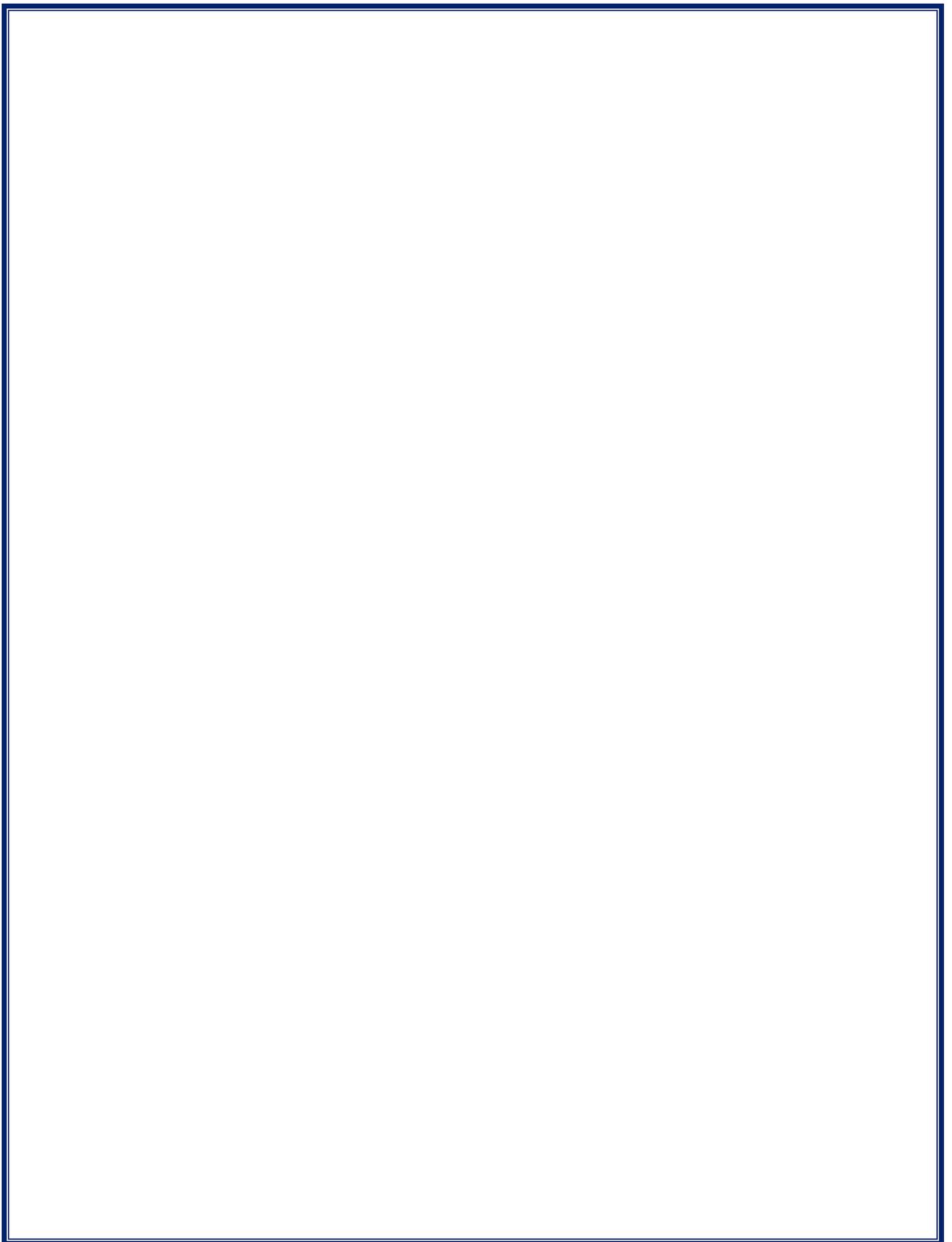# Master of Public Health Program

Perelman School of Medicine
University of Pennsylvania

Capstone Presentation Program

Spring 2019

Tuesday, May 7, 2019

Biomedical Research Building II/III, Room 252

10:15 am

Sara Cristal Ramírez

Mentors: Adina Lieberman, MPH; Dominique Ruggieri, PhD; and Robert Schnoll, PhD

Communication about potential detention and deportation: An exploratory qualitative study of Latinx families with mixed immigration status

Abstract:
Mixed immigration status families are on the rise in the US. The risk of deportation is also on the rise, meaning it is critical that family-led conversations occur about how to be prepared in case of deportation. Despite a plethora of support for immigration policy changes to decrease deportation, there is no current action plan for undocumented and mixed-status families. Without actual policy actions or resources, undocumented families continue to be extremely vulnerable when a member of the family is detained or deported, and as a result they are at risk of psychological harm and physical health issues. We conducted 12 semi-structured interviews (30-45 minutes) with undocumented immigrants living in a mixed-status family unit in the city of Philadelphia in a private location of their choosing. The aims were to understand: (1) perceptions about proactively planning for detention or deportation and (2) current facilitators and barriers (i.e., emotional, social, political, and financial vulnerabilities) to accessing resources to proactively plan for potential detention and deportation. This research can lead to recommendations for an evidence-based resource intended to support families who are at risk of experiencing the detention or deportation of a family member.

Sara Cristal Ramirez is a Master of Public Health student at the University of Pennsylvania who aspires to integrate skills in graphic design and fine arts in the communication of public health and community health. She has experience in public health social determinants of health, proficiency on the needs and sensitivity towards minority and at-risk populations, qualitative methods, and health communication and policy. She is currently working with a non-profit organization that believes housing is a human right and provides affordable housing in Chicago.

10:35 am

Kara Martin

Mentors: Heather Klusaritz, PhD, MSW; Alice Yoder, RN, MSN; and Courtney Summers, MSW

Quality improvement efforts around community planning at Penn Medicine: Preliminary findings from the Community Health Inventory survey

Abstract:
Nonprofit hospitals are held accountable for developing Community Health Needs Assessments (CHNA) and Community Health Implementation Plans (CHIP) under Internal Revenue Service (IRS) Section 501(r)(3). Through this regulation, hospitals are encouraged to serve the community outside of one-on-one patient care to address social risk factors and meet various needs. It is necessary for an institution to have a comprehensive understanding of its current system-wide community health initiatives to engage in the in-depth CHNA and CHIP process and map future initiatives to meet remaining needs. A Community Health Inventory (CHI) survey was created to establish the current state of community health initiatives at Penn Medicine. The target population for this exploratory quantitative study included any Penn Medicine employee that acted as a manager of a community health initiative at the time of survey administration. Primary data were collected on general information, program information, evaluation and reporting methods, Penn and community involvement, and program contact information. The survey was presented to a group of key stakeholders for their approval and administered via email to health system and academic staff. Descriptive statistics were performed to document patterns in the development, composition, and delivery of the Penn Medicine's community health initiatives. Preliminary results indicate that more time, buy-in, and education may be needed for the CHI survey to be successful. Future study of the CHI survey will provide insights about how to improve health system processes for developing, tracking, evaluating, and reporting on its community health initiatives.

Kara Martin graduated from Penn State's Health Policy and Administration program in 2017 and will graduate from the University of Pennsylvania MPH Program in 2019. She is currently an intern at the Penn Medicine Center for Health Equity Advancement and the co-lead for Penn Public Health Society. After graduation, Kara plans to pursue a career focused on health policy, advocacy, and systems improvement.

10:55 am

Teniola Egbe
Mentors: Diana Montoya-Williams MD; Kate Wallis MD, MPH; and Scott Lorch, MD, MSCE

Risk of stratified preterm births by maternal nativity:
Evidence against an immigrant paradox

Abstract:
Foreign-born immigrant women have lower rates of preterm births than US-born women despite more sociodemographic risk factors. It is unknown how a woman's race, ethnicity and nativity together affect risk of delivering an extremely, moderately, or late preterm infant. We conducted a retrospective cohort study of women delivering live births in Pennsylvania from 2011-2014 using vital statistics linked to maternal records. Preterm infants were stratified into 3 groups: late (LPT, 34-36 6/7 weeks), moderately (MPT, 29 to 33 6/7), and extremely preterm (EPT, < 29 weeks). Women were grouped into eight race/ethnicity/nativity categories: US non-Hispanic White (USNHW) and Black (USNHB), US Hispanic White (USHW) and Black (USHB) vs. foreign-born (FB). Bivariate and multivariate regression models determined the association between race/ethnicity/nativity category and risk of each preterm group. Among the 515,074 dyads in our cohort, FBHW women had the lowest rates of prematurity overall (6.3%), compared to USNHB (12.5%) and FBNHB (8.9%). In adjusted models, USNHB (aRR 2.1, 95% CI 1.9-2.3), USHB (aRR 2.2, 95% CI 1.1-4.1), and FBNHB (aRR 3.0, 95% CI 2.4-3.8) women had a higher risk of delivering an EPT infant than USNHW women. USNHB women showed a higher risk of delivering MPT infants than USNHW (aRR 1.2, 95% CI 1.1-1.3). FBHW women's risk of stratified preterm birth supports the immigrant paradox, but nativity and ethnicity are not protective for Black women with respect to risk of stratified preterm birth. Understanding how nativity, ethnicity, and race impact birth outcomes can inform policies to improve disparities in birth outcomes.

Teniola Egbe graduated from Villanova University in 2017 and will graduate from the University of Pennsylvania MPH-Global track and MBE program in 2019. She is currently a research assistant at the Center for Health Behavior Research & Center for Clinical Epidemiology and Biostatistics. After graduation, Teni plans to pursue a career in program implementation in a global health context.

11:15 am

K. Catalyst Twomey
Mentor: Sara Jacoby, PhD, MPH, MSN

Patient Perceptions of their long-term outcomes after traumatic injury:
Identifying opportunities for a trauma-informed continuum of care

Abstract:
Traumatic injury was the cause of hospitalization for nearly 3 million Americans in 2015. Trauma-informed healthcare takes a biopsychosocial approach to healthcare interactions by recognizing that previous traumatic experience can influence how people respond to the aftermath of events like injuries and hospitalization. This purpose of this study was to identify how people who have experienced traumatic injuries describe their recovery process and the need for support to manage long-term symptoms. Specifically, this analysis identified ways in which a trauma-informed approach may mitigate long-term injury sequalae and challenges to optimal recovery. We conducted 5 focus group interviews with 20 self-identified Black or African-American men aged 21-61 years who experienced a traumatic injury and acute hospitalization in the previous 36 months in Philadelphia, PA. Interviews elicited participants' experiences of long-term symptoms and facilitators and barriers to recovery. Recordings of focus group interviews were transcribed and then coded using NVivo software. Thematic analysis was used to identify how participants described their recovery process and to interpret where and how a trauma-informed approach might improve their experiences. A primary theme that emerged from analysis was the long-term persistence of psychological symptoms such as depression, anxiety, traumatic stress, and paranoia that continued beyond the physical recovery process and interactions with local health systems for follow-up care. Taking a trauma-informed approach to the design and priorities of injury care during acute and post-acute health system interactions may create opportunities to improve long-term outcomes and warrants further study.

Catalyst Twomey is a dual degree student working towards her Master of Public Health and her Master of Nursing, family practice. She is currently working as a nurse in a surgical ICU, and as a research assistant on the study for which her capstone project is based. She has a passion for harm reduction and works in that field as part of a local Philadelphia collective.

12:20 pm

Anna Filipczak

Mentors: Kate Wallis, MD, MPH and Katherine Yun, MD, MPH

Language services at Pennsylvania hospitals:
A needs assessment survey for LEP and ASL interpretation

Abstract:
Although patients who are Limited English Proficient (LEP) experience disproportionately poorer health outcomes compared to English proficient patients, having professional interpreter services can improve patient safety and satisfaction. As such, federal law requires that healthcare organizations receiving federal funds provide interpreter services to LEP and American Sign Language (ASL) patients, but information about implementation and compliance is limited. National and state-level surveys suggest that interpreter requirements are not being met, but there is no current data regarding compliance of hospitals in Pennsylvania. To fill this gap, we surveyed general acute hospitals in Pennsylvania about their compliance with Culturally and Linguistically Appropriate Services standards. We distributed an online survey to contacts at 135 general acute hospitals using a list generated from the Hospital and Health System Association of Pennsylvania and the Pennsylvania Department of Health facility directory, through which we identified hospital language services managers or equivalent. The survey included 26 questions to identify the availability of interpreter services at each hospital and to gather respondents' perspectives on policies and resources to improve interpreter services. Fifty-eight respondents have completed the survey (43%) to date. Preliminary findings suggest that responding hospitals do not have a dedicated language or interpretation department (34.5%), report insufficient funding for interpreter services (46.6%), and do not receive third-party reimbursement (72.4%). In Pennsylvania, access to interpreter services in general acute hospitals is inconsistent. Recommendations to improve access include additional funding to enhance existing services, such as increasing access to in-person interpretation.

Anna Filipczak graduated from Smith College in 2002, Johns Hopkins University in 2006, and will graduate from the University of Pennsylvania MSN/MPH program in 2019. Prior to Penn, she worked as Registered Nurse at Johns Hopkins Hospital and at the Howard County Health Department in Maryland. Anna hopes to pursue a career in clinical research to reduce health disparities and improve outcomes in healthcare.

12:40 pm

Rebecca Koppel, MSW

Mentor: Evan Anderson, JD, PhD

Diverting arrest and reducing harms associated with substance use disorder:
Understanding experiences in the Philadelphia Police Assisted Diversion program

Abstract:
People with substance use disorders (SUD) are at high risk of arrest and incarceration. As many as one-third of people in the U.S. who use heroin pass through a prison or jail each year. Drug dependence has been documented in more than half of jail inmates and state prisoners. High prevalence of SUD and elevated overdose risk after re-entry have concentrated attention on jails and prisons as logical sites for intervention; however, jails and prisons are not the only places to intervene within the Criminal Justice System. According to the Sequential Intercept Model (SIM), opportunities to provide treatment and other services, rather than merely punishment, exist throughout the criminal justice continuum. Recognition that police frequently encounter individuals experiencing SUD, but that punishment is often counterproductive, has motivated the idea of police-assisted (or law enforcement assisted) diversion (PAD, LEAD). This pre-booking diversion model has spread from Seattle to a number of other cities in recent years. Philadelphia launched a PAD program in early 2018 in which police officers can direct individuals to a treatment facility when an individual would otherwise have been arrested for a low-level criminal offense (a "stop referral") or when an individual independently asks the police for this assistance (a "social contact referral"). This presentation will present findings from semi-structured interviews exploring the perceptions and experiences of individuals who entered through a stop referral and individuals who entered the program through a social contact referral.

Rebecca Koppel received her Master of Social Work from the University of Pennsylvania School of Social Policy and Practice in 2018 and will graduate with her Master of Public Health this spring. She has clinical and research experience in housing, healthcare, and behavioral health. Rebecca looks forward to combining her social work experience and public health education to address homelessness and other social determinants of health from a systemic perspective.

1:00 pm

Quratul-ain Qaiser, MD

Mentor: Gary Smith, MA, MA, DPhil, Cert. Ed.

To vaccinate or not to vaccinate?
Modeling the critical threshold population for polio in the U.S.

Abstract:

As a vaccine preventable disease that has still not been completely eradicated, poliomyelitis remains a threat for children around the globe. The current prevalent anti-vaccination sentiment poses a unique risk for polio introduction and outbreak in currently polio-free countries. This project focused on addressing gaps in the literature regarding possible consequences of low vaccination coverage rates in a country like the United States. The primary aim of this study was to compare the required level of polio vaccination to the existing level of polio vaccination in low- coverage U.S. states. To do this, we used modeling techniques to determine the transmission coefficient (R_o) for polio transmission in Ashland, Oregon – a county known for low vaccination rates and infectious disease outbreaks – and used it to calculate the critical threshold for vaccination coverage for the entire state. This critical threshold was compared to existing regional vaccination rates in the U.S. to highlight states at highest risk of possible polio transmission. This study can be helpful in shaping and informing essential policies on vaccination strategies, exemptions, and even the magnitude of vaccine stockpiling for response in case a live poliovirus gets imported into a subpopulation with low vaccination coverage. It also highlights the importance of vaccination against polio, a disease commonly considered a 'foreign' problem by the American public.

Quratul-ain Qaiser ('Q') received her Doctor of Medicine degree from Rawalpindi Medical College in Pakistan in 2015 and worked as an intern in her home country. As a medical student, she volunteered for Rotary International's End Polio Now campaign and has been interested in infectious disease and vaccination ever since. Quratul-ain is excited to start a preventive medicine residency program this summer which will allow her to combine her passion for medicine and public health after she graduates with her Master of Public Health degree this spring.

1:20 pm
Areeba Shaikh

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

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

Abstract:

Intimate Partner Violence (IPV) affects 12 million people annually and frequently co-occurs (40%) with child abuse, increasing risk for severe physical and psychological impacts among children. Added touchpoints with families in crisis and available round-the-clock resources make pediatric hospitals uniquely positioned to assist affected families, but it is unclear if pediatric hospitals are prepared in this realm. Our objective was to develop a tool for pediatric hospitals to assess their preparedness to identify and respond to IPV. We identified 56 U.S. experts in IPV and pediatrics via snowball sampling to participate in a three-stage, consensus-driving Delphi process. Initially, participants reviewed items from Coben's nine-category adult hospital IPV preparedness tool; participants rated items' appropriateness for pediatric hospitals on a five-point Likert-scale, modified items as needed, and brainstormed new pediatric-focused ideas. Qualitative responses were coded independently by two reviewers, with discrepancies decided by a third. All original, modified, and new items were included in subsequent consensus-building stages, rated on the same five-point appropriateness scale, and ranked for relative importance. Predetermined consensus criteria were used to determine final items for the tool. Data collection concludes in summer 2019. Based on round 1 results, we anticipate categories for screening, documentation, and intervention services will require the most substantive changes to become pediatric-focused. The final tool will include constructs that are appropriate and important for pediatric hospitals to assess in order to successfully identify and support families affected by IPV to maximize health outcomes.

Areeba Shaikh graduated from Rutgers University with a Bachelor's of Science in Public Health. She is a Masters of Public Health student at University of Pennsylvania expected to graduate in May 2019. She is a research assistant at the Penn Injury Science Center and also works for Penn Residential Services as an operational graduate assistant. Following graduation, Areeba hopes to pursue a career in global health and maternal/child care.

1:55 pm

Meghana Sharma
Mentor: Carolyn Cannuscio, ScD

Opening the book on librarians' perceptions:
Understanding community needs around exercise, nutrition, and food access

Abstract:
As a free resource available to communities of varying populations and demographics, public libraries play a unique role in addressing the needs of the community. Public libraries offer a multitude of services, programming, and education that can impact the health and well-being of its patrons. With over 1.39 billion visits in 2015 alone, these institutions are highly utilized and should be recognized as partners in improving population health. To further explore this idea, a secondary qualitative analysis was conducted to understand what librarians and library staff perceive as the health and social needs of the population they serve. Librarians and library staff from a Public Library Association Conference were recruited to participate in semi-structured interviews. Interview questions consisted of asking librarians and staff to describe their experiences providing health information to patrons, their capacity in addressing the needs of the community, and training they have received or would like to receive to meet the health needs of the community. The secondary analysis from these transcripts will further inform possible health initiatives for public libraries that can improve the overall health of the community and ensure basic health needs are met.

Meghana Sharma is a Master of Public Health candidate expected to graduate in May 2019. She earned a BA degree in Psychology from the University of Illinois at Chicago and previously worked in Emergency Medical Services. While completing her MPH degree, Meghana interned with the Office of the Deputy Managing Director of Health and Human Services and worked with the Center for Public Health Initiatives and the Philadelphia ACES Taskforce. Her professional and research interests include reducing health disparities, understanding Secondary Traumatic Stress in health care workers, and addressing the opioid epidemic in Philadelphia. Meghana is passionate about serving her community and aims to continue this work after graduation.

2:15 pm

Yuer Deng, MSW
Mentor: Irene Wong, PhD

The stigma of mental health in rural China: Stories from frontline providers

Abstract:
The increasing number of persons with untreated mental illness presents a pressing public health issue in China. In 2016, over 160 million Chinese people living with mental illness did not receive any treatment. Pervasive stigma is a significant barrier leading to treatment refusal and non-compliance. Whether mental healthcare providers (MHP) demonstrate stigmatizing or supportive attitudes can play an important role in either perpetuating or mitigating self-stigma of persons with mental illness (PMI). This study used qualitative methods to explore frontline MHP's attitudes towards PMI and the challenges they face working with them. Four focus groups were conducted with 36 MHP from a rural county healthcare system in southwestern China. Focus groups were recorded and transcribed verbatim. All transcripts were double-coded by three bilingual team members who are native Chinese speakers. Coding discrepancies were resolved by consensus. Once coding was complete, the team convened to organize resultant codes into thematic categories. MHP recruited from county, township, and village levels varied in educational background, professional qualification, and experience of working with PMI. The results will provide critical insights to inform the development of stigma reduction programs targeting healthcare providers.

Yuer Deng is a dual-degree Master of Public Health and Master of Social Work candidate expected to graduate in May 2019. She is currently a research assistant at the School of Social Policy and Practice and also works with the Penn Mental Health AIDS Research Center. Her interests include mental health, health disparities, and health communication.

2:35 pm

Rachel Levy
Mentor: Anne Teitelman, PhD, FNP-BC, FAANP, FAAN

The Just4Us intervention to increase PrEP uptake for women at high risk for HIV:
Creation of a facilitators training manual

Abstract:
Just4US is a pilot randomized trial to determine the acceptability and feasibility of an individually-tailored intervention to increase PrEP uptake and adherence among 80 women at risk for HIV infection. Developed based on in-depth interviews and surveys conducted in Philadelphia and New York City, the intervention and associated curriculum will be facilitated by counselor/navigators (C/N). This capstone project focused on the development of a training manual for the C/N's in order for them to effectively facilitate the intervention. A goal for the C/N training manual was to bolster the C/Ns' self-efficacy in facilitating a training for participants, utilizing techniques such as providing instruction, modeling/demonstrating behaviors, prompting mental rehearsal of successful performance, and promoting self-affirmation. The completed manual includes background information on HIV and PrEP, as well as an overview of how these two topics relate to women in New York City and Philadelphia. The manual details the three phases of the study, the theoretical models used to inform the study, and the overall theme of the study. Additional sections include detail of skills needed to facilitate the intervention, including motivational interviewing, harm reduction, interactions with clients, and skill-building activities. Appendices include emergency protocols, standard operating procedures, and a glossary of terms.

Rachel Levy has had a long-standing interest in community health outreach, education, and health access, and received her Bachelor's degree in Public Health from the University of Maryland. Prior to starting the Master of Public Health program at Penn, she worked as a community health worker in Baltimore, and over the past 2 years has focused her efforts on health education.

2:55 pm

Candace Wickliffe
Mentors: Holly Fernandez Lynch JD, MBE and Emily Largent JD, PhD, RN

Factors influencing offers of payment for clinical trial participation:
Paying individuals with an opioid use disorder

Abstract:
This study assessed the ethical and practical factors principal investigators (PIs) of clinical trials with individuals with or at risk for opioid use disorder (OUD) used when determining offers of payment in their studies. We also collected and analyzed advertisements from these studies to explore what information was provided regarding payment. Using the NIH RePORTER website, we identified the studies based on whether: 1) individuals with or at risk for OUD were included, 2) the trials were active in 2016, 2017, and/or 2018, and 3) were funded through NIDA R01 Research Program grants. We excluded studies that included children, prisoners, and were conducted outside the US. The survey revealed that practical factors, such as recruitment attrition and attainment, influenced PI decisions to offer an amount of payment in their trial more so than ethical factors such as the possibility of undue influence or using the payment to purchases drugs. Some PIs stated that there was no difference in paying research participants with OUD compared to other research participants. The qualitative analysis of the advertisements revealed that an offer of payment was present in the majority of the advertisements, and the emphasis of payment text such as bolding and the use of large fonts was minimal. However, the method and timing of payment and the study's risks and burdens were rarely included in the advertisements. These findings suggest that practical factors may be more important indicators in offering payment to research participants than ethical factors. Overall, PIs seem to not make special considerations for individuals with or at risk for OUD. Also, while potentially misleading methods of describing payment, such as bolded text, were not used in advertisements, there appears to be less transparency in weighing payment and the risks and burdens, if any, in study advertisements. These results can help inform efforts to guide the use of research payments in potentially at-risk populations.

Candace Wickliffe will complete her Masters of Public Health degree at the University of Pennsylvania this spring. She obtained her Bachelor of Science in Biology at the University of California, Los Angeles. She completed her fieldwork at the UNESCO headquarters in Paris, France. She intends to continue to pursue her interests in health economics and policy.

3:15 pm

Cody L. Mullens
Mentor: Evan Anderson, JD, PhD

Emergency department utilization associated with opioid-related harms in Philadelphia County

Abstract:
There is an epidemic of opioid-related harms locally and nationally. Fatal overdose is the most prominent. In 2017, there were over a thousand opioid overdose deaths in Philadelphia and more than 40,000 in the U.S. There has been less research attention to other opioid-related harms including injuries related to non-fatal overdose and infections. The aim of this study is to describe the utilization of emergency medical care among individuals who experienced a nonfatal overdose or were hospitalized due to other opioid-related sequelae (e.g., infective endocarditis, abscess, sepsis). All hospital discharge data in Philadelphia County were retrieved for the calendar year 2017 from the Pennsylvania Health Care Cost Containment Council (PHC4). Opioid-related diagnoses were identified using International Classification of Disease Revision 10 (ICD-10) codes. Patient demographic data, hospital admission data, hospital stay data (i.e., procedures performed, length of stay), discharge disposition, and financial charges associated with individuals' hospital stay were abstracted for individuals with opioid-related diagnoses. These findings will inform ongoing policy debates regarding potential harm reduction interventions (e.g., supervised injection facilities) to reduce the burden associated with the non-medical opioid use.

Cody L. Mullens is a second-year student who will graduate from the MPH program in May 2019. Cody is a research fellow in the Department of Surgery and is interested in clinical outcomes and access to surgical care. Upon graduation, Cody will be returning to medical school at West Virginia University to complete his MD and plans to ultimately pursue a career in academic surgery.

10:35 am

Justin Escobar

Mentors: Evlambia Harokopakis-Hajishengallis, DMD, DDS, MSc, PhD; and Jill Johnson, PhD, MPH

Caregivers and pediatric dental residents' perceptions of caregivers' understanding at initial dental visits

Abstract:

It is critical to understand the relationship between health literacy and health outcomes, particularly in the changing landscape of healthcare delivery and quality. Poor health outcomes are more common among those with low health literacy; further, in the pediatric population, low caregiver health literacy is negatively associated with a child's health status. In dentistry, both patients' *oral health literacy* and *oral literacy*—i.e., the demand providers place on them—correlate to their comprehension and ability to make decisions regarding their oral health, and ultimately to oral health outcomes. Specifically, the relationship between oral health literacy and oral health outcomes may be stronger in those who experience higher oral literacy demand (e.g., medical jargon or contextualized language introduced into patient-provider exchange). Although prior studies have established that providers have high tendencies to overestimate patient literacy in general medicine, little is known about this issue in the field of dentistry. Thus, we developed a study to evaluate the concordance between caregivers and residents' perception of caregivers' understanding. We enrolled 58 patients and their caregivers presenting for initial dental visits at the University of Pennsylvania School of Dental Medicine Pediatric Clinic 1/2015-8/2016. Prior to being seated, caregivers completed the rapid assessment of adult literacy in dentistry (REALD-30). Immediately following the dental visit, caregivers and providers both completed electronic quantitative surveys to assess their perception of the caregivers' understanding. Results will help provide insight into a provider's ability to assess caregivers' oral health literacy and adjust oral literacy demand accordingly.

Justin Escobar is currently in the dual-degree DMD/MPH program at the University of Pennsylvania, graduating in May 2019. After graduation, Justin will begin a residency in pediatric dentistry at Children's Hospital Colorado.

10:55 am

Sai Prasanna Narasimmal, MBBS

Mentor: Carolyn Cannuscio, Sc.D

Substance use in public libraries: Capturing perspectives from library staff in Michigan via the Statewide Public Library Survey

Abstract:

Overdose deaths among patrons in libraries across the US are being increasingly reported in the media. In addition to helping patrons find rehabilitation and treatment services, some public library staffs have actively adopted a new role of saving the lives of patrons by stocking Narcan, an opioid overdose reversal drug. It is critical to capture public librarians' experiences regarding this issue, in particular (1) the extent to which libraries experience opioid overdoses, (2) library policies around substance use, and (3) willingness of library staff to be trained to administer Narcan. Thus far, no prior studies have addressed these specific questions. Therefore, the aim of this Penn Healthy Library Initiative study is to understand Michigan public library staffs' perspectives and experiences with substance use among patrons. To this end, we used the Public Library Association's database of libraries to identify all public libraries in the State of Michigan. We sent a representative from each public library an email with the link to a REDCap survey. Our results indicate that approximately 10% of respondents reported witnessing a patron overdose in the past month, and about 16% reported interacting with a patron about finding drug and alcohol treatment services. Furthermore, an overwhelming majority of librarians (94%) expressed willingness to be trained on the issues of substance use. Results of this study can be used to inform the public health community about the size of the growing problem of substance abuse in public libraries and the potential role of librarians in combating it.

Sai Prasanna Narasimmal, MBBS graduated from The Tamilnadu Dr. MGR Medical University, India with her medical degree in 2016. She volunteered as a Registered Medical Practitioner with a non-profit organization bringing mobile hospital services to underserved rural areas in India. After completing her MPH program at the University of Pennsylvania, Sai hopes to pursue a career in pain medicine.

11:15 am

Farhana Rahman
Mentor: Allison E. Curry, PhD, MPH

Healthcare Provider Perspectives on
Transportation and Safe Mobility for Autistic Adolescents

Abstract:
Currently one in 59 children in the US are diagnosed with autism spectrum disorders. Transitional resources begin to diminish for autistic adolescents with autism with the completion of high school, creating many challenges as these individuals transition to adulthood. Indeed, a recent Drexel report by Roux et al. indicated that young adults with ASD feel trapped at home and unable to work because of transportation issues, leaving them reliant on caregivers. Thus, it is critical that the support community provide guidance to autistic adolescents on the issues of transportation and safe mobility, which may improve their quality of life and independence significantly. In general, healthcare providers are a key source of support and guidance for autistic adolescents and their families. However, little is known about the guidance and support that healthcare providers give to autistic adolescents and their families regarding transportation and safe mobility. Thus, we conducted a cross-sectional quantitative survey to capture provider perspectives and experiences in providing transportation-related guidance to autistic adolescent patients and their families. We administered a 10-minute survey electronically via RedCap to over 600 CHOP and non-CHOP providers who may care for autistic adolescents. Survey topics included assessing driving readiness, what resources (if any) they provided, and how the level of provider guidance differed between teens with and without ASD. Results intend on tailoring provider interventions for this population and ultimately will inform the development of a longitudinal cohort study of 450 autistic adolescents and their parents.

Farhana Rahman will graduate from the University of Pennsylvania MPH program in 2019. She is currently working as a primary care coordinator at Prevention Point. After graduation, she will begin her job as director of operations of a physician group in Tampa, Florida.

12:20 pm

Lisenia M. Collazo
Mentor: Joan I. Gluch, Ph.D., RDH, PHDHP

Dental students' perception of their knowledge, skills, and comfort in providing care to pediatric dental patients

Abstract:
Certain issues regarding the care of pediatric patients have been at the forefront of the dental community. Dental caries remains the most common chronic disease in children. According to the American Academy of Pediatric Dentistry, a child should be first seen by a dentist no later than 12 months of age. However, most general dentists state that they do not feel comfortable treating infants or toddlers. In addition, the numbers of obese children and adolescents continue to rise. Improved collaboration between dentists and primary care providers to address the childhood obesity epidemic has been discussed by both fields as a potential solution to address these concerns. Penn Dental Medicine has recently created a predoctoral program that allows its students to become familiarized with treating very young pediatric patients and discuss oral health topics with their caretakers. Thus, the aims of this study were to (1) assess the experiences of current senior dental students at the University of Pennsylvania in caring for dental patients aged 5 and younger; and (2) examine their perceived knowledge, skills and comfort when carrying out various activities with these patients and their caretakers, including (a) education in caries prevention, (b) providing diagnostic and preventive care, (c) providing restorative care, and (d) education in childhood obesity. To do this, we conducted a cross-sectional survey via Qualtrics, which was sent to Penn Dental's class of 2019, consisting of 145 students, in February of their graduation year. Data was analyzed using descriptive statistics. Results will highlight the experience of Penn Dental Medicine students in caring for pediatric patients and may provide suggestions to improve the Birth to 5 program. Finally, results may encourage other dental schools to incorporate community based programs to produce more dentists willing to work with children of all ages.

Lisenia M. Collazo graduated from the University of Puerto Rico – Río Piedras with a Bachelors degree in cellular and molecular biology. She is currently a dual degree student in dentistry and public health and will graduate in May 2019. After graduation she will complete a general practice residency program and hopes to work in underserved areas with the National Health Service Corps.

12:40 pm

Timari Yow

Mentors: Dr. Evlambia Harokopakis-Hajishengallis, DMD, DDS, MSc, PhD; and Dr. Hillary Nelson, PhD MPH

"Tooth be Told"
Pilot Evaluation of a Children's Book Designed to Increase Oral Health Knowledge

Abstract:
Across the globe, dental caries remains one of the most persistent and prevalent chronic diseases in child populations. The purpose of this study was two-fold; first, we designed an evidence-based children's book targeted towards school-aged children, ages 7 to 9, following the recommendations of critical analysis available. Second, we tested the effectiveness of this children's book in improving oral health knowledge and promoting behavior change intention amongst its targeted audience. Each subject was administered a quantitative baseline questionnaire measuring oral health knowledge and oral hygiene behavior. The 24-page illustrated children's picture book was subsequently administered as the intervention media, followed by a 15-question follow-up interview measuring oral health knowledge, behavior change intention, and perception of the intervention material. Study findings provided insights into the motivations for oral hygiene behaviors in children and identified effective strategies for improving dental knowledge. In a preliminary examination of 33 participants using Wilcoxon signed-rank tests, statistically significant increases in oral health knowledge were observed after exposure to the children's book (z-value=4.872, p<0.0001). In addition, 94% of participants reported increased desires to improve oral hygiene practices after exposure to the reading material. The conclusions drawn from this study will guide future research on children's books as an intervention media for improving oral health outcomes and influencing hygiene behaviors in children.

Timari Yow is a dual DMD and Master's in Public Health candidate at the University of Pennsylvania and will receive both degrees in May of 2019. She will be completing a pediatric dental residency at Children's Hospital of Colorado in Denver and hopes to continue focusing her academic work on caries prevention in adolescents as she moves forward in her career. Timari hopes to improve oral health outcomes for underserved child populations through health education and wellness initiatives.

1:00 pm

Margaret Alexander

Mentors: Chris Colameco, MPH and Evan Anderson JD, PhD

Leveraging biometrics technology to improve employee health
at Company X in Philadelphia, PA

Abstract:
Research suggests that a healthier employee population saves employers money. Healthy employees are more engaged and productive at work and are less costly to insure. As such, more businesses are emphasizing the health of their employees and getting creative with their wellness offerings. Company X, for example, is piloting a new digital health technology called Higi, a kiosk that measures biometrics including pulse, blood pressure, weight, BMI, and body fat and shares screening results with users and their doctors in real-time. We seek to estimate Higi utilization and effectiveness in improving employee health. To predict Higi utilization at Company X, we created a 10-item general interest survey that will be disseminated prior to the pilot by an internal HR representative via email to a random sample of employees including those of various job types and office locations. The interest survey has yet to be disseminated and employee utilization of Higi is still unknown. To determine effectiveness, we conducted a literature review to examine the relationship between biometric screening programs and health outcomes. Evidence from the literature suggests that biometric screening programs can improve health outcomes by raising people's awareness of their health status and disease risk and connecting them to care in a timely manner. If the pilot deems Higi to be effective and engaging, Company X has the opportunity to implement additional Higi stations at offices across the country to improve employee health and control healthcare expenditure.

Meg Alexander is a Junior Account Manager at GlobalFit, a wellness technology company based in Philadelphia. Upon graduating from the University of Pennsylvania with her Masters of Public Health (MPH), she plans to start her own concierge wellness consulting company to deliver onsite health promotion services to businesses to improve population health and transform organizational culture.

1:20 pm

Theresa C. Soya

Mentors: Douglas J. Wiebe, PhD, and Bernadette A. D'Alonzo, MPH

Protective equipment and concussion in lacrosse:
Findings from the Ivy League-Big 10 Epidemiology of Concussion Study

Abstract:
An estimated 1.6–3.8 million sport-related concussions occur each year. Symptoms are painful and limiting; recovery is often frustrating. Athletes who suffer a concussion are between 4-6 times more likely to sustain a second one, a rate that increases if they return to play too soon. Repeated concussion injuries may result in long-term neurological health consequences like early-onset dementia and chronic traumatic encephalopathy (CTE). According to data from the Ivy League-Big Ten Epidemiology of Concussion (ILBTEC) study, lacrosse ranks consistently as one of the top 5 sports with highest concussion rates in collegiate varsity sports. In lacrosse, there exist fundamental differences in the rules between women's and men's play. Required gear for men consists of a chest guard, arm pads, shoulder pads, protective cup, protective gloves, mouth guards, and helmets. Women are only required to wear mouth guards and eye goggles. Investigative research is needed to determine the factors within lacrosse that cause concussion rates to remain at such a high level of incidence and suggest potential solutions on how to mediate these causes. This study examined sport-related concussion in men's and women's lacrosse participating in the ILBTEC Study during 6 consecutive seasons (2013-2014 to 2018-2019), estimating concussion rates and comparing concussion incidence by sex based on use of protective equipment, mechanism of injury, player position, and whether penalties were called during the play where injury occurred. Amidst ongoing debate by stakeholders within the sport, results from this study suggest that requiring helmets might help prevent concussions in women's lacrosse.

Theresa Soya graduated from The College of New Jersey with a BA in communication studies in 2016 and will graduate from the University of Pennsylvania with a Master of Public Health degree in May 2019. She currently works as a research coordinator at the Penn Injury Science Center, where she collaborates on several projects investigating concussion incidence and recovery, school violence, and community-engaged research. She would like to thank her incredible family, friends, coworkers, and MPH program mentors for their endless support.

1:55 pm

Carlos J. Carmona

Mentors: Natalie Stollon, MSW, MPH; Heather Klusaritz, PhD, MSW; and Dominique Ruggieri, PhD

Stories within the pixels: Perceptions of career attainment
among foster youth living with chronic conditions

Abstract:
Foster youth are at increased risk for negative health and social outcomes including poor mental health, unemployment, delayed high school graduation, and homelessness. According to the Adoption and Foster Care Analysis and Reporting System (AFCARS), about 250,000 foster youth under 21 years of age exited the U.S. foster care system by August 2018. Moreover, studies estimate that 20%-60% of youth within the foster care system have an identified chronic illness or disability. Despite these known risk factors, the intersection of foster youth living with a chronic illness and/or disability and their experiences with transitioning into adulthood remains understudied. By using qualitative interviews and photo-elicitation, this study explores the transition experiences of youth in the Children's Hospital of Philadelphia (CHOP) Career Path for Foster Youth Program. Implemented in 2007, CHOP Career Path provides foster youth ages 18-21 living with comorbidities with the tools to pursue their future careers and become independent in their healthcare and daily lives. This exploratory, qualitative study highlights perceived barriers and facilitators to career attainment and independence among program participants using photo-elicitation methods to guide semi-structured qualitative interviews. Photo-elicitation is a qualitative research technique that asks participants to generate photographs to elicit nuances or contextualize the research question. Furthermore, the incorporation of qualitative methods in the continuous quality improvement evaluation of the program offers opportunities to improve the program and provides youth-serving organizations with innovative strategies to support youth as they are transitioning into adulthood.

Carlos J. Carmona is a Master of Public Health candidate expecting to graduate in May 2019. He earned a Bachelor of Arts degree in Health & Societies from the University of Pennsylvania in 2017 with a minor in American Sign Language & Deaf Studies. He works as an assistant data manager for the Biomedical Research Support Core at The Wistar Institute where he designs and validates survey instruments that collect clinical data for biomedical research on HIV and cancer. Following the completion of his degree, he aspires to pursue a career working with and advocating for adolescent young adults in their transitions to adulthood.

2:15 pm

Janissa Delzo
Mentor: Moriah Hall, MPH

Faces of public health: Communicating the Penn MPH student experience

Abstract:
Program-specific university websites can offer an abundance of information to inform both current and prospective students, including the academic calendar, curriculum requirements, and student life. Often, a prospective student's first point of contact with a university is through their official website, and information from the student perspective (e.g., biographies, interview) may guide a student's decision to enroll in a program. Such information may aid admitted students in deciding whether or not the program is the right fit for them. However, the University of Pennsylvania's Master of Public Health (MPH) Program's website does not currently include any anecdotes or biographical details from current students and alumni. Gaining inspiration from the Penn Post-Baccalaureate Pre-Health Programs' "Student and Alumni Stories" section of their website, specifically the narrative format and web layout, the current project focused on content creation. Using social media and targeted outreach, students were recruited for semi-structured interviews. The interviews were then transcribed and profiles were written for the ten participants, nine in various years of the program and one alumna. Participants discussed similar strengths of the program, such as its interdisciplinary nature. The interviews also highlighted the diverse professional and educational backgrounds that drew students to pursue an MPH at Penn. This project may help inform future public health practitioners thinking of obtaining a professional degree from Penn's MPH Program.

Janissa Delzo is a Master of Public Health candidate expected to graduate in May 2019. She received her Bachelor of Science in Journalism from Emerson College in May 2016. She is currently an editorial assistant at the Penn Memory Center, a National Institute on Aging-designated Alzheimer's Disease Center, and has written health content for national and international news outlets. After graduation, Janissa plans to pursue a career combining her communications and public health skills.

2:35 pm

Elizabeth Pride
Mentor: Melissa Dichter, PhD, MSW

Research to Action:
A Dissemination Guide for Domestic Violence Researchers and Practitioners

Abstract:
The gap between research and practice has been well-documented across disciplines. Bridging that gap requires a concerted effort to change dissemination practices so that relevant research results reach those "on the ground" providing services to affected communities. For domestic violence researchers, the urgency of applying research to the response to and prevention of domestic violence makes dissemination a priority. Research findings should be available to domestic violence practitioners so they can make informed, evidence-based decisions to improve services for clients and communicate high-quality information to the public, stakeholders, and funders. Despite this need, knowledge of practitioners' preferences for receiving research or uses for research information is limited. The lack of information about this component of dissemination (i.e., what works and does not work for those who need information) and how completed research is used by organizations make it more difficult to track successful efforts or determine how past actions could apply to other efforts. To explore this, a literature review of existing knowledge on dissemination practices was conducted, and practitioners and researchers were engaged in conversation about their experiences with and preferences for engaging with research. The resulting dissemination guide will assist domestic violence researchers and practitioners with planning for and executing activities for dissemination, considering how research can be used in practice, and filling in the information gap on how to effectively disseminate domestic violence research.

Elizabeth Pride is a Master of Public Health candidate expected to graduate in May 2019. She earned a Bachelor of Arts degree in Anthropology from Temple University in 2012 with minors in Women's Studies and Spanish. She works as the Intake Coordinator at the Women Against Abuse Legal Center where she provides and supervises the delivery of direct services for victims of domestic violence.

2:55 pm

Swathi Raman
Mentor: Jalpa A. Doshi, PhD

Medication adherence and specialty pharmacies: A systematic review

Abstract:
Specialty pharmacies largely dispense specialty drugs, a class of high cost, complex medications, often necessary for the treatment of serious health conditions. Compared to traditional retail pharmacies, specialty pharmacies offer better patient education and support, more precise adherence monitoring technologies, and greater familiarity with cost-saving policies for specialty drugs. Recent studies have shown that the utilization of specialty pharmacies may lead to higher medication adherence, which is associated with lower risks of relapse, improved clinical characteristics, and substantial medical savings due to reductions in total health care use. However, there are no studies compiling existing evidence on the impact of specialty pharmacy dispensing channel use on medication adherence. The objective of this review was to summarize evidence on the association between pharmacy dispensing channel (retail or specialty) and adherence to specialty drugs. A literature search was conducted in the MEDLINE database to identify studies that measured medication adherence among patients using retail and specialty pharmacies. In accordance with the PRISMA guidelines, articles were screened on the basis of title, abstract, and/or full text. A final sample of studies, with publication years ranging from 2003-2018, met the eligibility criteria and were included in this review. A majority of studies supported a higher adherence rate through specialty pharmacies compared to retail pharmacies, with antirheumatic and anticancer therapies showing an especially marked increase in adherence through specialty pharmacies. Findings from this review can serve to inform stakeholders of the benefits of specialty pharmacy utilization, especially for certain population segments.

Swathi Raman received her undergraduate degree in 2018 from the University of Pennsylvania, where she studied Health and Societies and volunteered with the United Community Clinic and Service Link. She is a Research Assistant with the Children's Hospital of Philadelphia's Division of Nephrology and Leonard Davis Institute of Health Economics. Following graduation, she will attend medical school with the hope of continuing to pursue her interests in community health and health policy.

Thursday, May 9, 2019

Biomedical Research Building II/III, Room 252

10:35 am

Sandra E. Loza-Avalos
Mentor: Ashlee Murray, MD, MPH

Exploring pediatric emergency department providers' opinions around intimate partner violence (IPV) screening

Abstract:
Annually, 15 million children are exposed to intimate partner violence (IPV). As a setting that is anonymous, able to reach patient caregivers, and can serve as a springboard to other resources, the pediatric emergency department (ED) is an appropriate setting to screen patient caregivers for IPV. However, existing research on provider barriers to screening patient caregivers is limited and does not assess the effectiveness of screening more than six months after screening programs' implementation. We conducted a study composed of quantitative surveys and qualitative interviews to assess provider opinions about the non-verbal screening program implemented in fall 2015 in The Children's Hospital of Philadelphia's (CHOP) ED. We analyzed 141 survey results descriptively using chi-square tests and the grounded theory approach to analyze themes that emerged from our 20 interviews. Almost all providers supported IPV screening for patient caregivers, but confidence carrying out the screening and subsequent referral to an IPV counselor varied widely across provider types. Providers also felt differently about which provider types were best suited to conduct the screening and where the screening process should occur. Providers identified barriers to screening similar to those reported in earlier studies on this topic. Our results will inform future improvements to the screening program at CHOP and the implementation of future screening programs in different departments and hospitals. They will also illuminate what further work can be done to make universal IPV screening of patient caregivers the norm.

Sandra Loza-Avalos earned a BA in Biology and Health & Societies with a minor in Chemistry in May 2017 from the University of Pennsylvania. She submatriculated into the MPH program in fall 2016. She currently works full-time as a Clinical Research Coordinator in the Department of OBGYN at the Hospital of the University of Pennsylvania. Sandra's public health interests include reproductive health, access to care, how environments affect health, and improving healthcare delivery.

10:55 am

Zoey Binder
Mentor: Evan D. Anderson, JD, PhD

What's in a Name? An analysis of the naming of public health laws

Abstract:
Law is a valuable and popular tool for promoting population health. The Centers for Disease Control and Prevention identified law as playing essential roles in all ten of the most important public health achievements of the 20th century. However, translating evidence into consistent legal reform is often a necessary but challenging process. One of the impediments to successful policymaking is the outsize role of anecdotes. Policymakers and their constituents are thought to rely on dramatic incidents rather than epidemiological data about the population burden of a risk or harm. Some researchers and advocates have co-opted this tendency by wrapping legal reform campaigns within a particular story as embodied in the naming and framing of a law in relation to one person (e.g., Megan's Law). Political science has explored this tendency related to the theory of "focusing events." Many public health experts agree that focusing events can stimulate lawmaking, but no research has empirically explored the role naming on the incidence and characteristics of public health lawmaking. This study explored the effects of focusing events on federal and state lawmaking and problem framing. All named laws adopted between 1996 and 2018 were systematically gathered using a legal database (N=435). Basic data mining techniques were then employed to describe the patterning of the laws in terms of public health problems they target. The results suggest some interesting implications about how lawmakers and advocates use incidents for problem definition.

Zoey Binder graduated from the University of Pennsylvania in May 2017 with a degree in Health and Societies and will graduate from the University of Pennsylvania MPH program in May 2019. She is currently a paralegal at a boutique law firm, Kang Haggerty & Fetbroyt LLC. Zoey will begin law school in August 2019 and plans to pursue a legal career in the public health field.

11:15 am

Maria Cortese Hering, MA
Mentor: Sherry Morgan, PhD, MLS, RN

Feeding a continent: A systematic review of the intersection of agriculture, nutrition, and climate change in Africa

Abstract:
Our environment supplies the land, the land produces the food, and the food sustains the population. In the midst of this interdisciplinary landscape, 815 million people worldwide are undernourished, climate change threatens food production, and agriculture contributes 24% of global greenhouse gases. Low and middle-income countries bear both the brunt of climate change and the burden of malnutrition. To date, there has been no systematic review of the interdisciplinary literature attempting to address agriculture, climate change, and nutrition. This systematic review identified the relevant literature using academic journal databases. Due to the interdisciplinary focus, databases were chosen from the biomedical and social sciences. Searches were performed in PubMed and two ProQuest resources, Sociological Abstracts and a combination of Social Sciences Databases. Studies were further filtered to those pertaining to Africa and published in English. Conference papers and proceedings were excluded as were reviews of literature and papers where the nutritional focus was on animals and not humans. 178 records were screened, 25 articles remained for a full read, and 4 studies were included for the final review. All 4 studies explored the barriers and needs of smallholder farmers and the adoption of a particular agricultural initiative. Three studies focused on the nutritional and ecological advantages of legume production. In addition, themes of gender disparities and the role of political power were identified. This review elucidated the patterns and the gaps in the literature, with the goal of informing future research and policies on reducing malnutrition and mitigating climate change.

Maria Cortese Hering holds a BA in Film from Temple University and an MA in African Studies from Ohio University. She currently works for Penn Global in the office of Global Support Services. She is thankful for the opportunity to bring her arts and social sciences background to the study of Public Health.

12:20 pm

Julian A. Hernandez
Mentor: John H. Holmes, PhD, FACE, FACMI

No turn on red:
Exploring street traffic behaviors and environments contributing to injury

Abstract:
Road traffic injuries are one of the world's leading cause of death for people aged 15-19 years old. We conducted an observational study with video data to identify the most common street traffic behaviors of road users that could lead to conflict or injury. We collected and analyzed 15 minutes of video data at each of 10 strategically selected intersections in University City, Philadelphia, PA. A codebook was developed to guide the classification of behavior that could lead to conflict or injury at each intersection. Videos were summarized by two coders (Cohen's Kappa = 0.96). There was a total of 219 incidents of unsafe and/or noncompliant behavior that could lead to injury. Behaviors varied by intersection, but pedestrians were the most noncompliant road users with the highest number of observed behaviors. The intersections of 27th & South and 38th & Spruce had the highest number of incidents of unsafe and/or noncompliant behavior. Additionally, the intersections of 34th & Spruce and 38th & Spruce had the highest number of conflicts. The behaviors observed in this study will be used to set the parameters of agents in future agent-based modeling and simulation efforts that explore interventions to reduce road conflict and injury.

Julian Hernandez received his BA in Health and Societies in 2017 from the University of Pennsylvania. For the past two years, he has worked at the Institute for Diabetes, Obesity, and Metabolism at Penn managing several obesity-related investigational drug and medical device research studies. Julian's public health interests include obesity prevention, road injury prevention, and improving public transportation systems in cities.

12:40 pm

Alexa Avitto
Mentor: Gary Smith, MA, MA, D.Phil, Cert. Ed.

Gone to the dogs: Modeling Guinea Worm Disease transmission dynamics in humans, copepods, and dogs

Abstract:
Guinea Worm Disease (GWD) is a waterborne and parasitic disease on the brink of eradication. Despite the lack of drugs and vaccines to combat infections, tremendous surveillance and control efforts have driven GWD's global burden from about 3.5 million cases in 1986 to only 28 in 2018. However, the causative agent – *Dracunculus medinensis* – has now spilled over into dogs, which has raised new concern over the feasibility of complete eradication. A deterministic SEI (susceptible-exposed-infectious) model was developed to both characterize the effect of the new host species on GWD transmission dynamics and to compare the impacts on different intervention strategies on eradication success. Model parameters aimed to simulate a typical Chadian village with one pond as the primary water source and were obtained and estimated from historic literature prior to the onset of human interventions. Parameters were then modified in different simulations to depict known intervention strategies using Berkeley Madonna modeling software. Analyses indicated that culling all canines, moving all humans, and only containing human cases would not result in successful eradication. Rather, reducing the pond's copepod (GWD's intermediate host) population by 85% using water larvicides could result in eradication within 49 years, and combination strategies of water treatment and personal water filter compliance could drive the worm to eradication even sooner. These findings corroborate the current control strategies being used in the field by entities including the WHO and Carter Center and emphasize the importance of maintaining robust surveillance throughout GWD's "endgame" stage.

Alexa Avitto earned her BS in Biology from The College of New Jersey in 2016. She has since worked as a Research Specialist at the Perelman School of Medicine contributing to projects ranging from HIV to ape *Plasmodium* parasites. Upon completing her Global Health MPH this summer, she plans to use her scientific and public health experiences to pursue a career in infectious disease epidemiology.
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1:00 pm

Caitlin McDonald
Mentors: Shivan Mehta, MD, MBA, MSHP and Jill Johnson, PhD, MPH

Colorectal cancer screening among patients receiving medical and dental care at an urban community health center

Abstract:
Despite a variety of screening tests available, colorectal cancer (CRC) screening rates remain subpar, particularly among underserved populations. As the role of health care providers evolves, it has been suggested that dentists could play a larger role in preventative health. Building on this concept, dental visits could serve as an additional contact point for CRC screening outreach. The primary goal of this study was to compare CRC screening rates among patients who receive both dental and medical care to those who only receive medical care at an urban community health center in order to inform future CRC screening intervention development. To determine this, we conducted a retrospective medical and dental record data abstraction of all patients meeting the criteria for CRC screening and who had a medical and/or dental appointment within the last year. A total of 1,081 eligible patients were identified – 250 in the dental and medical group and 831 in the medical only group. The patient population was largely black, female, and publicly insured. Among the dental and medical group patients, 36% were up to date on CRC screening compared to 22% among the medical only group (p<0.001). In addition, the medical and dental group patients had higher screening rates in all other preventative health measures analyzed (p<0.001). Despite higher screening rates among patients who received both dental and medical care, rates overall were very low. Further screening outreach is needed in this population and engaging patients at dental visits may be one approach.

Caitlin McDonald received her BS in Molecular Biology from Fairfield University in 2013 and will graduate from the University of Pennsylvania MPH program in May 2019. She is currently a clinical research coordinator at the University of Pennsylvania in the Department of Cardiovascular Medicine focusing on Cardio-Oncology. Her primary areas of interest include cancer screening outreach, preventative health, and patient engagement.

1:20 pm

Ashley Mercede
Mentor: Evan Anderson, JD, PHD

A case study of the role of law in housing affordability in Narberth, PA

Abstract:
Housing segregation is an important public health problem associated with numerous individual and population harms. The causes of housing segregation are complex and longstanding. Implicit bias and institutional racism motivate affluent Americans to reside in communities that are aesthetically, economically, and racially homogenous. Examples of white flight and homogenous landscapes are common and obvious in cities such as Boston, New York, Philadelphia, Baltimore, and Washington D.C. and in the surrounding suburban enclaves. The Main Line, a suburban enclave surrounding Philadelphia, is known for its wealthy residents and strong public resources (e.g., schools). Narberth is a small suburb on the Main Line, which is a popular place for local academics. It is also considered one of the more affordable boroughs surrounding Philadelphia. Although Narberth is considered affordable, the average housing price is well over $400,000. Little is known about regulations that impede access to affordable housing. This study explored whether housing regulations in Narberth are creating barriers to entry for low-income individuals. Affordable housing is lacking across the Philadelphia suburbs. The results from this study will inform debate about future reform to suburban land use and zoning regulations.

Ashley Mercede currently works at the University of Pennsylvania's Nudge Unit where she focuses on implementing a mobility protocol for hospitalized patients. Ashley is interested in public policy, particularly in the interplay between structural inequities and public health. Ashley hopes to attend law school in the near future.

1:55 pm

Lauren O'Malley
Mentors: Hannah Lawman, PhD; Amory Hillengas, MUSA; and Jill Johnson, PhD, MPH

Assessing the impact of tobacco retailer permit regulations in Philadelphia

Abstract:
Tobacco products kill an estimated 3,500 Philadelphians each year, and Philadelphia has significantly more tobacco retailers per capita than other comparable cities. Numerous studies have found that high retailer density and close retailer proximity is associated with increased tobacco use and reduced cessation efforts. As such, in 2017, the Philadelphia Board of Health imposed new regulations on tobacco retailer permits, including a density cap and tobacco-free school zones. The goal of this study was to evaluate how these retailer regulations changed travel distance for tobacco purchasing, impulsive tobacco purchases, and cessation efforts in Philadelphia compared to a control city without similar regulations. Data were collected through an anonymous online survey of Philadelphia and Baltimore residents prior to implementation of the regulations (N=481), and one- (N=537) and two-years later (N=688). Linear regression analyses were used to assess whether the city and timepoint predicted the target tobacco use and purchasing behaviors, after controlling for covariates. Among tobacco users in Philadelphia, 71% noticed tobacco for sale and 56% bought tobacco on impulse when in the store to buy something else, at least half the time that they were in stores. In addition, 82% reported traveling six blocks or less to purchase tobacco products and only 20% reported being ready to quit tobacco use within the next 30 days. These results will inform the short-term impact of the regulations on specific behavioral targets. Further long-term research is needed to continue to evaluate the impact of these regulations and to examine additional tobacco use and health outcomes.

Lauren O'Malley graduated from the University of Connecticut with a BS in allied health sciences in 2016 and will graduate from the University of Pennsylvania MPH program in August 2019. She is currently a clinical research coordinator at the Center for Weight and Eating Disorders at Penn where she conducts childhood obesity and nutrition research. After graduation, Lauren plans to pursue a career in program planning, policy evaluation, and health communication related to chronic disease prevention.

2:15 pm

Praveen Paul Rajaguru
Mentor: Neil P. Sheth, MD

Operation Kilimanjaro: Understanding the delivery of surgical care in Northern Tanzania

Abstract:
Access to surgical care in Low- and Middle-Income Countries (LMICs) such as Tanzania is extremely limited. Northern Tanzania is served by a single tertiary referral hospital. The surgical and trainee volumes, workflows, and payment mechanisms in this region have not been characterized. This project sought to determine what non-physical structural barriers exist within this system that may limit access to surgical care. Case and specialty volume in the main operating theaters at Kilimanjaro Christian Medical Center (KCMC) was retrospectively reviewed for the whole of 2018. Workflow and financing data from operating theater logs was analyzed for the five-month period of March 2018 to July 2018. In 2018, KCMC performed 3,817 total procedures. General surgery (1,927, 50%) was the most operated specialty, followed by orthopaedics (1,371, 36%) and gynecology (519, 14%). While attending volume was comparable, taverage trainee volume was lower than in the US. During the study time-period, just 54.6% of planned operating days were fully completed and there were 238 cancellations (20.8%). Time (31.1%) was the largest reason; lack of patient payment and unavailable equipment were equivalent as causes for cancellation (6.3%). Only 45.5% of non-emergency cases were financed by insurance, yet this vastly exceeds overall coverage in Tanzania at just 16%. There are clear areas for improvement in the system that can be addressed to improve surgical capacity, for patients and trainees. Physical resources are not enough to improve access in LMICs. Patient financing and workflow are key considerations in improving access to surgical care.

Praveen Paul Rajaguru earned a BA in Health & Societies in 2017 from the University of Pennsylvania. Throughout his time in Philadelphia, he has worked to improve population health through city government departments, various nonprofits, and research on domestic and international healthcare financing. He will start medical school in the fall with the goal of ultimately improving access to affordable surgical care.

2:35 pm

Unmesha Roy Paladhi
Mentor: Frances Shofer, PhD

To train or not to train?
Associations between CPR training status and preventative health behaviors

Abstract:
Early recognition of out-of-hospital cardiac arrest and intervention through cardiopulmonary resuscitation (CPR) are crucial for patient survival, but CPR training rates in the US are low. It is currently unclear which populations are more likely to get CPR trained. This retrospective study tested the hypothesis that those engaging in preventive health behaviors are more likely to have completed CPR training by examining data obtained from the 2015 Household Health Survey completed by the Public Health Management Corporation. 10,048 participants were recruited via random-digit-dialing and queried regarding various health behaviors, including current CPR training status, recency and reason for training. To compare CPR training with health behaviors, chi-square tests and logistic regression modelling were employed. Participants were 62% female, 71% Caucasian, with a mean age of 54 years. 6,472 participants (65%) had attended CPR training, with 1,433 (22%) voluntarily trained (not as a job requirement). Adjusted for age, gender, education, and race, visiting the dentist (OR: 1.23, 95% CI: 1.10-1.37) or having a blood pressure measurement (OR: 1.27, 95% CI: 1.06-1.53) in the past year, and exercising at least once a week (OR: 1.39, 95% CI: 1.24-1.57) all had an increased odds of CPR training. Primary implications of these results are that those that exhibit preventative health behaviors are more likely to be CPR trained. Furthermore, those that are voluntarily CPR trained appear more likely to engage in preventative health behaviors. Potential future CPR training initiatives could be targeted towards those that already exhibit these healthy behaviors.

Unmesha Roy Paladhi earned her BS in Biology from Drexel University and will graduate with her Master in Public Health in May 2019. She has been working as a Clinical Research Coordinator on GI and diet-related clinical trials at Penn for the past four years. In fall 2019, Mesha will be moving to Seattle to embark on her doctoral education in Epidemiology with a focus on the intersection of health and technology at the University of Washington.

Friday, May 9, 2019

Biomedical Research Building II/III, Room 252

10:15 am

Caroline Joyce
Mentor: Harsha Thirumurthy, PhD

Education as a predictor of price premiums for condomless transactional sex among high-risk HIV-uninfected women in western Kenya

Abstract:
Kenya has a low per-capita income, with 36% of the population living below the poverty line. Transactional sex is a leading risk factor for HIV, and HIV prevalence in the Nyanza region is nearly 20%. Condom use in transactional sex encounters is not universal, and economic factors may influence women's decisions to engage in condomless sex. Among women with no primary education, condoms were used during high risk sex 25% of the time. This study investigated the role that education plays in predicting prices charged among those who engaged in transactional sex. Data were collected as part of a randomized control trial that is currently underway in the Nyanza region with 2,098 female sex workers (FSWs) enrolled as part of this trial. Education attained was significantly and positively associated with price premiums for condomless sex. Education significantly predicted price premiums for condomless sex among participants with some secondary education. Education may play an important role is determining HIV risk. HIV prevention programs should consider interventions that target those who have less than secondary school education.

Caroline Joyce is a student in the Master of Public Health program at the University of Pennsylvania, from which she will be graduating this May. She received her B.A. in psychology from Scripps College in 2016. Caroline's research interests focus on the effect of economic and social policies on health, particularly maternal health and HIV risk. She has spent the last two years as a graduate assistant to Dr. Alison Buttenheim, where she worked on multiple projects including behavioral interventions to change parental vaccine hesitancy, and investigating the effect of recent legislation on childhood vaccination rates in California. Caroline will be starting a PhD in Epidemiology at McGill University this fall.

10:35 am

Naser Mubarak
Mentor: Stephanie Mayne, PhD

An examination of trends in lifestyle risk factors over time in US children, adolescents, and adults

Abstract:
For most of human history, infectious disease was the primary cause of death. This changed around the mid-1900s, when chronic disease began to eclipse the rate of acute and infectious related death. Parallel to this change, lifestyle has become widely recognized as an important area of public health research. Lifestyle encompasses the ways in which individuals behave in occupational, social, dietary, and recreational contexts. Lifestyle is influenced by a range of specific geographical, political, economic, religious, and cultural influences and is often characterized by specific health behaviors, such as smoking, alcohol consumption, diet, physical activity, and sleep hygiene; these behaviors are major contributors to the development and progression of preventable chronic disease. The purpose of this project was to characterize temporal trends in lifestyle factors of US children (age 2-11), adolescents (12-19), and adults (20 years and older) over a 10-year period and examine the association of sociodemographic factors with number of unhealthy lifestyle factors using the National Health and Nutrition Examination Survey (NHANES). The results showed an increase in children and adolescents not meeting the physical activity guidelines over time, while all age groups showed improvement in meeting the recommended dietary guidelines. Children and adolescents that identified as non-Hispanic black, were uninsured, and who had guardians that were not married were at increased risk for clustering of unhealthy behaviors. Similarly, adults that identified as non-Hispanic black, were less educated, and were uninsured were also at increased risk for clustering of unhealthy behaviors. These findings illustrate that the disparities found across certain chronic diseases can be linked back to differences in adherence of certain healthy behaviors across sociodemographic factors and the significance associated with addressing these differences.

Naser Mubarak is a Master of Public Health candidate expecting to graduate in May of 2019. He earned his Bachelor of Science degree in Integrative Health Science at Stetson University with minors in Biology and Public Health. He works as a program evaluator for the Netter Center of Community Partnerships at the University of Pennsylvania and plans to attend medical school following the completion of his degree.

10:55 am

Andrew Becker

Mentor: Jonathan Tan, MD, MPH

Geographic analysis of Pay-for-Quality:
Evaluating readmission risk by proximity to hospital

Abstract:
Our healthcare system has shifted towards value-based reimbursement measures in an effort to improve quality and incentivize healthcare systems to increase public health responsibility. Readmission rate is one such reimbursement-linked quality measure. Through the Hospital Readmissions Reduction Program (HRRP) the Center for Medicare and Medicaid (CMS) has begun penalizing hospitals with 30-day readmission rates below the median rate of peer institutions. A patient that is discharged and returns to the hospital within 30-days is counted as a readmission that is federally reported to CMS and the overall rate benchmarked for public consumers. Our study uses the national Healthcare Utilization Project's (HCUP) 2013 State Inpatient Databases (SID) for New York to understand the association between geography and readmission rate. This large (2.5 million+) claims-based data set is de-identified and includes multiple patient level factors including demographic, socioeconomic, clinical, and utilization variables. Using the patient-level zip codes, we mapped patient proximity to hospitals using Geographic Information Systems (GIS) and calculated 30-day readmission events to elucidate the relationship of patients' drive-time to hospitals and readmission risk. Our results show patients living in closer drive-time proximity to hospitals have an increased risk of being readmitted across multiple types of discharge diagnoses. This suggests that hospitals sitting in urban, often disproportionately socioeconomically disadvantaged communities, may have increased readmission rates due to the proximity of their patient base. Our study is relevant to large health systems and federal policy bodies continually grappling with improving public health care through reimbursement-linked quality metrics.

Andrew Becker is an MD-MPH candidate interested in health systems policy and federal payer reform. He is an Associate Fellow at the Leonard Davis Institute of Healthcare Economics and has experience in value-based care and quality improvement at Cigna and the University of Pennsylvania Hospital System. Andrew graduated from Ithaca College, summa cum laude, and will be completing his Anesthesia residency at the Hospital of the University of Pennsylvania.

11:15 am

Raymond Gonzales

Mentor: Marilyn Howarth, M.D.

Is driving for Lyft or Uber hazardous to your health?
The occupational hazards of rideshare driving

Abstract:
Uber and Lyft have transported passengers over five billion times. Many studies have showcased the financial aspects of driver's wages. However, driver experiences and their safety have been understudied. This study will fill a knowledge gap answering the question if rideshare driving is hazardous for drivers. This study will measure the occupational hazards of rideshare driving and what factors could influence a driver's experience. In the spring of 2019, drivers will be contacted to complete a non-identifiable 42-question survey. Drivers will be contacted through Facebook groups across the United States. The analyses will focus on major themes regarding workplace hazards for drivers, factors associated with the hazards, and suggestions to Uber and Lyft to provide better safety features for their drivers.

Raymond Gonzales is currently finishing his Master's Degree in Public Health focusing on Occupational and Environmental Health. Utilizing both his nursing and social work skills, Raymond has worked on medical-surgical units, hospice care outreach and veteran-focused initiatives. More recently, Raymond worked on campaigns with the United Nations and World Health Organization in India, Cambodia and the Philippines. Having a passion for helping people has led him to research a new category of vulnerable people, rideshare drivers.

12:20 pm

Jehan Luth
Mentor: Evan Anderson, JD, PhD

Food for thought: Where is taste and culinary expertise in local food law?

Abstract:
Obesity in America is one of the most serious public health issues that increase the risk of developing heart disease, diabetes, and various cancers. Additionally, dietary risks have been identified as the largest risk factor contributing to the burden of all non-communicable diseases. Law regulates access, quality, and cost of food in numerous ways. The largest regulated source of nutrition is the National School Lunch Program (NSLP). This policy analysis study selected the five healthiest and the 5 unhealthiest US cities out of the 50 largest cities in the United States for comparison. A novel methodology characterized each city along the following dimensions: 1) whether the cities adopted NSLP or a more strict policy; 2) whether flavor/taste is a requirement for food being served; and 3) who are the people (including credentials) that make the final decision on local food policy. Of the 5 healthiest cities, all five adopted a much stricter law than the NSLP, three of the five cities had an explicit requirement for food tasting good and being flavorful, and the same three of the five had listed their contract administrators along with their credentials. For the five unhealthiest cities, three complied with the NSLP and one has no food policy available to the public for analysis. Of the four valid cities, all four had no requirement for the food taste/appearance or flavor, but the same four cities had their contract administrators listed. There was no relationship with contract administrators and the health status of the city. That being said, healthier cities have food policies that are more strict than the NSLP and make sure the sensory qualities of food are also being required from their food service contractors. Hence, if a city wants its population to get healthier, they should extend beyond the NSLP and ensure that healthier food is flavorful as well as nutritious.

Jehan Luth is a classically trained chef with experience ranging from three Michelin Star restaurants, corporate food service, to culinary innovation for consumer packaged goods companies. He currently leads the strategy for food programs including food policy for large higher education institutions around the world. Jehan's passion lies in delivering food that benefits human health at a large scale. He graduates from the Masters of Public Health and Master of Law program at the University of Pennsylvania in 2019 and has his undergraduate degree in Culinary Science and Culinary Arts from the Culinary Institute of America.

12:40 pm

Catherine Sayikanmi
Mentor: Gary Smith, MA, MA, D.Phil, Cert. Ed.

Modeling of extensively drug resistant (XDR) typhoid fever outbreak in Pakistan

Abstract:
Typhoid fever, an illness caused by the bacterium *Salmonella* serotype Typhi, has been reported in several different countries in the past years. Nearly 21 million cases of typhoid occur and 161,000 typhoid related deaths occur annually. A recent outbreak of extensively drug resistant (XDR) typhoid fever cases was been reported in several districts in Sindh, Pakistan since late 2016. The XDR strain of *Salmonella* serotype Typhi has resulted in an exponential increase in cases of typhoid fever as well as extensively drug resistant typhoid fever. To explore the hypothesis that the number of XDR cases will continued to increase, this study utilized a mathematical model to predict the number of cases that will occur in the Sindh district in Pakistan. This project explored 3 scenarios: (1) incidence of typhoid fever in Sidn, Pakistan, (2) total number of typhoid related deaths that will occur over the next year, and (3) the difference in differences between projected typhoid related deaths and lives saved using mass immunization of the typhoid conjugate vaccine (TCV) as a prevention method.

Catherine Sayakanmi is a second year graduate student at the University of Pennsylvania. She is earning a Master of Public Health degree with a focus on global health. Prior to attending UPenn, Catherine received her Bachelor of Science in Community Health with a minor in Leadership Studies from the University of Maryland, College Park. Between degrees, Catherine spent time gaining work experience working at a local hospital in the District of Columbia and the United States Environmental Protection Agency (EPA). She attributes her interest in an advanced degree to the time that she spent working in a public health setting. She is primarily interested in deepening her understanding of global health priorities in low and middle income countries. Her experience and interest pertain to health equity, infectious disease prevention and healthcare delivery in under-resourced communities. After completion of her MPH degree, Catherine hopes to pursue a career working on infection prevention in a global setting.

1:00 pm

Simone Snead

Mentor: Sherry Morgan, PhD, MLS, BSNEd, RN

One too many:
Issues of maternal morbidity in the United States and the impact of doulas

Abstract:
Every year in the United States nearly four million women give birth. Rates of maternal morbidity are on the rise; each year, more than 50,000 women (135 women each day) experience unexpected complications that result in short or long-term consequences to their health and well-being. Studies have evaluated the impact of continuous labor support on improving birth outcomes. Having continuous support during labor may decrease the rates of maternal morbidity and improve maternal health outcomes. A doula is a trained professional that offers continuous physical, emotional and informational support to a mother before, during and after childbirth. To this end, we conducted a systematic review of the impact of doulas on maternal morbidity in the United States. A total of eight studies where doulas provided continuous labor support were evaluated based on four key themes: type of delivery, labor length, complications for mother and baby and pain medications administered. Results showed that mothers with a doula during labor experienced shorter labor duration, and rates of cesarean delivery were lower which ultimately resulted in fewer labor and postpartum complications. Further research is needed to explore possible reasons for this finding, and to examine the influence of doula support on maternal health outcomes among populations with high rates of chronic disease and stressors such as poverty, racism, and exposure to violence.

Simone Snead is a Master of Public Health candidate graduating in May 2019. Simone is dedicated to maternal and child health, specifically the rates of maternal morbidity and mortality in the United States. Simone serves her community as a birth doula and lactation counselor. Simone is committed to helping women feel empowered and supported as they experience birth. Following completion of her MPH, she will continue to pursue her career working in women's health research.

1:20 pm

Katherine Wu

Mentors: David Rubin, MD, MSCE and Dava Szalda, MD, MSHP

Clinical decision supports:
A population-based approach for supporting transition to adulthood

Abstract:
Adolescents and young adult patients experience increased vulnerability during transition to adult care. While electronic medical record-based clinical decision support (CDS) tools can influence provider behavior, little is known about CDS tools for promoting successful transition. The primary aim of this study was to determine whether participation in a Learning Collaborative (LC) increased provider utilization of a transition-specific CDS tool. A secondary aim was to determine whether tool implementation increased patient reports of transition discussions. Three pediatric primary care sites implemented a transition CDS tool for 14+ year olds; 2 sites participated in a LC to design quarterly Plan-Do-Study-Act (PDSA) cycles targeting utilization. Metrics included monthly tool utilization rates by and patient report of transition discussions via anonymous surveys collected from 16+ year olds at the two participating sites before and after implementation. Over 9 months, providers at the two participating sites used the tool for 9% (n= 412) and 6% (n=130) of patient visits, respectively. Providers at the control site used the tool for 3% (n=52) of patient visits. Participating sites had the highest monthly utilization for patients 18+ years old, 33% and 23%, compared to 9% at the control site. Patients reported increased discussions about 2 transition topics: transfer to adult care and expected changes in healthcare at age 18. Site LC participation increased tool utilization compared to the control, particularly for 18+ year olds; however, overall utilization was low. Patients reported increased discussion about certain transition topics after implementation. Further analysis is needed to understand patient-, provider-, and practice-level factors that influence utilization and patient reports of transition discussions.

Katherine Wu is completing her Master of Public Health degree this spring. She graduated with a BA in Biology from the University of Pennsylvania in 2017. Katherine started working at Children's Hospital of Philadelphia in 2015 as a community health worker for the Transition to Adult Care Service, and she is currently a clinical research coordinator in COP's PolicyLab with an interest in adolescent and young adult health and transition to adulthood.

Previously Presented
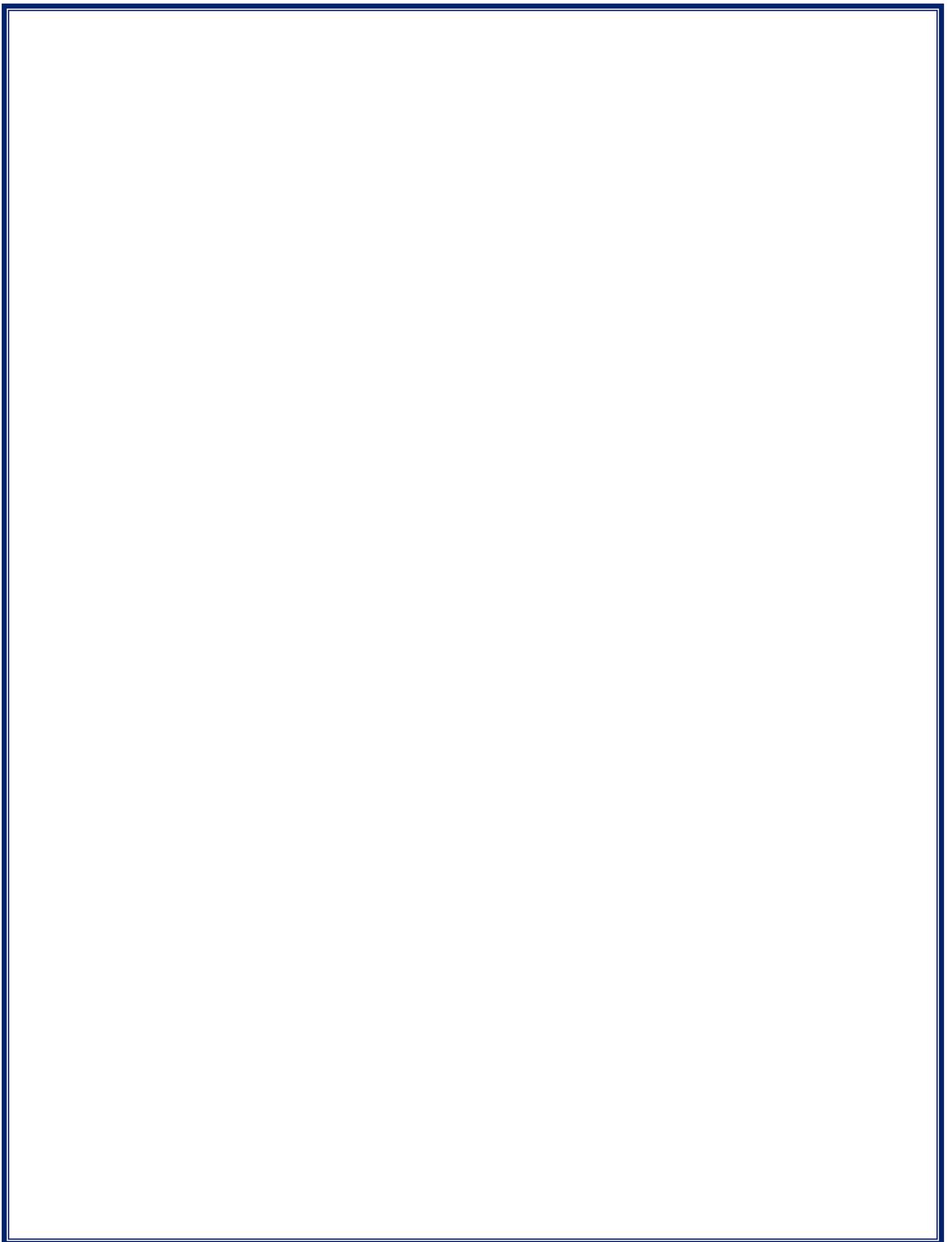
Safa Browne

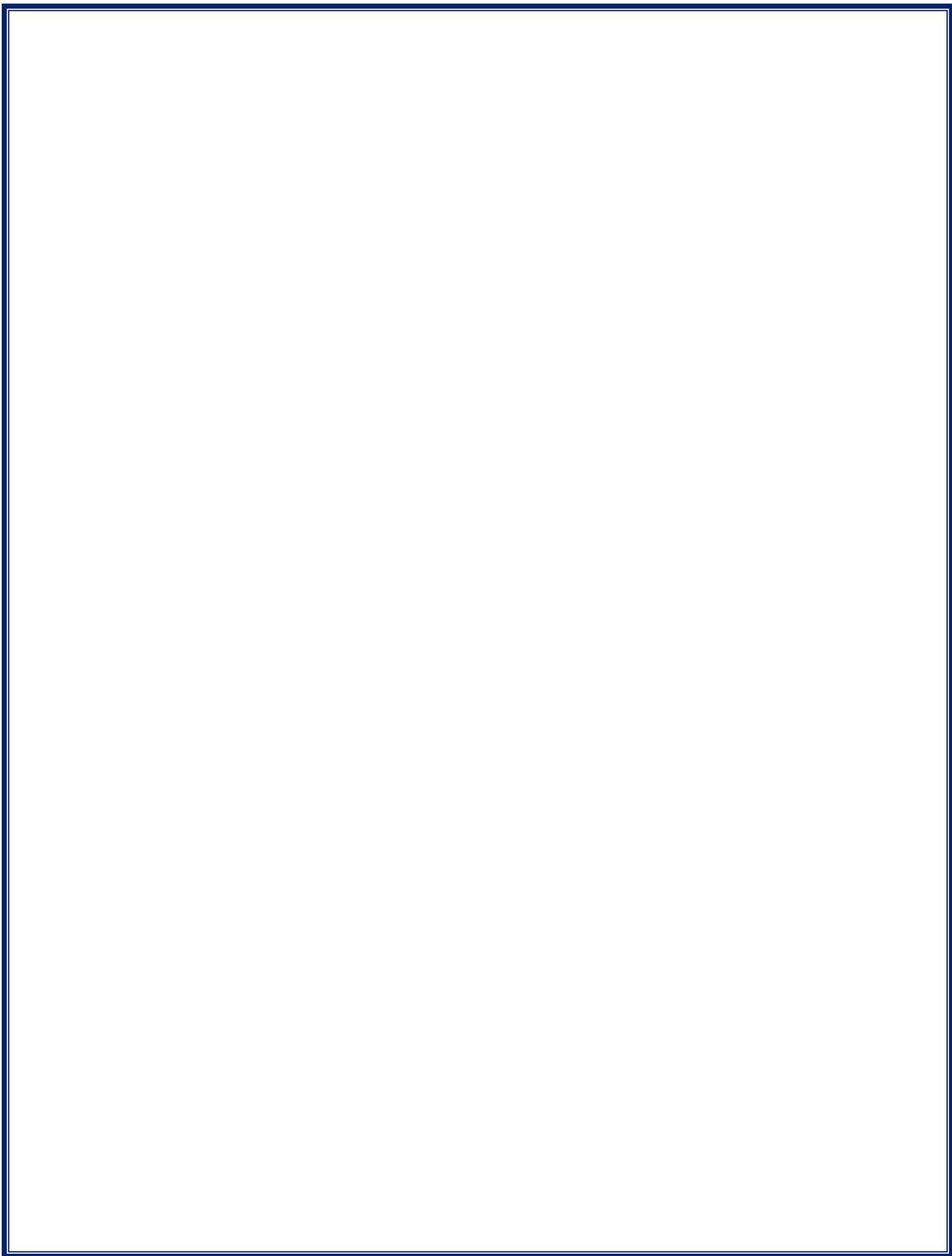Mentor: Robin Stevens, PhD, MPH

#HIVPrevention:
A systematic review of social media as a health information source for young adults.

Abstract:

In the United States, an estimated 1.1 million people, 13 years and older, were living with HIV/AIDS in 2016. Young adults are the population most affected by this illness with 56% of the HIV diagnosis in 2017 being persons within the ages 13-34 years old. The use of online resources in communicating information about diseases such as HIV/AIDS has become more popular in recent years among this age group. In this systematic review, I examined the use of social media as a source of sexual health information for young adults. I utilized the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines to prepare the review. A total of 15 articles were examined from three databases (Pubmed, CINHAL, and Scopus). The articles examined were observational studies published within the last 10 years. Of the 622 articles reviewed, the 15 articles that met the inclusion criteria were focused on the different uses and themes of young adults using social media to communicate about HIV/AIDS prevention and treatment. Results will highlight the importance of social media use in providing an open space for a larger population to discuss sexual health and sensitive illnesses such as HIV/AIDS.

Safa Browne graduated from Syracuse University in 2012 where she studied Journalism and Business Management. She will graduate from the University of Pennsylvania MPH program in May 2019. Safa is currently a Research Coordinator at the Leonard Davis Institute of Health Economics at the University of Pennsylvania. After graduation, Safa plans to pursue a career in public health research and training.

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