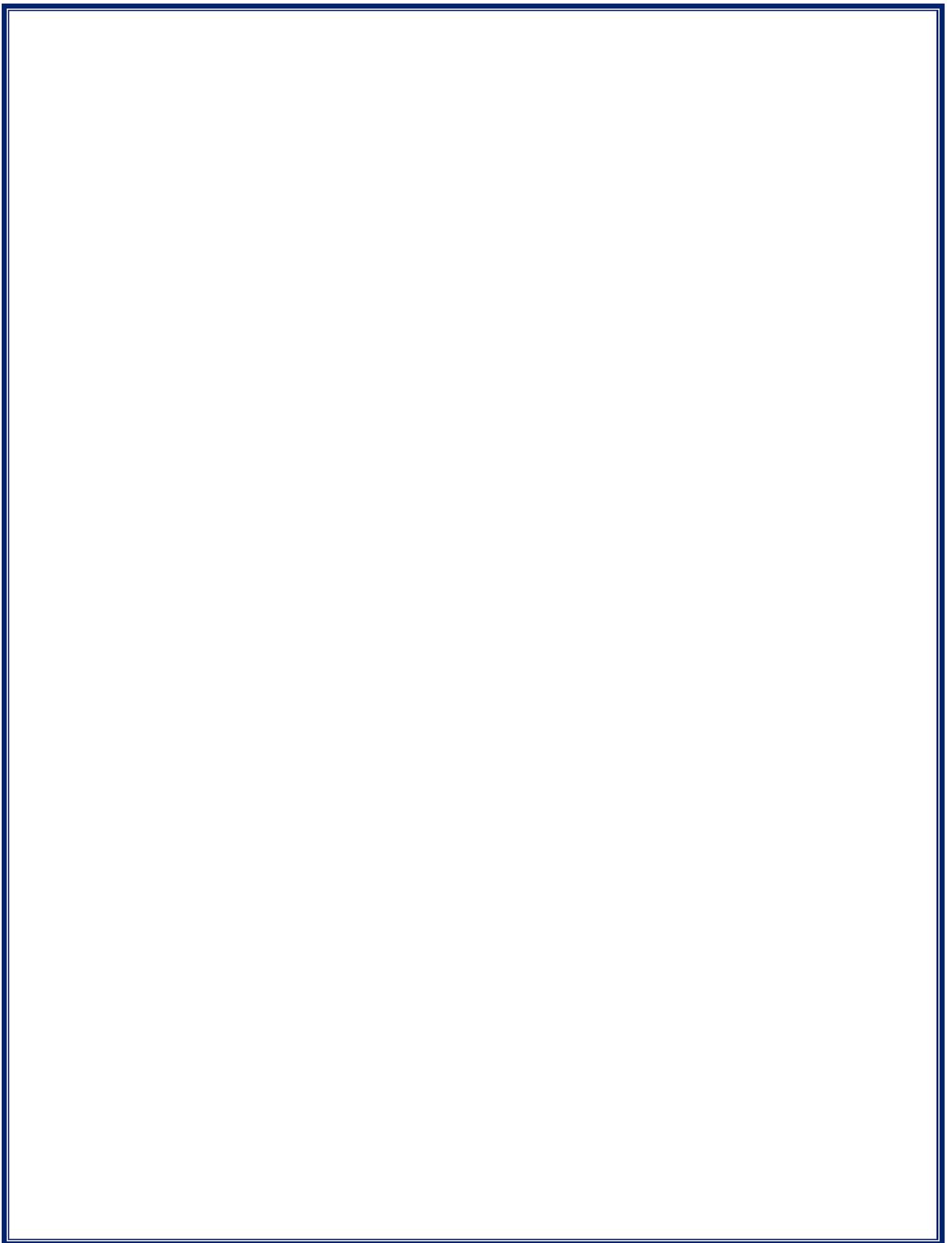# Master of Public Health Program

Perelman School of Medicine
University of Pennsylvania

Capstone Presentation Program

Spring 2020

Tuesday, May 5, 2020

To Join, Click Here

10:00 am

Yasmin Tontat
Mentors: Joan I. Gluch, PhD, RDH, PHDHP; Maria Velasco, DMD, MS; and Morgan Morrow, DMD

"Hi, I'm Dr. X, and I'll be your dentist": Using audio-visual tools to improve cooperation in children with autism spectrum disorder

Abstract:
It is well established that dental care is an important component of overall health care, yet it remains a significant unmet need for children with autism spectrum disorder (ASD). Children with ASD often have a higher prevalence of comorbidities such as anxiety and unusual sensitivities to sensory stimuli, including loud sounds, bright lights, and strange smells – many of which are typical during routine dental appointments. These characteristics often lead to behavioral difficulties and lack of cooperation in the dental chair. As a result, children with ASD more frequently undergo sedation or general anesthesia to complete dental treatment than their neurotypical peers, placing them at higher risk of associated complications. Research supports the use of desensitization and behavioral modifiers to successfully treat children with ASD in the dental setting. Thus, our study builds upon existing research through the development of a desensitizing video designed to introduce the child to the dental provider and the sights and sounds he/she might experience during the visit. This video was viewed prior to the appointment and data regarding the child's common sensitivities was collected. Parents were given a choice of behavioral modifiers, such as TV/tablet or headphones, to be used during the visit to distract the child. The goal of this study was to successfully achieve cooperation, complete an oral examination, and obtain radiographs without the need for sedation or general anesthesia. Results will inform future dental providers of possible accommodations to allow for more successful dental appointments for children with ASD.

Yasmin Tontat is currently a dual-degree Master of Public Health and Doctorate of Dental Medicine candidate at the University of Pennsylvania, graduating in May 2020. She received her BS in Psychobiology from the University of California, Los Angeles in 2014. After graduation, Yasmin will begin a residency in pediatric dentistry at Columbia University/New York Presbyterian Hospital.

10:20 am

Britt Lang, MA
Mentor: Nadia Dowshen, MD, MSHP

Comparing reproductive health attitudes among transgender and gender nonconforming individuals and cisgender women

Abstract:
Transgender and gender non-conforming (TGNC) individuals are understudied in family planning research. We sought to characterize TGNC individuals' attitudes regarding abortion stigma, reproductive autonomy, and desire to avoid pregnancy in comparison with those of cisgender women. We conducted a cross-sectional survey of people assigned female at birth, comparing cisgender (76) and TGNC individuals (76). Participants were recruited on MTurk, an online crowdsourcing platform, and completed a demographics questionnaire, pregnancy and contraceptive history, and three scales: Individual-Level Abortion Stigma (ILAS), Desire to Avoid Pregnancy (DAP), and Reproductive Autonomy (RA). Scores were compared using Chi-square tests and linear regression was performed to account for confounders. Results indicated that there are no statistically significant differences in the scores for DAP and ILAS between cisgender women and TGNC individuals. There is a small but statistically significant difference in the RA score between cisgender women and TGNC individuals assigned female at birth. This study provides evidence of the variances between family planning attitudes among TGNC individuals and cisgender women, illustrating the need for specificity in the deployment of healthcare to these populations.

Britt Lang graduated from The College of New Jersey with a BA in English, received an MA in English from Temple University, and will graduate with a Master of Public Health in May 2020. Their research interests include the intersections between family planning, gender identity, and public policy. Britt works for the Division of Family Planning at the University of Pennsylvania.

10:40 am

Allison Bianchi
Mentor: Sherry Morgan, PhD, MLS, RN

Balancing benefit and risk in the oncology setting:
A systematic review of immune checkpoint inhibitors

Abstract:
Adverse drug reactions (ADRs) are undesirable effects caused by a medication during normal administration. ADRs are an important cause of morbidity, mortality, and wasted expenditure in the U.S. each year and represent a major public health problem among cancer patients. Immune checkpoint inhibitors (ICIs) are a new class of cancer drugs with promising efficacy and reduced toxicity compared to conventional chemotherapy. Studies suggest that combining ICI therapies may further improve clinical outcomes but may also cause more frequent or more severe ADRs. This literature review aimed to evaluate safety monitoring activities associated with combinations of ICIs to better characterize safety profiles and best practices in this complex field. Articles reporting information regarding drug safety practices associated with combination ICI therapy from 2011 through February 4, 2020 were assessed following PRISMA guidelines. The search was conducted using multiple databases including PubMed, Embase, Ovid, Scopus, Web of Science, and the Cochrane library. Full-text articles were individually assessed for new information relating to the safety profile of combined ICIs or new techniques for data collection and evaluation. Articles were evaluated within the context of each individual study and the broader group. This assessment revealed several critical issues related to pharmacovigilance activities associated with combinations of ICIs in the oncology setting. Risk characterization and effective communication to patients persist as challenges in this setting. The findings of this review will help to inform clinicians and patients regarding adverse reactions associated with ICI combination therapy and strategies for monitoring and mitigation.

Allison Bianchi earned her BS in Human Science from Georgetown University and has since held several positions working in pediatric genetic disease and oncology research. Her interests include epidemiology of chronic diseases and patient safety. Following completion of her degree, Allison plans to continue working to monitor and enhance patient safety in clinical trials.

11:00 am

Elizabeth Norton
Mentors: Frances Shofer, PhD and Lorraine Dugoff, MD

Adverse perinatal outcomes associated with stage 1 hypertension in pregnancy:
A retrospective cohort study

Abstract:
Chronic hypertension (cHTN) affects up to 6% of pregnancies in the U.S. and is associated with multiple adverse perinatal outcomes. The American College of Obstetricians and Gynecologists defines cHTN as elevated blood pressures (BPs) $\geq$ 140/90 mmHg, prior to 20 weeks of gestation. However, new 2017 guidelines from the American College of Cardiology/American Heart Association redefined hypertension categories for adults, lowering the threshold for "stage 1 hypertension" to include BPs $\geq$ 130/80 mmHg. This retrospective cohort study investigated if women who newly met criteria for stage 1 hypertension in early pregnancy were at increased risk for adverse perinatal outcomes compared to healthy, normotensive women. Eligible women (n=1,646) were identified from a retrospective chart review based on having prenatal care at a Penn clinic and subsequently delivering a live infant at a Penn hospital between December 2017 – August 2019. Two exposure groups were identified: healthy, normotensive women (n=1,459) and stage 1 hypertensive women (n=187). The primary outcome was diagnosis with any hypertensive disorder of pregnancy (HDP); a secondary outcome was indicated pre-term birth (PTB). Generalized linear models with Poisson distribution were used to compare risk of adverse outcomes between groups. Women with stage 1 hypertension were at significantly increased risk for any HDP (aRR 1.95, P=<0.001) and indicated PTB (aRR 1.83, P=0.016). Black and obese women with stage 1 hypertension were at additional risk for these outcomes. These results provide insight about the prevalence of stage 1 hypertension and inform future guidelines for diagnosis and management of hypertension in pregnancy.

Elizabeth Norton is a dual-degree candidate expecting to complete her Master of Public Health in Spring 2020 and her Master of Bioethics in Spring 2021. She earned a BS degree in Human Development and Family Studies from Penn State University in 2016. Currently, she works as a Research Project Manager at the Maternal and Child Health Research Center (MCHRC) at the University of Pennsylvania, coordinating several studies that aim to better understand maternal health conditions and improve pregnancy outcomes.

11:40 am

Maxine Jann
Mentor: Dominique Ruggieri, PhD

Thinking outside the box, eating inside the box: Can delivery meal kits be a solution to food insecurity?

Abstract:
Food insecurity puts individuals at higher risk for poor diet and diet-related diseases. However, the prevalence of non-communicable diseases (NCD) related to poor diet is associated with a decrease in time spent cooking at home and a decline in cooking skills. In 2018, the United States Department of Agriculture (USDA) spent $51B on the Supplemental Nutrition Assistance Program (SNAP), and yet food insecurity is still associated with $77B in annual excess health care expenditures. While changing policies are aiming to overcome barriers to health, more effective and innovative changes are needed to be financially efficient and benefit the public health needs of the low socioeconomic population. This study aimed to consider delivery meal kits as one method to address food insecurity, reduce barriers to healthy foods, and increase time spent cooking at home for low socioeconomic families. The study consisted of conducting qualitative interviews with seven participants from five different meal kit delivery organizations and one representative from the USDA to ask about perceptions, feasibility, and current engagement with serving low socioeconomic populations. Interviews suggested that although many organizations are not currently focused on targeting this population, they are open to considering ways to reduce costs and increase access to lower socioeconomic populations. Results of the thematic analysis were used to write an op-ed to be published in a major news outlet in order to increase awareness about this potentially innovative method for addressing food insecurity, as well as to engage stakeholders in considering the issue of food insecurity for this vulnerable community.

Maxine Jann will graduate with her Master of Public Health (MPH) from the University of Pennsylvania in May 2020. Outside of academia, she has almost five years of health care public and media relations experience working with a wide variety of clients including hospital systems, non-profits, insurance, pharmaceuticals, and start-ups. Maxine graduated from Villanova University with a BSc in comprehensive science and minor in psychology in May 2015 and received an Advanced Certificate in Public Health from New York University in December 2018.

12:00 pm

Ayesha R. Anwar
Mentors: Katherine Yun, MD, MHS; Elizabeth E. Dawson-Hahn, MD, MPH; Manuel E. Jimenez, MD; and Casey K. Lion, MD, MPH

Exclusion of families with limited English proficiency from federally funded pediatric clinical trials

Abstract:
In the US, there are ~7.8 million children with no English-proficient parents and ~2.4 million children with limited English proficiency (LEP). Little is documented regarding inclusion of LEP individuals in pediatric research. However, a review of predominantly-adult emergency medicine research found that 42% of articles did not address multilingual enrollment; of those that did, 19% mentioned LEP as an exclusion criterion. The objective of this study was to determine whether LEP individuals are excluded from pediatric research in the US. Using ClinicalTrials.gov, we identified trials conducted in the US, inclusive of children ≤17 years, federally-funded, focused on one of four chronic conditions (asthma, mental health, obesity, dental caries), and completed by 2019. We reviewed ClinicalTrails.gov online content and linked published manuscripts for information about exclusion/inclusion criteria and minority enrollment. In total, 189 trials met the inclusion criteria and 67% did not address multilingual enrollment. Of 62 trials that did, 82% specified that LEP individuals were ineligible. Almost every trial that explicitly included LEP individuals focused on asthma and Spanish-speakers. No trials addressed enrollment of non-English, non-Spanish-speaking individuals. Latino individuals comprised 31% of participants in eight trials that explicitly included LEP individuals and 14% of participants in 33 trials that explicitly excluded LEP individuals. This study found that the majority of the federally-funded pediatric trials registered on Clinicaltrials.gov do not address multilingual enrollment. Clinical research inclusion of LEP individuals is particularly important to understand the effectiveness of interventions in these excluded groups and to address growing health disparities in these diverse populations.

Ayesha R. Anwar, MSW graduated from the University of Pennsylvania with a Master in Social Work in 2017 with a focus on Global Human Rights and will graduate in 2020 with her Master in Public Health at the University of Pennsylvania with a focus on Global Health. Through academic and community-centered mediums, she has focused her efforts on addressing the psychosocial and health needs of immigrant, refugee and minority families experiencing health disparities, violence and trauma. After graduation, she will continue her career at AmeriHealth Caritas where she works to address health disparities for racial and ethnic populations living in Pennsylvania.

12:20 pm

Silicia Lomax
Mentors: Katherine Yun, MD, MHS and Heather Klusaritz, PhD

Access to outpatient pediatric mental & behavioral health services for families with limited English proficiency: A secret shopper study

Abstract:
Although one in six US children have mental/behavioral health disorders, access to care is believed to be poor for those with limited English proficiency. Barriers to access limit prevention, early identification, and treatment and may contribute to poor outcomes. This mystery shopper study comprised phone calls to outpatient mental/behavioral health facilities using a standardized script. Of 1452 unique outpatient facilities listed in the Pennsylvania (PA) Department of Human Services Online Provider Directory for Mental Health and Substance Abuse Services, an English-language caller made up to two call attempts to 288 randomly-selected facilities. A Spanish-language caller contacted each facility with a completed English-language call. The primary outcomes were whether an attempt was made to schedule an appointment (intake, therapy, etc.) and whether communication took place in the caller's preferred language (language-concordant staff or interpreter). Of 288 facilities, 24 did not have an accurate number, 34 were ineligible (did not see children and/or accept Medicaid), and 68 did not answer. Of the remaining facilities, 127 in 36 PA counties answered both the English and Spanish caller. Of these, 71% attempted to schedule an appointment for the English-language caller and 100% communicated in the caller's preferred language; 24% attempted to schedule an appointment for the Spanish-language caller and 25% communicated in the caller's preferred language. Among outpatient mental/behavioral health facilities for Medicaid- insured children in Pennsylvania, there are profound system-level inequities in access to appointments for families with limited English proficiency.

Silicia Lomax graduated from the University of Pennsylvania in 2018 and will graduate from its MPH-Global Health Program in May 2020. She is currently a research coordinator in the Communication Neuroscience Lab at Penn and the director of a non-profit, United Against Inequities in Disease. After graduation, Silicia plans to pursue a global health career in health equity and maternal and child health.

12:40 pm

Stephanie Brown
Mentor: Heather Klusaritz, MSW, PhD

Fulfilling the promise: Tools to support initiatives in the West Philadelphia Promise Zone

Abstract:
In 2013, the Promise Zone designation program was founded in order to address community revitalization efforts through a partnership between the federal government and local leaders. In 2014, a region in West Philadelphia was chosen as one of three communities to receive the Promise Zone designation. In this designated area of Philadelphia, there are roughly 35,000 residents and of those, 59% live in poverty. The West Philadelphia Promise Zone aims to address five different policy areas: education, health & wellness, economic development, public safety, and housing. For each of the policy areas there is a committee made up of volunteer community members, community stakeholders, and local government officials. These committees are responsible for planning, implementing, and assessing interventions and programs to ensure that the citizens of the Promise Zone have a chance to achieve their full potential. The objective of this capstone project was to work closely with the Promise Zone operations team and Access to Care Committee to develop a compilation of resources for the community. The resource guide will be printed for distribution and highlights free and low-cost care, primary care, dental care, and insurance. A community health implementation plan was created that consisted of recommended areas of partnership between Penn Medicine and the Promise Zone in order to align community efforts to maximize the benefit for the community members. The Promise Zone Access to Care Committee will use these tools to guide planning and programming for long term and sustainable initiatives strengthening the community.

Stephanie Brown has worked full-time at the University of Pennsylvania, Center for Health Incentives and Behavioral Economics (CHIBE) since 2017 as a Way to Health Operations Specialist while simultaneously completing her Master of Public Health and Master in Law. Previously, she worked in clinical settings managing projects that addressed health disparities through data-driven process improvement. Upon graduation, Stephanie plans to dedicate her career to program development, addressing the interaction between health, education, and the environment as well as the policies that have shaped these often strained interactions in our communities today.

1:40 pm

Zoe Rosoff-Verbit

Mentors: Ashlee Murray, MD, MPH and Christine Forke, PhD, RN, MSN, CRNP

Preparing pediatric hospitals to address intimate partner violence within families:
A new tool to assess readiness

Abstract:

Children exposed to intimate partner violence (IPV) are at greater risk for substance abuse, eating disorders, risky sexual behaviors, and further partner violence. Similarly, adolescents who experience teen dating violence (TDV) are at higher risk for future IPV and adverse health outcomes. Pediatric hospitals are uniquely positioned to assist pediatric patients and their families affected by IPV/TDV. However, to our knowledge, no present standard or tool exists to assess pediatric hospital IPV preparedness. The objective of this project was to develop a comprehensive tool for pediatric hospitals to assess their preparedness to identify and respond to IPV/TDV within their scope of practice, by utilizing the "Delphi Instrument for Hospital-based Domestic Violence Programs" published by Jeff Coben as a starting reference. We recruited experts in IPV and pediatrics from across the United States via snowball sampling for a three-stage, consensus-driving Delphi study. Initially, participants reviewed Coben's adult hospital IPV preparedness tool and rated items' appropriateness for a pediatric hospital setting on a five-point Likert scale and modified or added items using open-ended comment boxes via REDCap. Original items agreed upon as being appropriate for pediatrics, modified items, and new items were included in Round 2, and again in Round 3 where they were then ranked for relative importance. Screening, documentation, and intervention services were the categories requiring the most substantive changes to become more pediatric-focused. The final tool will provide pediatric hospitals with a standard to successfully identify and support families affected by IPV/TDV to maximize health outcomes.

Zoe Rosoff-Verbit, BS graduated from the College of Charleston with an undergraduate degree in Psychology. She currently works on smoking cessation and medication repurposing trials at the University of Pennsylvania's Center for Interdisciplinary Research on Nicotine Addiction. Zoe plans to continue serving underprivileged communities in the Philadelphia area following her MPH graduation.

2:00 pm

Samuelle Voltaire

Mentors: Elaine Tran Weigelt, MPH and Amy Hillier, MSW, PhD

Making it inclusive:
Training interdisciplinary health educators to teach middle school sex ed

Abstract:

Sex education in the United States is in a dire state. Locally, there are no laws mandating comprehensive sex education. Numerous studies have looked at mitigating gaps through offering different training modalities to educators and through medical school-community partnerships. However, sex education training using blended education has yet to be tried with an interdisciplinary group of graduate students providing health education in middle schools. This capstone project aimed to develop a blended learning training aimed at achieving the standards of professional disposition and best practices for sex education created by the Sexuality Information and Education Council of the United States (SIECUS). The blended learning training consisted of a pre-post self-assessment, an online pre-training module, and in-person training. Self-assessment questions were obtained from the Professional Learning Standards for Sex Education (PLSSE). The module included relevant policy information, videos, readings, and a podcast episode that discussed racial equity, inclusivity, and trauma-informed and youth-centered sex education. The in-person training was planned with the Center for Public Health Initiatives and included sessions with partner school representatives as well as a teaching simulation. Training evaluations used a one-group pretest-posttest design; participants included health educators who applied and were accepted into the Spring 2020 cohort. Post-training survey data showed shifts in scores for capability and comfort with standards under professional disposition and best practices. Program highlights include the flexibility of the training for volunteers and the incorporation of a social justice lens to help prepare health educators to teach in West Philadelphia classrooms.

Samuelle Voltaire (she/they), MSW, is a licensed social worker with a passion for integrating social justice into public health practice. She has years of experience in HIV prevention research and mental health crisis intervention. Their professional interests lie at the intersection of queer affirming + trauma-informed sex education and mental healthcare for trauma survivors, queer people, and Queer People of Color (QPOC).

2:20 pm

Adrian Wood
Mentor: Marilyn Howarth, MD, FACOEM

Let's clear the air: Federal and state response to industrial ethylene oxide emissions

Abstract:
Ethylene oxide (EtO), a gas used in the manufacture of ethylene glycol and as a sterilizing agent for medical equipment, is emitted from facilities across the United States, despite it being a known human carcinogen by inhalation. An interactive map released in 2018 by the Environmental Protection Agency (EPA) showed that areas around facilities that emit EtO had cancer risks up to 24 times the national average from air toxics exposure. The release of this information led to public outcry from communities living in close proximity to these facilities and while some communities were successful on initiating action by their state and/or federal government on EtO emissions in their area, other communities were not. Little pressure from the federal or state government has been placed on facilities with the highest EtO emissions, resulting in continued exposure in communities with the highest estimated cancer risks. This project aimed to analyze the discrepancy in federal and state actions toward EtO emitting facilities since the release of the 2018 EPA report. In this analysis, we compared states that were successful in imposing restrictions on EtO emissions to states where little action has taken place. This analysis will be presented on a public, interactive webpage disseminated by the Center of Excellence in Environmental Toxicology (CEET). Results will highlight the social and demographic factors that lead to successful activism around EtO, including how politics, economic ties to the industry, and a history of hazardous air pollution affects community perception of EtO. These results will be used to advocate for increased regulations on EtO in underserved areas.

Adrian Wood graduated from the University of North Carolina at Chapel Hill in 2018 with a BS in Biology and a minor in Chemistry. This summer, she will receive her Master of Public Health with a concentration in Environmental Health. She is currently a Program Coordinator for the Community Engagement Core of the Center of Excellence in Environmental Toxicology (CEET) at the Perelman School of Medicine, where she will continue to work after graduation.

Wednesday, May 6, 2020

To Join, Click Here:

10:20 am

Tolulope Oyetunde
Mentors: Alison Buttenheim, PhD, MBA and Dominique Ruggieri, PhD

Promoting the menstrual health of adolescents and young women in Nigeria

Abstract:
Menstruation is a physiological occurrence that all women and girls of reproductive age experience. However, traditional beliefs and social norms in many Nigerian communities result in a culture of secrecy and shame surrounding menstruation. As a consequence, many adolescent girls enter puberty with knowledge gaps and misconceptions about menstruation, making them ill-equipped to cope with menarche (the onset of menstruation) and feeling uncertainty about when and where to seek guidance. *Promoting the Menstrual Health of Adolescents and Young Women* (PROMHAW) project is a community-focused intervention in Benue State, Nigeria that aims to improve knowledge and resources for proper menstrual health and sexual and reproductive health (SRH) for adolescent girls and their parents. The intervention trained adolescents and young adults on menstrual health and hygiene, SRHR, and digital educational apps. Parents and communities participated in workshops about menstrual health and how to support their daughters during menstruation. Two hundred girls and 40 parents were randomly selected from four intervention communities to complete a baseline survey. This project used a mixed-methods approach to evaluate the program baseline survey for preliminary program findings. The results will provide recommendations to improve the PROMHAW curriculum, educational tools, and program design.

Tolulope Oyetunde is an MPH student also working on a Master's degree in Nonprofit Leadership. She is currently a graduate assistant at the Center for Public Health Initiatives, where she designed and currently manages a three-cohort Public Health Pipeline program for high school students. With a passion and commitment for sexual and reproductive health, she has worked on numerous initiatives in this field both locally and internationally. Tolu plans on pursuing a career that advances sexual and reproductive health and rights for women and girls around the world.

10:40 am

Cariné Megerian
Mentor: Evan Anderson, JD, PhD

Dismantling the revolving door:
Understanding police experiences and perceptions of Philadelphia's PAD program

Abstract:
With crime and punishment as the primary approach in our criminal justice system (CJS), many communities experience trauma and fear surrounding law enforcement. This problem brings into question the role of police in promoting the health and safety of communities. Calls for new, innovative approaches in the CJS were met with the creation of pre-booking Law Enforcement Assisted Diversion (LEAD) programs. Previous work has investigated the success of LEAD programs in cities like Seattle, Atlanta, Albany, and Baltimore. Our study is one of the first to directly ask police officers involved in diversion programs about their attitudes and opinions regarding the program. Moreover, there has not yet been an evaluation conducted for Philadelphia's Police Assisted Diversion (PAD) program. This project explored the knowledge, experiences, and perceptions of officers that participate in Philadelphia's PAD program by conducting fifteen semi-structured interviews with officers from the PAD pilot districts (22nd and 24th police districts and the Citywide Vice Enforcement Unit). Two team members facilitated an iterative coding process using NVivo 12 to independently code all fifteen transcripts. Ultimately, the final codes were organized into thematic categories. Preliminary findings suggest that four key themes emerged in the analysis of the transcripts: strengths and challenges of the program, readiness to change, relationships with service providers, and interest in program effects. As the first evaluation of Philadelphia's PAD program, results from this study will be critical to improving future PAD program activities and criminal justice system reform efforts within Philadelphia and other similar cities.

Cariné Megerian graduated from the University of Virginia in 2018 with a degree in Sociology. As an MPH student at Penn, she worked on a variety of projects exploring the intersection of criminal justice polices and public health. After graduating in May, Cariné plans to pursue her passion of advancing criminal justice system reform through public health research and advocacy.

11:00 am

Jenna Pellegrino
Mentor: Patty Skuster, JD, MPP

A policy brief for Congress:
Advocating for the expansion of women's reproductive rights worldwide

Abstract:
The purpose of this project is to provide a policy analysis of the Global Gag Rule, an executive order that silences healthcare providers that utilize United States global health funding from discussing, advocating for, or performing abortion services. The Global Gag rule poses a human rights threat to women and girls around the world - directly impacting the right to life, the right to equality and non-discrimination, the right to privacy, and the right to information. A systematic review of literature was conducted under guidance from research librarians and faculty at the University of Pennsylvania to inform development of a policy brief and a policy memo to negate the Gag rule and support a new bill, the Global HER Act. The brief and memo were created to inform the need for policy reform to both policymakers in Congress and an international aid organization, Ipas, who were made aware of the value and potential impact of the Global HER Act through this work. Data from the literature review suggests that the Global HER Act could promote safe, ethical medical practices by removing any discriminatory regulations on essential health care services as well as supporting and encouraging democratic participation and freedom of speech abroad. This policy analysis can inform future research and policy decisions focused on public health and human rights, generally, as well as reproductive rights for women and girls, more specifically.

Jenna Pellegrino graduated from Quinnipiac University in 2018 with a degree in Sociology, Medicine and Health and a minor in Biology. She is now a candidate for her Master of Public Health degree with a concentration in global health at the University of Pennsylvania. Her public health interests include policy development, human rights, and sexual and reproductive health on the national and global level. Upon graduation, she hopes to use her degree to engage stakeholders, form coalitions, and continue to promote health and human rights for all.

11:40 am

Emma V. Myers, RN, CEN
Mentors: George L. Anesi, MD, MSCE, MBE and Dominique Ruggieri, PhD

A multi-faceted approach for improving preparedness for Ebola and other high-risk pathogens: Recommendations for the Hospital of the University of Pennsylvania Emergency Department

Abstract:
The 2013-2016 West Africa Ebola epidemic motivated U.S. hospitals to prepare for Ebola and other emerging high-risk pathogens. Operationalizing a functioning preparedness plan based on evidence-based safety and infection control practices is critical to protecting healthcare workers, patients, and the public from highly infectious diseases. The U.S. has four specialty biocontainment units that utilize robust, specialized policies to maximize care and infection control of these patients. However, there is a dearth of information specific to care of Ebola patients in emergency departments (EDs). This is notable since Ebola is a foreseeable threat to U.S. hospitals in the form of returned travelers presenting to EDs with or without prior notification. Patient care in the ED starts with the transition of care from the field, sometimes literally on the front steps of the hospital. The differing resources and physical plans of EDs compared to biocontainment units demand separate policies for each clinical area. This project identifies gaps in current policies related to care of Ebola patients in the ED at the Hospital of the University of Pennsylvania and offers specific and actionable recommendations. This work is the result of an extensive review of the literature and organizational policies, as well as interviews with key informants, and builds on common preparedness infrastructures that can be adapted to fit new threats. While Ebola serves as the model for this project, there will always be evolving diseases to prepare for, such as the novel 2019 Coronavirus, that is challenging public health preparedness worldwide

Emma Myers, BSN, RN, CEN is a dual degree student in the Master of Public Health and Master of Science in Nursing, Health Leadership programs. She also holds a Bachelor of Arts degree in Biology from Williams College and an Accelerated Bachelor of Science in Nursing degree from the University of Pennsylvania. She works full time as a registered nurse in the emergency department at the Hospital of the University of Pennsylvania (HUP) and acts as the Deputy Task Force Team Leader for HUP's Hospital Emergency Response Team (HERT).

12:00 pm

Jenna Muller
Mentors: Heather Klusaritz, PhD, MSW and Natalie Stollon, MSW, MPH

Factors influencing career attainment of foster youth with chronic conditions: A photo-elicitation study

Abstract:
Foster youth in the early stages of adulthood who age out of the foster care system in the US are faced with prospects of poor educational, career, and health-related outcomes. Little is known about these outcomes as they pertain to these individuals who also have a chronic disability or illness, such as ADHD or sickle cell disease. This qualitative study explored the perspectives of present or former foster youth with chronic conditions enrolled in the Career Path Program at the Children's Hospital of Philadelphia (CHOP). Seven semi-structured interviews were conducted using photo-elicitation methods with program youth at CHOP between the ages of 18 and 21. The interviews were audio-recorded, transcribed, and analyzed for nascent themes; primary analysis of data is currently ongoing. Findings from this study will be used to assess the alignment of CHOP's Career Path Program service delivery with youth needs, give recommendations for program strengthening, and more generally inform future policy and programming that aims to ameliorate educational and career outcomes of foster youth with chronic conditions.

Jenna Muller will complete her Master of Public Health program this spring. She previously completed her bachelor's degree in Psychology at the University of Portland, with two minors in Spanish and Neuroscience. Jenna is passionate about improving mental health in international and global contexts and will be pursuing a PhD in Social Work at University of Illinois beginning next fall.

12:20 pm

Isabel Straw, MD
Mentors: Chris Callison-Burch, PhD and Evan Anderson, PhD, JD

Artificial Intelligence in psychiatry: An industry effort to optimize mental health management amongst trauma responders

Abstract:
Medicine is at a disciplinary crossroads. With the rapid integration of Artificial Intelligence (AI) into the healthcare field the future care of our patients will depend on the decisions we make today. For AI to account for the past and build a better future, we must first unpack the present and create a new baseline on which to develop these tools. The impact of AI on health outcomes and inequalities calls for health professionals and data scientists to make a collaborative effort to ensure historic health disparities are not encoded into the future. We present a study that evaluates bias in existing language-based models of AI used in psychiatry and discusses how these biases may widen health inequalities. This project was developed with an industry partner to explore the use of AI in mental health management amongst trauma-exposed populations including first responders and military veterans. Our assessment of existing models demonstrates significant psychiatric biases along gender, age, religious and racial lines. These findings are relevant to professionals who wish to minimize the health inequalities that may arise as a result of AI and data-driven algorithms.

Isabel Straw is a medical doctor from the United Kingdom who will graduate from the University of Pennsylvania in May 2020 with her MPH in Global Health. Over the past year her research has focused on the role of Artificial Intelligence in meeting global health challengers, reducing health disparities and managing population mental health. Following graduation, she will start a Clinical PhD in Artificial Intelligence in Healthcare, while also returning to work in the Emergency Department in London.

Thursday, May 7, 2020

To Join, Click Here

10:00 am

Toore Adebajo
Mentor: Kate E. Wallis, MD, MPH

Autism disparities in the age of universal screening

Abstract:
Autism Spectrum Disorder (ASD) affects approximately 1 in 59 children in the U.S. however, the prevalence rate varies by socio-demographic characteristics (e.g., sex, race, primary language, etc.) leading to disparities in rates of diagnosis. Delayed diagnoses often preclude affected children from accessing early ASD interventions, which are associated with improved outcomes in life. In 2014, the Children's Hospital of Philadelphia (CHOP) implemented a universal ASD screening recommendation proposed by the American Academy of Pediatrics (AAP) suggesting that all children be screened specifically for autism during 18- and 24-month well-child visits. Despite this, there is still insufficient evidence assessing the direct benefits of universal screening for ASD in young children. To further understand its role, the present study examined whether disparities in rates of ASD diagnosis exist in a universally screened cohort. A retrospective study was conducted among children receiving primary healthcare at a CHOP facility (n = 23,303). Demographic and diagnostic data were extracted from electronic health records and rates of ASD diagnosis were stratified and assessed using chi-square, t-test and regression analyses. Results showed that universal screening was nearly achieved (91%) and the ASD prevalence of the cohort was 2.2%. Additional analyses will highlight whether disparities continue to exist in an age of universal screening and which demographic factors affect the likelihood of receiving an ASD diagnosis. Findings will contribute to research assessing the role of universal screening on improving the equity of early ASD diagnosis and access to interventions.

Toore Adebajo graduated from the Honors Specialization of Psychology program at the University of Western Ontario and is a global health MPH candidate anticipating graduation in May 2020. She is a current graduate assistant at the center for autism research at CHOP and following graduation plans to pursue a career that combines her passions for autism and global child health to improve the health outcomes of children.

10:20 am

Caitlin Axtmayer, MSW, LSW
Mentor: Ashlee Murray, MD, MPH

Utilizing CBPR to implement sustainable IPV screening practices
in the pediatric primary care setting

Abstract:
Exposure to intimate partner violence (IPV) affects roughly eight million children annually in the United States and can lead to poor physical and mental health outcomes. Screening caregivers for IPV in conjunction with IPV services can connect individuals with resources to support the needs and safety of those being affected. Although pediatric primary care centers are effective screening locations for IPV, there is little evidence about how screening implemented by health care providers may change workflow. Community based participatory research (CBPR) may guide successful implementation and collaboration with health care staff to foster long-term acceptability and sustainability. This project's goal has been to develop, implement, and evaluate an acceptable IPV screening process to integrate into the outpatient workflow through a CBPR partnership between CHOP Karabots Primary Care Center and Lutheran Settlement House, a non-profit, community-based organization with a bilingual IPV counseling program. In order to develop the most functional and effective screening tool, we engaged community partners, physicians, nurses, social workers, other employees, and IPV specialists. Since June 2018, we have conducted a number of pre-implementation analyses of the clinic's readiness to respond to IPV disclosures, including a pre-implementations survey of clinic staff. A screening protocol was developed through staff collaboration and went live in October 2019. Evaluation measures such as screening and referral rates, as well as a post-implementation staff survey and Delphi assessment, are still being collected. Results will inform the importance of collaborating with health care staff in screening development in order to foster acceptability and sustainability.

Caitlin Axtmayer, MSW, LSW (she/her/hers) completed her Master's in Social Work from the University of Pennsylvania in 2019 and will graduate with her MPH this spring. While studying at UPenn, Caitlin has worked as a research coordinator supporting the development of an intimate partner violence screen for adolescents and caregivers in pediatric outpatient primary care. Caitlin has a background working as a hospital outreach specialist for children with chronic and terminal illnesses, as well as providing psychotherapy to survivors of sexual violence.

10:40 am

Emma Blackson, MS
Mentors: Tiffani Johnson, MD, MSC and Marsha Gerdes, PhD

Implicit racial bias in early childhood settings

Abstract:
Racial bias has been hypothesized as a factor contributing to the disparities in suspensions and expulsion rates for black children in preschool settings. However, little is known about the racial attitudes that childcare educators and staff have towards children. To address this gap, we measured implicit and explicit racial bias of educators and staff from three Philadelphia childcare centers using the Child Race Implicit Association Test (IAT). The Child Race IAT is a time measure that compares the speed with which participants pair target-concepts (Black Child vs. White Child) with either positive or negative attributes across two blocks. Explicit bias was measured using a racial preference scale from zero to ten indicating cold and warm feelings towards black and white children. On average, participants had weak pro-white/anti-black bias on the Child Race IAT (M=0.26, SD=0.45). Although 21% of participants had no racial bias on the Child Race IAT, most had unconscious pro-white bias ranging from weak to strong (n=29). Racial differences in IAT scores were noted with white participants (N=27, 56.25%) having a more implicit bias in comparison to black participants (M=0.42, SD=0.42) versus (M=0.03, SD=0.33,). Despite 95% of early childhood educators reporting no explicit racial preferences towards white or black children, the majority were found to have weak to moderate implicit pro-white/anti-black racial bias. With increasing evidence demonstrating racial disparities in the early childhood education setting, future studies are needed to explore how educators' unconscious biases impact interactions and disciplinary actions with children and to identify effective intervention strategies.

Emma Blackson received a bachelor's degree in public health from Temple University. As a student, she worked on two independent research projects where she helped to develop anti-racist medical education curriculum and created original learning materials to assist with reducing bias in medical education. She currently works as a Clinical Researcher at the Children's Hospital of Philadelphia's PolicyLab working on research studies related to bias, equity, and positive behavior supports for children in childcare centers across Philadelphia.

11:00 am

Vernell Brown
Mentors: José A. Bauermeister, PhD, MPH and Steven Meanley, PhD, MPH

Disseminating Undetectable = Untransmittable (U=U) messaging:
A framework for eradicating HIV/AIDS-related stigma

Abstract:
Knowledge of the impact of viral load suppression on HIV transmissibility has been slow to filter from the scientific community. Treatment as Prevention (TasP) model has confirmed via phylogenetic testing, that in serodiscordant couples in which the seropositive partner is virally suppressed (<200 copies of HIV-1 RNA per mL of blood), there is zero risk of seroconversion during condomless sex. The U=U campaign, implemented in 2016, and subsequently endorsed by the CDC, seeks to promote awareness of the TasP strategy. The U=U concept bridges biomedical science with behavioral and social science by removing the feeling of self-imposed and external stigma that many people with HIV experience. Dismantling HIV/AIDS related stigma is accomplished by shifting the public discourse away from seropositive individuals as being vectors of transmission. Building on previous scholarship, Qualtrics surveys were administered to assess the awareness of U=U among individuals with risky sexual behaviors in communities of color within Philadelphia. Recruitment occurred on social media platforms of Instagram and Facebook. Data analysis via STATA version 15 used chi square tests, analysis of covariance, and a proportional odds model that controlled for the covariates of age, sexual ID, race/ethnicity, and pre-exposure prophylaxis (PrEP) uptake. HIV risk behavior was designated the independent variable, and the perceived accuracy of U=U messaging was deemed the dependent variable. It is expected that knowledge and perceived accuracy of U=U will be low among this sample. Quantitative data was extracted to inform the content of focus groups, and a social marketing campaign to be launched at a later date. Historically, public health has placed the responsibility of HIV prevention on the individual, rather than via broad, structural, and population-level interventions.

Vernell Brown will earn a Master of Public Health degree from the University of Pennsylvania this spring. He graduated from Delaware Technical Community College with an Associate of Applied Science degree in Health Information Management in 2015 and received a Bachelor of Arts degree in Health & Societies from the University of Pennsylvania in 2018. His career trajectory lies at the intersection of social epidemiology and infectious disease, where his passion for health equity research is quintessentially embedded.

11:40 am

Natalie Czekai
Mentors: Chinwe Onyekere, MPH, and Dominique Ruggieri, PhD

Provider perspectives on gestational diabetes:
A quality improvement project within Main Line Health System

Abstract:
Gestational Diabetes (GD) is characterized as insulin resistance during a woman's pregnancy that typically develops around the 24th week of pregnancy. While GD only impacts approximately 7% of pregnancies, it is of public health significance because it may lead to adverse birth complications for the mother and her baby, such as preeclampsia, miscarriage, and preterm birth. About 50% of women diagnosed with GD go on to develop type 2 diabetes. Although GD is preventable and manageable, some women experience challenges and barriers to their care, such as lack of knowledge and skills in dietary management and lack of transportation to follow-up appointments. This study therefore attempted to identify areas of improvement within Main Line Health System, which is a not-for-profit health system serving portions of Philadelphia and its western suburbs. This was completed through conducting semi-structured interviews with OB/GYNs to assess their experiences, attitudes, and opinions in regard to properly screening, diagnosing, educating, and treating patients at risk for or with GD. The themes that emerge from these interviews will be used to guide the creation of future programs or interventions within Main Line Health System and other health systems to better serve this patient population and provide mothers with the tools and education to better manage their GD and overcome any perceived challenges and barriers.

Natalie Czekai is a Master in Public Health candidate focused on the interdisciplinary examination of health policy and health care delivery in the U.S. She is focused on addressing issues from economic, political, and sociological perspectives, with research focused on child and maternal health and nutritional health and wellness. Natalie is committed to developing innovative solutions and supporting health care policies that put value, quality outcomes, and the patient first.

12:00 pm

Laura Lagunez
Mentors: Katera Moore PhD, MES and Dominique Ruggieri PhD

The Good Food Network at Penn:
Recommendations to address healthy food access
among first-generation, low-income students

Abstract:
The widespread prevalence of food insecurity among college students has surpassed that of the general U.S. population, with approximately half of U.S. college students experiencing some form of food insecurity. First-generation, low-income (FGLI) college students at the University of Pennsylvania (Penn) are most likely to experience food insecurity, which can have detrimental impacts on academic performance, mental and social health, and dietary choices. The purpose of this project was to describe and evaluate a yearlong pilot program, The Good Food Bag Program, that initially provided weekly food assistance to FGLI undergraduate students at Penn and was later extended to FGLI graduate and professional students in Fall 2019. The program involved collaboration with two student serving offices and an existing food assistance and nutrition education program through the Netter Center for Community Partnerships. Pre- and post-survey data from Fall 2019 informed our team about the characteristics of FGLI students who participated in the program, their diet-related behaviors, and feedback for quality improvement. We also interviewed 8 campus stakeholders about their experiences with FGLI students in need of food assistance and resources they offered them. The perspectives of campus stakeholders and student feedback from the Good Food Bag program demonstrate a need for greater campus collaborations to connect students with existing resources. Our data show growing evidence of food insecurity among graduate and professional FGLI students at Penn. Results of the Good Food Bag evaluation and stakeholder interviews will inform the development of sustainable interventions supported by student serving offices at the university.

Laura Lagunez graduated from Cornell University in 2017 and will graduate from the University of Pennsylvania MPH program in 2020. She is currently a research assistant at the Center for Public Health Initiatives and is also working as an intern at the Agatston Urban Nutrition Initiative. After graduation, Laura plans to pursue a career in healthy equity and access research and chronic disease prevention/management.

12:20 pm

Catherine Downey
Mentor: Evan Anderson, JD, PhD

Legal and policy implications of police investigations in acute care settings

Abstract:
In the United States, law enforcement often responds to incidents involving serious injury from violence. For this reason, police are often present in Emergency Departments (EDs) in the immediate aftermath of violence. For law enforcement, this is an opportunity to collect evidence that might be lost if an injured patient dies or that could support an immediate public safety response. There are also potential negative effects of police presence including creating distrust between patients and their healthcare providers. However, there is little empirical evidence exploring the legal and medical implications of police presence in hospital settings. This capstone aims to address this gap by reviewing how evidence obtained in EDs was utilized during subsequent criminal cases regarding the admissibility of evidence and civil rights violations. To achieve this aim, twenty-three appellate court cases were identified following a LexisNexis search (words such as "evidence" and "emergency room" were included) and a thematic analysis was completed. Characteristics such as the year the case was decided, court level, features of the police interrogation (e.g. whether the patient was undergoing treatment), legal question presented, and court resolution were examined. Initial findings show that seventeen cases upheld evidence admissibility while two cases reversed evidence admissibility. Of the four cases that pertained to civil rights violations, only one found a civil rights violation, two did not find civil rights violations, and one was remanded for further investigation of the civil rights violation claim. This review will inform a broader discussion about law enforcement practices in hospital settings.

Catherine Downey graduated from Amherst College with a bachelor's degree in Anthropology and will graduate from the University of Pennsylvania with a Master of Public Health in 2020. After graduation, Catherine will be attending law school.

1:20 pm

Santosh Nori
Mentor: Dr. Kent Bream, MD

MedMobile: A process evaluation of the formation of community partnerships by the Sayre Mobile Clinic Initiative during the COVID-19 crisis

Abstract:
Recent studies have shown that there are many clusters of Philadelphia where there is a shortage of primary care physicians. Literature shows that in West and Southwest Philadelphia, patient-physician ratios are as high as 10,000:1 (patient-physician ratio of Philadelphia is 1,243:1). Mobile clinics serve as a model to expand access to healthcare in many rural and urban underserved parts of the United States, Canada, South Africa, and India, among other countries. Much of this detailed research on mobile clinics focuses either on the needs of the mobile clinic or the impact of a mobile clinic intervention within a given community. There is, as such, a dearth of literature on the process of starting a mobile clinic intervention. Sayre Health Center, a federally qualified health center, is starting a mobile medical unit to extend primary care to homeless and food insecure populations in these areas. This study is a process evaluation of how Sayre formed partnerships with feeding stations and homeless shelters as part of their mobile clinic program and established trust with vulnerable communities during the COVID-19 crisis. Points of contact (POCs) were identified at each community organization. A 7-step process guided the formation of partnerships. Each step was evaluated through a number of parameters measuring trust, effective communication, and professionalism through surveys administered to Sayre's healthcare providers and POCs. This study will elucidate effective mechanisms by which trust can be established between healthcare providers and vulnerable communities, especially during high-stress situations in society.

Santosh Nori received his BA in Biology from the University of Pennsylvania and became interested in studying public health after working with underserved cancer patients in rural India. Alongside his MPH studies, he has been working with a colleague to start a mobile clinic with Sayre Health Center to increase access to primary care in West Philadelphia. He will be pursuing his MD at the University of Michigan Medical School and hopes to continue finding innovative ways to bring high-quality healthcare to underserved populations as a physician and public health advocate.

1:40 pm

Briana Vogel
Mentors: Heather Klusaritz, PhD, MSW and Kelly Courts, MPH

Beyond treatment:
A state of the practice report for food insecurity programs in clinical settings

Abstract:
Food insecurity (FI), or limited access to food due to lack of money or other resources, is a major public health issue in the United States. There is solid evidence that FI is associated with poor diet and a number of adverse health outcomes. In light of this, health systems and hospitals have an interest in addressing FI in their patient populations. However, best practices for screening and referring patients to resources to reduce FI are lacking in the literature. To address this gap, we conducted qualitative interviews with eight employees at seven health systems and hospitals across the United States. The hospital settings included three integrated health systems, two academic medical centers, and two children's hospitals. Interview questions centered on FI program implementation, barriers and facilitators to successful programs, and community partnerships. Preliminary results found that health systems tailored their programs based on community demographics and patient needs (e.g. targeting programs to diabetic patients or those with a diet-related diagnosis). Features that contributed to program success centered on close and communicative partnerships with community-based organizations, technology utilization, formal and ongoing staff training, and the existence of on-site food resources. Program challenges included the role of stigma, external factors such as transportation and childcare, health system capacity limitations, and funding issues. Results will be further analyzed and used to inform a best practices report that will be shared with non-profit hospitals seeking guidance on FI programming.

Briana Vogel has a Bachelor's degree in Politics and International Affairs from Wake Forest University. She currently works as a Research Coordinator at University of Pennsylvania Perelman School of Medicine. Her public health interests include food and nutrition, health policy, and healthcare delivery.

2:00 pm

Lydia Watson-Lewis, MSW
Mentor: Sherry Morgan, PhD, MLS, BSNEd, RN

Social media and extremism:
A systematic review of the digital virus and its treatment

Abstract:
Since its inception, social media has provided an equal platform for free expression. While this egalitarianism has been one of the networking technologies' greatest assets, it has also created an unprecedented domain of influence that is controlled by data structures and algorithms. In recent years, some of the world's most disturbing events and trends have been linked to social media. Although organizations and governmental agencies have attempted to address online extremist behavior, most advances have focused on its detection rather than its prevention. This has led to discriminatory practices, wasted resources, and its unfaltering presence on the internet. Existing literature demonstrates evidence of the proliferation of extremist content but offers little knowledge on how this phenomenon is defined. As the threat of protected speech and use of encrypted technologies is increasingly becoming a reality, it is essential to understand these patterns while the information is still available. Like any public health outbreak, a proper case definition is needed. To address this gap, this study will review journal articles and organizational reports on social media-based interventions that address behaviors described as extreme. The operationalization of extremism and the article's contextual information (e.g. its purpose, design, year and place published) will be analyzed to identify successful and unsuccessful efforts to control the viral nature of this contagion. Thus, this systematic review will offer a broader examination into how this issue is being approached and prioritized and will provide insight into strategies that can effectively contain the spread of this digital virus.

Lydia Watson-Lewis, MSW received her BA in Psychology and Media Arts from Temple University in 2015. She began the MSW/MPH program in 2017 and received her MSW in 2019. Upon completing her MPH, Lydia intends to continue to draw upon her interests in clinical practice and macro policy issues, particularly in the areas of access to care, outbreak response and prevention, and the use of artificial intelligence.

Friday, May 8, 2020

To Join, Click Here

10:00 am

Barbara Biney
Mentor: Paula Chatterjee MD, MPH

Assessing the quality of care in United States safety-net hospitals:
A systematic review

Abstract:
For the past 10 years, quality of health care is a major topic of interest in United States legislation. The ACA, for example, includes penalties for hospitals that do not meet designated quality of care measures. Although legislation like this is supposed to promote quality of care, it may have unintended consequences for certain hospitals, such as safety-net hospitals (SNHs). SNHs tend to have more uninsured and sicker patient populations than non-SNHs, which can make it difficult for them to meet the quality of care measures. To explore this issue, we conducted a systematic review of peer-reviewed studies that assessed SNHs performance on the processes and outcomes of care for heart attack (acute myocardial infarction), congestive heart failure, and pneumonia. Processes of care are specific procedures that a physician must follow when a patient presents with a specific illness, like providing aspirin within 10 minutes of a patient having a heart attack. Outcomes of care are metrics like mortality and readmission rates. We found that SNHs are significantly more likely to score lower than non-SNHs on both processes of care and outcomes of care for all conditions examined. However, overall SNHs' performance on these measures has improved over the years. These findings demonstrate that SNHs are improving their quality of care, but at a slower rate compared to non-SNHs.

Barbara Biney is a Master of Public candidate at the University of Pennsylvania. She obtained her Bachelor of Arts degree at the University of Pennsylvania. Barbara will be matriculating into medical school this fall, as a member of the class of 2024, and aspires to combine her medical training and MPH degree to address social determinants of health in underserved populations.

10:20 am

Kenja-Rae Farquharson
Mentor: Robin Stevens PhD, MPH

The world is coming to an end, and I haven't even graduated high school yet:
An educational guide to conversations of current events and mental health with youth based on the series *Euphoria*

Abstract:
Generation Z, born between 1997 and 2012, report worse mental health than preceding generations and is more greatly affected by stressors such as current events. Gen Z has lived through the jarringly dichotomous political landscapes of the Trump versus Obama administration, witnessed the aftermath of foreign terrorism like 9/11 and the war in the Middle East, and are constantly reminded of the threat of domestic terrorism through school lockdown drills. Now, as youth face the unprecedented times of COVID-19 quarantine, more than ever, strategies must be implemented for youth to be able to process and discuss the world around them. Using qualitative content analysis and the theories of framing and social learning, this capstone provides tools for discussing adolescent mental health using the HBO series *Euphoria*. *Euphoria* follows the lives of high school students as they navigate current events, relationships, and identity formation in this unique time. Four episodes of the series were coded as the basis for an educational guide directed at high school-aged adolescents. A prominent theme found was frustration with a seemingly broken system that youth have very little power to fix. This was embodied by the quote, "The world's coming to an end, and I haven't even graduated high school yet." This guide provides a structure for conversations with youth tackling this notion of "the world ending" by giving youth space to discuss their concerns, empowering them to have control over their lives, and providing skills to advocate for their future.

Kenja-Rae Farquharson graduated from Penn in 2019 with a BA. in Health & Societies with a concentration in Public Health. She is interested in mental health, sexual and reproductive health, and working with adolescents. She plans to continue working in the field of entertainment-education.

10:40 am

Augustine Cassis Obeng Boateng

Mentors: Carol McLaughlin, MD, MPH, DTMH, MSCE; Frances Shofer, PhD; and Vicky Tam, MA

Identifying Malaria Hotspots among Children Under Age 5 in Ghana

Abstract:
Children under age 5 are significantly affected by malaria; approximately one child dies of malaria every 2 minutes worldwide. About 20,000 children, 5,000 under the age of 5, die of malaria annually in Ghana. Although efforts by the government of Ghana and other international agencies have decreased malaria cases, the disparity in the incidence of malaria between urban and rural areas persists. We sought to 1) create a baseline for future geospatial analysis of malaria among children under age 5 using the 2014 Ghana Demographic and Health Survey and 2) analyze the intersection of risk factors in predicting and identifying malaria hotspots among children under age 5 in rural and urban areas. These aims will help stakeholders assess the burden of disease and design targeted interventions. A total of 3,192 children who tested for malaria by random diagnostic testing were included. Hotspot, univariate, and stepwise multiple logistic regression analyses were performed to determine environmental, macro, and individual level factors predictive of malaria cases. The results suggest that children in rural areas are 4.7 times more likely to develop malaria compared to their counterparts in urban areas. Overall wealth index, child's age, indoor residual spraying, and enhanced vegetation index were predictive of malaria. Enhanced vegetation index was not predictive of malaria in rural areas adjusting for covariates. Likewise, adjusting for covariates, indoor residual spraying was not predictive of malaria in urban areas. Targeted interventions should address the high proportion of malaria cases especially among children age 36 months and above in rural areas.

Augustine Cassis Obeng Boateng is a Master of Public Health candidate expected to graduate in May 2020. He earned a Bachelor of Science degree in Psychology from Brigham Young University-Hawaii in 2016 with a minor in Biology. Upon completion of his degree, he will continue to pursue his career in nursing with emphasis on the intersection between spirituality and mental health. Specifically, he will focus on the role of spirituality in building resilience among individuals suffering from trauma, addiction and anxiety, and how to incorporate spirituality into nursing practice.

11:00 am

Juliette Rando

Mentors: Evan Anderson, JD, PhD and Heather Klusaritz, PhD, MSW

An implementation assessment of a Housing First intervention for justice-involved populations in Philadelphia

Abstract:
Individuals experiencing homelessness often face numerous health needs stemming from substance abuse, mental illness, and medical issues, causing them to cycle between correctional facilities, shelters, emergency departments, psychiatric wards, substance abuse treatment programs, and the street. Housing First programs, which offer housing without precondition, have demonstrated considerable benefits in reducing chronic homelessness for individuals with cross-sector service needs. Initiated in Philadelphia in June of 2018, a Housing First program called The High Utilizer Five Year Housing Intervention (Hi-Five) offers five years of housing subsidy and comprehensive, individualized support services to individuals with a serious mental illness diagnosis who have persistent involvement with the criminal justice system and high utilization of homeless service. We conducted a qualitative implementation assessment of the Hi-Five program in order to identify barriers and facilitators to implementation. We conducted 13 semi-structured interviews with key stakeholders, including five individuals from the Philadelphia Department of Behavioral Health and its operational partners, five case managers and housing services providers and three clients enrolled in the program. Interview guides were developed using the Consolidated Framework for Implementation Research (CFIR). The interviews lasted 30-60 minutes, were audio recorded and transcribed by a secure service. Transcripts were coded and thematically analyzed by two independent coders using Dedoose online software. Preliminary analyses of themes regarding barriers and facilitators to implementation are ongoing. The results of this study can be used to reform and potentially expand this and similar programs.

Juliette Rando is a Master of Public Health candidate expected to graduate in May 2020. She earned a Bachelor of Science degree in Biology from Haverford College in 2015 with a minor in Neuroscience. She works as a research assistant in a molecular biology lab at the University of Pennsylvania conducting HIV vaccine research. Following the completion of her degree, she hopes to pursue a career in policy, addressing issues of mass incarceration and homelessness.

11:40 am

Alexis W. Phillips
Mentors: Peter Cronholm, MD, MSCE, FAAFP, and Justin Clapp, PhD, MPH

Improving data collection methods of Adverse Childhood Experiences within the Black, African American Community: Oregon as a Case Study

Abstract:
Conventional measures of Adverse Childhood Experiences (ACEs) include physical and emotional abuse, neglect, and household challenges/dysfunction. ACEs are associated with a variety of adverse health outcomes, diminished life opportunities, and poor academic achievement. Conventional ACEs measures fail to capture the breadth of an individual's adverse childhood experiences, which limit the comprehensiveness of prevention and intervention strategies. By examining current ACEs data collection methods, this study aims to shed light on how to improve data collection within the Black, African American Oregonian community in order to understand the impact of those experiences with respect to long-term health outcomes. This study describes community-informed strategies for improving data collection and aims to highlight the burden of ACEs in populations not traditionally represented in ACEs measures. This is a secondary analysis of data, the primary study facilitated by the Oregon Health Authority's Division of Equity and Inclusion. Focus group participants self-identified as Black, African American Oregonians. Focus groups were audio recorded, lasted ± 2 hours, and were transcribed. Two independent coders examined the transcripts, and thematic analysis was conducted using NVivo 12 for Mac software. Analysis is ongoing. By improving the quality of assessments of ACEs experienced by Black, African American individuals, we can work to develop targeted prevention and intervention strategies aimed at supporting populations not traditionally represented.

Alexis W. Phillips is a skilled and compassionate health equity warrior; she advocates for inclusive and equitable practices by addressing the gaps between Community Health and Health Policy. During the past two years, Alexis has directed a federally funded study aimed at improving HIV health disparities, facilitated focus groups aimed at informing public health interventions, and developed translational research for policy. Alexis graduated Cum Laude from Portland State University with a dual degree in French and Sociology and is currently a Master of Public Health Candidate at the University of Pennsylvania with an expected completion date of May 2020.

12:00 pm

Jonathan Muruako
Mentors: Risa Lavizzo-Mourey, MD, MBA and Raina Merchant, MD, MSHP

Content and privacy analysis of mobile apps targeted at Children age 5 and under

Abstract:
Mobile smartphone usage has become ubiquitous among adults as well as infants since the turn of the 21st century. Prior work supports that children should avoid all aspects of screen time and mobile entertainment apps. In addition to the potential problems with content, there are also concerns regarding how information about infants is used, potentially sold, and maintained to protect privacy. This qualitative study assessed the quality of mobile apps targeted at children under age 5, focusing on the content and data protection of these apps. We searched the Google Play Store and the Apple App Store using the term "infant" and "baby" in February 2020. For each term, the top 20 apps returned that targeted children 5 and under in each marketplace were pooled together. For the "infant" search, we evaluated the percentage of targeted apps that fit our inclusion criteria. For the "baby" search, we collected information from marketplace app descriptions and the apps itself to assess the quality of apps using the Mobile App Rating Scale (MARS). We also collected information about data privacy and security policies by coding each app and extracting information about the disclosure of primary and secondary uses of data, handling of data, user access rights, and data governance. Planned analyses are ongoing. We hope this project informs app developers, parents, and guardians of the potential risks associated with mobile apps that could lead to developmental disparities and violations of confidentiality among infants.

Jonathan Muruako is a dual-degree Master of Public Health and Master of Bioethics candidate expected to graduate in May 2021. He currently is a Research Assistant at the Penn Medicine Center for Digital Health where he helps code and interpret social media data in the context of health outcomes. Following completion of his degree, Jonathan plans to pursue a career in entrepreneurship leading his digital wellness startup named Fitalyst.

12:20 pm

Claire McKeown
Mentors: Vanesa Karamanian, MD, MPH; Anita Anim, MPH, RD, LDN; and Justin Clapp, PhD, MPH

Distribution practices of food banks:
A case study of two food banks in Philadelphia

Abstract:
Food insecurity continues to be a leading public health challenge in our country, despite the efforts across all sectors to mitigate the issue. There is a comprehensive amount of literature published on the impacts of various emergency food programs; however, there is little known about how these programs function as a part of the larger system. Notably, there is little known about the way food is distributed through the emergency food system. It is important that we better understand the distribution practices of food banks in order to facilitate a more productive and healthier emergency food distribution system. To accomplish this, we focused on analyzing two semi-structured interviews conducted with staff members from two food banks that serve the Philadelphia region. This case study focuses on the operations of the organizations, experiences and opinions of the way food is distributed, as well as opinions about the types of food that are distributed. The primary analysis of these interviews is ongoing. Themes identified through this case study will shed light on the operations of emergency food programs and the distribution of food through the emergency food system. Our findings will help to inform future directions of research in this area as well as program development and policy needs.

Claire McKeown is a Master of Public Health candidate expecting to graduate in May 2020. She earned a Bachelor of Social Work degree from Kutztown University of Pennsylvania in 2016 with a minor in Clinical Psychology. She currently works as a part-time research assistant at the Psychology of Eating and Consumer Health Lab at the University of Pennsylvania working primarily on a consumer health research study at a local food pantry. Following the completion of her degree, she will continue to work to address diet-related chronic health conditions through food education and access.