

Boston University School of Public Health

Student Practicum Abstracts

Spring 2015

BUSPH STUDENT PRACTICA SPRING 2015

The BUSPH Office of Public Health Practice is pleased to present the Spring 2015 Student Practicum Abstract Book featuring students' practicum experiences. Our office would like to congratulate this semester's practicum students for their accomplishments and express our appreciation to the agencies and organizations for their commitment to the BUSPH practicum program and for providing our students with valuable, hands-on public health experience.

Where in the world were BUSPH spring practicum students?

24 Cities and Towns

5 States across the U.S.

9 Countries



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Name: Biller, Alyssa
Practicum Site: Boston Children's Hospital Pediatric Research
Location: Boston, MA United States
Practicum Title: The Progeria Research Foundation

Introduction: The Progeria Research Foundation is currently conducting Phase II clinical trials on children with Hutchinson-Gilford progeria syndrome. Progeria is a rare segmental aging disorder that affects bone and body composition. It is caused by a mutation in the gene called LMNA and this cellular instability is what leads to the premature aging process. Progeria is an orphan disease with a prevalence of 1 in eighteen million children worldwide (Gordon et al., 2014). In the first clinical trial, 25 patients with progeria received a drug over a 2 year period. In the second trial, 40 patients with progeria received a combination of 3 drugs over a 3 year period. These clinical trials are both single arm trials with efficacy endpoints that include weight gain and cardiovascular endpoints, with a goal of trying to slow the advanced aging process.

Methods: I worked with the statistics team on analyzing data from these clinical trials, with a specific focus on analyses of safety outcomes. I assessed if the drugs cause adversely increased serum calcium levels and increased bone calcification in patients. I created calcium and calcification raw and analysis datasets in SAS from Excel spreadsheets and then used SAS to run safety analyses through use of various models I learned in classes and from the statistics team.

Results: I created tables and graphs that were presented at study team meetings and contributed to a manuscript containing the results of the various safety analyses. There is evidence that the drugs may cause increased calcification.

Name: Cheng, Han-Ling
Practicum Site: Harvard School of Public Health
Location: Boston, MA United States
Title: Research Assistant

Introduction: MC4R genotype has been related to adiposity, glucose metabolism and risk of GDM. We aimed to test whether MC4R genotype modify postpartum weight retention on long-term changes of glucose metabolism biomarkers among gestational diabetes mellitus (GDM) women.

Methods: We analyzed changes in glucose metabolism (glycated hemoglobin, 2 hours glucose and fasting glucose) from pregnancy to 1-5 years after delivery in 1208 Chinese women with GDM. Annual postpartum retention weight was calculated by dividing the weight change from delivery to postpartum by number of follow-up years.

Results/ Outcomes: After adjustment for age, pre pregnancy BMI, follow-up years and previous levels of biomarkers, the GWAS-identified MC4R was significantly associated with changes of glycated hemoglobin ($p=0.023$) and 2 hours glucose levels ($p=0.018$). In addition, we found significant interaction between the MC4R genotype and retention weight on change of fasting glucose levels ($p=0.036$). The variant was associated with increase of glucose level in women with low postpartum retention weight, but was related to reduction of glucose level in those with high retention weight. Our data indicate that MC4R genotype is related to change in glucose metabolism, and interact with postpartum weight retention in women with history of GDM

Name: Hartwell, Nathan
Practicum Site: Tufts University School of Medicine
Location: Boston, MA United States
Title: Pharmacotherapy and Pharmacy Benefit Consultant

Introduction: The treatment and management of cancer is entering a new age. Over the next decade we will see a massive influx of new molecular cancer therapies brought to market. These new therapies are already changing the way patients and providers approach the treatment of cancer. The challenge facing health care professionals is balancing and integrating the use of well-established approaches and highly experimental unproven, promissory therapies. Patients and health care professionals alike are interested in obtaining safe and cost-sensitive middle ground.

Methods: The practicum experience entailed working with the clinical and administrative staff of the Newman Lakka Institute for Personalized Cancer Care at the Floating Hospital for Children and Tufts Medical Center Boston. The focus of the practicum was three-fold: develop education for the staff on the various types of molecular targeted therapies available, offer recommendations on navigating the prior authorization process as well as patient assistance programs, and finally, develop a manuscript for publication describing emerging strategies utilizing molecular targeted therapies and the need for a multidisciplinary approach to personalized cancer care.

Results/Outcomes: A multidisciplinary team is critical to the success of molecular targeted therapies because it allows the health care team to; isolate patient relevant genomic and proteomic information (pathologist and geneticist), isolate patient-relevant toxicities (pharmacist), isolate Quality of Life (QoL) determinants (nurses, social workers) and perform cost and safety analysis (hospital administrators, ethicists and pharmacists). The experience at the Newman Lakka Cancer Institute demonstrated the importance of a team-based approach in order to obtain successful patient outcomes.

BIOSTATISTICS

Name: Hatton, Marita
Practicum Site: Partners In Health
Location: Boston, MA United States
Title: RESIST-TB Intern: Data Analysis of Survey to set MDR-TB Research Agenda

Introduction: As an intern at RESIST-TB, an international organization whose mission is to promote and conduct clinical research to cure and prevent drug-resistant tuberculosis, I supported a project to update the global MDR-TB Research priorities. The purpose of the project was to update earlier published research agendas based on analysis of a recent survey of the global TB public health community, in order to direct research toward the overall MDR-TB cure and prevention goal.

Methods: I developed several approaches toward analyzing the survey data, and I worked with the Principal Investigator and international collaborators to refine the analyses specific to the goals of the project. I used SAS to develop macros to re-code and analyze data and created multiple charts of the results. Ultimately I incorporated these analytical methods and results into sections of a draft publication on the topic.

Results/Outcomes: The results of the analysis will be shared with a larger concerned MDR-TB public health community to inform future actions toward the overall mission, and the PI and collaborators will continue to pursue publication of the updated MDR-TB Research Agenda.

Name: Hsu, Chuan
Practicum Site: Massachusetts General Hospital
Location: Boston, MA United States
Title: Data Analysis Practicum

Introduction: Soft-tissue sarcomas are characterized by the growth of cancer cells in the soft tissue of the body. Although the 5-year survival rate of people with localized soft-tissue sarcomas can be as high as 90%, the risk of distant metastasis is still a major concern. Alternative treatment regimens for patients with higher cancer stage are developing to improve metastasis-free and overall survival as well as quality of life. The purpose of the practicum is to conduct statistical analysis to compare survival rates between two different treatment regimens.

Methods: I am working with one of the physicians in the Department of Radiation Oncology to learn more about this disease through conducting literature review and attending their board meeting. REDCap is the database that the department uses, so I became familiar with the interface and extracted and exported data for data set preparation. SAS 9.3 was also used for data preparation and conducting survival analysis and plotting Kaplan-Meier curves.

Results/ Outcomes: Collaborative Institutional Training Initiative courses related to human research were completed. A data set with two treatment regimens and survival data for statistical analysis was prepared. Crude survival analysis was conducted showing there was no difference in the overall survival between the two treatment regimens. Adjusted analysis will be performed once the data on covariates is obtained.

Name: Krekel, Kyrena
Practicum Site: DM-STAT, Inc.
Location: Malden, MA United States
Title: Statistical Programming Intern at DM-STAT, Inc.

Introduction: The Prenatal Alcohol in Sudden Infant Death Syndrome (SIDS) and Stillbirth (PASS) Network Safe Passage Study (SPS) will recruit 12,000 maternal-child dyads from the Northern Plains, US, and Cape Town, South Africa, to investigate the association between prenatal alcohol exposure, SIDS and stillbirth. Growth is integral to define outcomes (e.g., small for gestational age, fetal growth restriction) and to diagnose neurodevelopmental disorders in early childhood. The purpose of this investigation was to compare published methodologies for fetal and infant growth using the SPS.

Methods: Longitudinal datasets were created, merging research specific and medical record data. Descriptive statistics and plots were generated by data source, age and race, and were evaluated for distribution, missingness and plausibility. Published methodologies were applied for estimating expected birth weight, accounting for age at delivery and maternal and pregnancy characteristics, as well as postnatal population norms through one year of age, and evaluated descriptively.

Results: Overall the data were of high quality. At least two observations were available on 55% and 91% in utero and during infancy, respectively. Upon review of the plots, most data were within expected ranges (9% outliers). Almost all outliers occurred in the medical chart abstractions, indicating the quality of fetal ultrasound collected for research was better than that of the clinical records. The plotted SPS growth did not reflect what would be expected based on the published norms for infancy. This approach has yet to be applied to the fetal data, yet these findings emphasize the need to develop individualized, population-specific curves for the SPS.

Name: Liu, Han
Practicum Site: Brigham and Women's Hospital
Location: Boston, MA United States
Title: Part-time Data Analyst in Division of Sleep and Circadian Disorders

Introduction: Previously, a study showed that women complain more about their sleep than men but sleep longer and sounder than men. The goal of this project is to evaluate if this fact is true with our pooled dataset and to understand the underlying reason for this. In this practicum, the association between subjective and objective assessments of sleep, circadian phase (6 bins), and sleep-wake T-cycle (20h, 28h, 42.85h) with age (young, old) and sex (female, male) will be analyzed.

Methods: The methodology consisted of 1) reviewing literature to understand terminology in this area; 2) data cleaning; 3) plotting graphs to visualize the relationship between variables (MACRO coding is applied in the SAS programming); 4) applying linear mixed effects models to investigate the relationship between subjective and objective assessments of sleep, circadian phase, and T-cycle overall and by age and sex;

Results/Outcomes: Using data on 131 subjects from pooled studies, a multivariate preliminary analysis suggests that the estimated time to fall asleep is significantly ($p < .0001$) positively associated with latencies, but this association does not differ by sex. We also found that while circadian phase does not have a significant effect on this subjective assessment, the effect of circadian phase significantly differs by sex ($p = 0.0397$). When the start circadian phase is before the second bin or after the third bin, on average, males have a longer estimated time to fall asleep than females. However, the estimated time is similar for both males and females when the start circadian phase is between second and third bin.

Name: Palettas, Marilly
Practicum Site: Harvard Clinical Research Institute
Location: Boston, MA United States
Title: Biostatistics Intern

Introduction: Harvard Clinical Research Institute (HCRI) is a leading academic research organization that designs and runs clinical trials with industry sponsors. A strong focus of the work at HCRI is on the advancement of pharmaceutical, biological, and medical device products. The objective of this project was to work with a Biostatistician to gain a better understanding of practical applications of biostatistics within clinical trial research and to ultimately learn how to write a statistical analysis plan (SAP) for a clinical trial.

Methods: In order to become familiar with biostatistics contributions to clinical trial research I was immersed in the department's daily activities. I performed data Quality Control for ongoing trials in preparation for Clinical Trial Final Reports as well as performed statistical data analysis using SAS to assess medical device product safety. Through the review of clinical study documents such as study protocols, statistical design and analysis reports, and previous SAPs I also learned how to write a Statistical Analysis Plan.

Results/Outcomes: I became familiar with clinical trial study protocols, performed data Quality Control, and contributed to the production of a Statistical Analysis Plan for a prospective, single blind randomized controlled study to evaluate the safety and effectiveness of the Tryton Side Branch Stent™ in the treatment of de novo bifurcation lesions within the native coronary circulation. Through this practicum I gained a better understanding of clinical research as well as an increased knowledge in statistical computing and data analysis in a professional public health setting.

Name: Rajkarnikar, Sujana
Practicum Site: Health Dialog
Location: Boston, MA United States
Title: Analyst

Introduction: Health Dialog is a leading provider of population care management, healthcare analytics, and decision support. The company is a wholly-owned subsidiary of Rite Aid Corporation. It helps health plans, employers and physician groups improve healthcare quality while reducing overall costs. I worked with the Analytic Development team at Health Dialog. I was introduced to the Health Dialog Population Care Manager (PCM) and Rite Aid Health Alliance (RAHA) projects. I gained further experience in advanced SAS analysis in UNIX environment.

Methods: I had an opportunity to understand the work dynamics, company policies and different databases used for analytic activities. The PCM project places health coaches in practice sites to coordinate the care of patients. I assisted with the monthly analytic task of producing patient target lists for the PCM project. Rite Aid Health Alliance is about engaging patients in wellness and empowering them to take steps to improve their health and well-being. Rite Aid pharmacists together with Health Dialog Care Coaches, work directly with patients to help them meet specific health improvement goals. I reviewed the ongoing quality improvement analysis for this project and will be performing the financial outcome analysis. I attended several analytics team meetings which gave me an understanding of current projects and analytics needs.

Results/Outcomes: I became familiarized with Big Data as well as programming and implementing analytics solutions using SAS. Additionally, I gained more appreciation of the concepts and analytics behind population care management.

BIostatISTICS

Name: Song, Kuncheng

Practicum Site: The Clinical and Translational Research Program, Massachusetts General Hospital Heart Center

Location: Boston, MA United States

Title: Non-Employee Graduate Student/Biostatistician Intern

Introduction: Massachusetts General Hospital Cardiovascular Research Center has a rich academic program investigating the fundamental scientific mechanisms underlying cardiovascular diseases and related metabolic disorders. I worked in Dr. Robert Gerszten's lab, whose research projects investigate the role of metabolic biomarkers and novel proteins that are associated with cardiovascular diseases. His laboratory has spearheaded metabolite profiling studies in the Framingham Heart Study as well as other related analyses at Massachusetts General Hospital.

Methods: I worked on summary data created from Dr. Gerszten's lab, both from the Framingham Heart Study, as well as the primary data collected from the Massachusetts General Hospital cohorts. I have dealt with raw data, and was able to transform into understandable format for R or SAS software. Then, I have conducted graphical and/or statistical analyses on the data. Moreover, I have helped to generate appropriate graphics for manuscript submissions.

Results/Projected Outcomes: At the end of the practicum, I will generate a report that includes: 1) Graphical representation on the preliminary data generated from the Mass Spectrometer 2) The analytic report on the cardiovascular infraction data collected from the hospital in both table and graphic formats; 3) Heatmaps and Correlation Matrix plots for the manuscripts submission.

Name: Wang, Yu-Hsuan

Practicum Site: University of California, San Francisco

Location: San Francisco, CA United States

Title: Research Assistant

Introduction: Approximately 17% of Chinese American preschool children are obese, compared to 12.4% of all children residing in the US. Children of overweight mothers, especially from low-income families, are at a higher risk for obesity. Mobile technology such as tablet computers may be a new and effective way to deliver obesity prevention information. This study aims to implement a family-centered and technology-based intervention to prevent obesity in young Chinese American children from low-income families with overweight mothers. The purpose of this practicum is to work as a clinical data analyst in the study.

Methods: I performed analysis with the Principle Investigator: 1) Data entry and data cleaning using SPSS. 2) Generated tables containing descriptive statistics of demographics of study participants. 3) Performed Mixed Model analysis to assess the significance of change in each outcome variable over time (Baseline, 3 months, 6 months). 4) Summarized key findings on the effectiveness of the technology-based obesity prevention program.

Results/Outcomes: The three principal deliverables of this practicum included: 1) Using mean differences and standard deviations, I calculated the effect size over time of each outcome variable (BMI, Body Image...), with the result being used for future study sample size planning. 2) I wrote an analytical report of the study in support of manuscript submission in 2015. 3) Preliminary results: Efforts to prevent obesity should start in early childhood and health disparities should be reduced in low income children with ethnic minority backgrounds.

Name: Wang, Yun

Practicum Site: Thrive in 5

Location: Boston, MA United States

Title: Biostatistics Consultant Intern

Introduction: ASQ (Ages and Stages Questionnaires) is a series of questionnaires designed to monitor children's development process at different age stages. Children's performance in communication, gross motor, fine motor, problem solving and personal-social domains are evaluated respectively and is categorized as above average, monitoring, and below average. We have approximately 1,500 completed ASQ questionnaires here in Boston and we aim to analyze the data to look for possible factors that will influence children's developing process.

Methods: In order to have a better understanding of all the information contained in the dataset, the following procedures were completed: 1) conduct data verification and data cleaning for ASQ dataset; summarize descriptive statistics as well as create tables, histograms and charts for all the variables in the dataset; 2) generate hypotheses and conduct hypothesis testing to estimated the association between several factors (including child's age, gender and type of childcare received) and child's performance in each developing domain; 3) participate in weekly group meetings to update the progress of data analysis; 4) provide written report and presentation of data analysis results.

Results/Outcomes: 1) ASQ data were sorted and stored in Excel spreadsheet for future analysis; 2) we came to the conclusion that female children have better results in communication, fine motor and personal-social domains; age is positively associated with children's performance in gross motor and problem-solving domains; 2) I completed a written report describing the results of the analysis; 3) I did a presentation to share the results with partners of Thrive in 5 and to discuss the conclusion drawn from the analysis.

ENVIRONMENTAL HEALTH

Name: Garrity, Jetta

Practicum Site: Boston Housing Authority

Location: Boston, MA United States

Title: Assessing the Associations between Clutter and/or Poor Sanitation, and Pest Control Visits at BHA Developments

Introduction: The Boston Housing Authority (BHA) provides affordable housing to over 58,000 residents and is the largest public housing authority in New England. According to the US Centers for Disease Control and Prevention (CDC), integrated pest management (IPM) is necessary to reduce the number of pests threatening health and property, while reducing human exposures to harmful pesticides. Poor sanitation and/or clutter are potential barriers to successful implementation of IPM. This practicum built on a study involving BHA and BUSPH, BUSSW and UNO faculty and assessed the associations between clutter and/or poor sanitation, and number of pest control visits in living units at four BHA developments.

Methods: The hypothesis of this study was that living units with identified clutter and/or poor sanitation will have a greater number of pest control visits compared to those living units that were not identified as having clutter and/or poor sanitation. Descriptive statistics were generated for the predictors: clutter, poor sanitation, housing development, and housing development type (elderly or family), as well as the outcome variable of number of pest control visits. Linear regression models were created to identify significant covariates and to fit a final model.

Results/Outcomes: When stratified by housing development type, in elderly units, clutter is associated with greater pest control visits when controlling for housing development. Poor sanitation is not associated with the number of pest control visits in the same model. In family units, clutter and/or poor sanitation are associated with greater pest control visits when controlling for housing development.

EPIDEMIOLOGY

Name: Abdo, Mona
Practicum Site: MAVERIC
Location: Boston, MA United States
Title: Data Analysis Intern

Introduction: The Massachusetts Veterans Epidemiology Research and Information Center (MAVERIC) is an interdisciplinary research and development organization within the Veterans Affairs. The goal of MAVERIC is to apply research resources from epidemiology, core laboratory, clinical trials, and biomedical informatics to address important clinical problems with particular focus on chronic disease, mental health, and genetics. Under the auspices of MAVERIC, a two-phase longitudinal study was conducted in two towns in Rivas, Nicaragua. The main goals of the study were to establish a baseline estimate of the prevalence of chronic kidney disease, determine appropriate equipment needed for accurate measurement of creatinine levels in blood samples, and determine if there were changes in incidence over time. This practicum also involved the development of a GIS dataset for displaying participants' residential and testing locations, comparison of creatinine values between the two towns, and investigation of selection bias.

Methods: The coordinate dataset from GPS was converted into a usable GIS dataset. Mean, standard deviation, and coefficient of variation were determined for the creatinine levels from participants' blood samples. Selection bias in both years will be investigated (as done by Lash TL, Fox MP, Fink AK. Applying Quantitative Bias Analysis to Epidemiologic Data. Springer. 2009).

Results/Outcomes: Data analysis is ongoing. The GIS dataset will be used for future mapping analyses. The level of variation in creatinine levels will be compared between the two towns. Based on the results of the selection bias analysis, recommendations will be given to future field based operations.

Name: Alhelo, Hasan
Practicum Site: Boston Children's Hospital
Location: Boston, MA United States
Title: Neurology Quality Improvement Intern

Introduction: Cerebral palsy (CP) is a non-progressive neurodevelopmental condition that results in a group of movement disorders. This practicum was focused on developing a novel cerebral palsy outcomes measure for quality improvement based on care provided in the Cerebral Palsy Program. Due to the lack of literature about CP outcomes in response to varying approaches to treatment in children, the purpose of this outcome measure is to determine which treatment has resulted in the most favorable outcome for varying CP symptoms. The objective of this project is to quantify improvements in the Quality of Life of the CP patients and their caregivers, the decrease in the patient's pain level, and any improvement in the patient's spasticity, dystonia, hypotonia and/or athetosis.

Methods: A literature review highlighting various Quality of Life instruments was proposed to the attending neurologist in the CP Clinic prior to developing the Cerebral Palsy Outcomes Measure Review. This review stated the objective of the project, the means of data collection, potential measurement tools and additional treatments to collect on, which included medications and procedures. I was then granted access to the Clinical Program for Neuromuscular Excellence and Teamwork (CPNEXT) protocol database, developed exclusively for CP patients at Boston Children's Hospital, which consisted of CP patients' demographics and medical history as well as the results from the pain questionnaire and the CP Quality of Life questionnaire.

Results/Outcomes: The Cerebral Palsy Outcomes Measure has been developed and approved by the attending neurologist. Data collection and preliminary analysis of the variables of interest are ongoing.

Name: Askin, Gulce
Practicum Site: Boston Medical Center
Location: Boston, MA United States
Title: Research Assistant

Introduction: Hypoglycemia is a dangerous complication of hospital insulin therapy. To reduce insulin-related hypoglycemia and improve quality of care, a restriction on ordering of high doses of glargine (>0.5 u/kg/day) was implemented at BMC on May 1, 2013 for endocrine staff. I served as the primary data analyst for a retrospective cohort study to assess the effect of the intervention on hypoglycemia and glycemic control within 48 hours of admission on the post-intervention inpatient population compared to the pre-intervention population.

Methods: 1) Described the pre and post-intervention populations, 2) carried out extensive manipulations of electronic medical records to measure incidence of hypoglycemia, hyperglycemia and average blood glucose during each patient visit, 3) used a Poisson regression model accounting for repeated measures to compare the incidence in the post-intervention group to the pre-intervention group, 4) used a multivariate model to explore predictors of incidence of hypoglycemia and assess joint confounding by sex, age, race/ethnicity, BMI, A1C, co-morbidities and steroid use and 5) carried out a correlated analysis of outpatient medications and inpatient insulin glargine dose.

Results/Outcomes: We found that implementation of a restriction on high doses of glargine resulted in a lower incidence rate of hypoglycemia without worsening of glycemic control. We found no evidence of joint confounding among the other independent variables. The results of this study will further inform quality improvement strategies at the BMC inpatient diabetes program and add to its unique, multidisciplinary approach to achieving inpatient glycemic control.

Name: Berdjis, Noushin
Practicum Site: Dana Farber Cancer Institute
Location: Boston, MA United States
Title: Intern

Introduction: The Survey and Data Management Core (SDMC) is part of the Center for Population Sciences of the Dana-Farber Cancer Institute located in Boston, MA. The SDMC provides research expertise and technical support for both behavioral and clinical research projects for various institutions within the Harvard medical research community. Specifically, SDMC staff design research tools, develop and implement data collection, conduct quality control, data management, as well as statistical and qualitative analysis of data. The SDMC is a fee-for-service organization and does not receive funding from the Dana-Farber Cancer Institute.

Methods: Throughout my internship at the SDMC, I assisted with the Internal Quality Improvement Study. This study consisted of interviewing key informants with the purpose of evaluating the SDMC and their services. The goal was for the SDMC to be able to improve and expand existing services, as well as their clientele. My responsibilities included: assisting with the development of the interview tool, conducting and transcribing interviews, coding and theme identification, as well as report writing and presenting results to SDMC staff. Interviews lasted an average of 30 minutes and were conducted either in-person or over the telephone.

Results: This study was completed by the end of December 2014. Of the 28 informants initially contacted, 86% (n=24) were interviewed. Challenges identified were: cost of services, availability issues, and a wish for improved communication between SDMC staff and clients regarding project goals, individual roles and expectations. Recommendations include increasing awareness, marketing competitive pricing, and obtaining external funding.

Name: Boggs, Krislyn
Practicum Site: Brigham and Women's Hospital
Location: Boston, MA United States
Title: Research Assistant

Introduction: As part of the Nurses' Health Study II, I assisted in cleaning data for a case control study that explores the association between certain occupational exposures and asthma outcomes. As part of a validation study, sixteen hospitals were contacted to validate nurses' responses in regards to occupational exposures. The information from this study can help to improve working conditions for nurses.

Methods: I assisted in manually and electronically cleaning and coding data from the case control study. I managed the hospital validation study by researching information on the hospitals, contacting directors of infection control departments at each hospital, sending the surveys and following up with each hospital, and gathering and interpreting the hospitals' responses.

Results/Outcomes: Case Control Study: At this point, the control dataset has been closed. It is completely cleaned, scanned, and filed. We are still collecting information from the cases. Hospital Validation Study: Sixteen hospitals were contacted, and surveys have been sent out to most hospitals. Once we receive responses, we can compare them to nurses' responses for validation. We have discovered that using multiple means of communication (phone, email) and reaching out to multiple people in addition to directors (assistants, secretaries) is more effective in being able to reach the hospitals more quickly.

Name: Burkhalter, Bailey
Practicum Site: Massachusetts Department of Public Health
Location: Boston, MA United States
Title: Raynham Board of Health Summer Intern

Introduction: Raynham, Massachusetts is the center of a high risk region for Eastern Equine Encephalitis (EEE), a potentially fatal illness caused by a mosquito-borne virus. In most states, EEE cases are extremely rare. Unfortunately, the white cedar swamps of Southeastern Massachusetts are the ideal breeding grounds for mosquitoes known to spread the virus. As such, primary prevention is mosquito control via pesticides. Ground level application targeting larvae (larviciding) is done annually. Aerial application targeting adults (adulticiding); however, only occurs after gubernatorial approval after certain critical thresholds are met. Due to increased public concern about EEE and controversy regarding environmental and human health consequences of aerial adulticiding, the Health Agent requested a report for presentation to the Board of Health outlining the need, potential benefit and hazards, and feasibility of aerial adulticiding in Raynham.

Methods: Development of this report involved historical data analysis, a literature review examining effectiveness and safety of aerial adulticiding, meeting with the Bristol County Mosquito Control program superintendent to discuss the aerial application process and potential costs, and an extensive review of federal and state government documents pertaining to pesticide application.

Results/Outcomes: While aerial adulticiding is legally possible to undertake without gubernatorial approval and could be an effective means of mosquito control with minimal environmental or human health effects, due to the logistics of meeting the numerous governmental regulations and extremely high costs required, it is not a feasible task for Raynham to undertake.

EPIDEMIOLOGY

Name: Cao, Xiaohui

Practicum Site: Boston University School of Dental Medicine

Location: Boston, MA United States

Title: Data Intern

Introduction: The Veterans Administration Normative Aging Study (NAS) is an ongoing closed-panel prospective study that initially enrolled 2,280 healthy men from the greater Boston metropolitan area beginning in 1960s. Every three years, NAS physicians conducted thorough medical assessments including detailed medical history, physical examinations and a variety of laboratory tests. In 1968, a subset of 1,231 NAS participants volunteered to enroll in the Dental Longitudinal Study (DLS). DLS subjects return every three years for comprehensive oral examinations. As a data intern, I had the opportunity to participate in data management and analysis using combined data from the NAS and DLS. The ultimate goal of this practicum is to assess the association between periodontal health status and cardiovascular mortality.

Methods: After revising and updating the master dataset that combines data from the NAS and DLS, I extracted data from the master database and created analytic datasets for data analysis. I created exposure variables related to periodontal health status and developed a set of potential confounders by using the Directed Acyclic Graphs. Lastly, I generated descriptive statistics, created tables of baseline characteristics, and developed a statistical analysis plan.

Results/Outcomes: Because of limited measurement of periodontal disease severity in DLS cycle 1, we analyzed results separately using two cohorts. Cohort 1 (n=1231) includes subjects entering at DLS baseline whereas cohort 2 (n=669) contains subjects present at DLS cycle 7 when full-mouth measurement were available. Analysis is still ongoing to evaluate the association between periodontal health status and cardiovascular mortality.

Name: Fiske, Haley

Practicum Site: MA Department of Public Health- Medical Use of Marijuana Office

Location: Boston, MA United States

Title: PRECEPT Student

Introduction: The Medical Use of Marijuana (MMJ) Program continues to build the necessary infrastructure to implement the law allowing for medical use of marijuana in instances of debilitating medical condition. The program's responsibilities include the creation of the recently released online registration system for patients, caregivers, health care providers, and dispensary agents. In addition, the program is charged with overseeing, regulating, registering and inspecting the Registered Marijuana Dispensaries across the state. The purpose of this practicum was to use newly available information from an online registry to develop an operations dashboard and a program profile of the MMJ program. The practicum was sponsored by the BUSPH Practice Office and Department of Epidemiology's PRECEPT program which works with local and state health departments to place epidemiology students in especially in-depth and intensive practicums at state and local health departments.

Methods: During my practicum, I worked with the Manager of Special Projects, Deputy Director, and Executive Director to identify key performance indicators for the MMJ program. I developed an operations dashboard and worked to develop a program profile for use in quarterly reports.

Results/ Predicted Outcomes: The dashboard drew on multiple data sources to assess MMJ program operations. It will be used on a monthly basis to track trends over time. The program profile describes the patients, caregivers, physicians, and registered marijuana dispensaries active within the Medical Use of Marijuana Program. The program profile will be used for both internal and public reporting. Both the dashboard and program profile will be used to inform program direction and initiative in the future.

Name: Folt, Taylor

Practicum Site: Boston Medical Center

Location: Boston, MA United States

Title: Low Vitamin D as a Risk Factor for Postoperative Hypocalcemia in Total Thyroidectomy Patients

Introduction: This retrospective cohort study evaluates whether or not a low preoperative level of vitamin D is a risk factor for postoperative hypocalcemia in patients that have undergone a total thyroidectomy operation at Boston Medical Center (BMC). Postoperative hypocalcemia is a common complication from thyroidectomies that results in an extended hospital length of stay, causing the patient and the hospital significant time, stress, and financial costs. Clinical literature does not have a consensus on the association between preoperative vitamin D and postoperative hypocalcemia. Clear evidence is necessary to demonstrate whether or not there is an association to improve patient safety and save hospitals and physicians extensive fiscal and logistic costs.

Methods: Data was collected on total thyroidectomy patients operated on from 2012-2015 by surgeons in the Otolaryngology and General Surgery departments at BMC. The data was imported into SAS software and a multiple linear regression and ANOVA test were run to rectify (1) whether or not low preoperative vitamin D levels are a risk factor for postoperative hypocalcemia and (2) whether or not race, age, and/or postoperative parathyroid hormone (PTH) levels are confounders for this possible association.

Results/Outcomes: Our study did not yield an association between preoperative Vitamin D levels and risk of postoperative hypocalcemia. The final model of $\text{PostOpCa} = 8.16 + 0.01284\text{PostOp_PTH}$ demonstrated that the only variable associated with the outcome was postoperative PTH levels ($b=0.01282$, $t=8.64$, $p<0.0001$). Future studies should consider looking into postoperative PTH levels as a more robust predictor of postoperative hypocalcemia.

Name: Garcia, Carmen

Practicum Site: Boston University School of Dental Medicine

Location: Boston, MA United States

Title: D.D.S., M.D. Clinical Instructor Department of General Dentistry, Boston University Goldman School of Dental Medicine

Introduction: With the increase in life expectancy a larger number of elderly patients with chronic diseases are taking more medications that affect oral health. Dental students are expected to provide dental therapy to medically compromised patients. The objective of this retrospective study was to investigate the prevalence of systemic diseases and medication use in a cohort of dental school patients.

Methods: A retrospective analysis of the electronic medical records was conducted for all new patients aged 18 or older, seeking dental care at BUSDM from July 8, 2013, through March 8, 2014. We described the distribution of patient's demographics, tobacco and alcohol use and past medical and drug use history. Differences between gender and diseases were detected by Pearson's chi-squared test. All p values were considered to be statistically significant at $p < 0.05$.

Results/Outcomes: A total of 15,796 patients (54.3% females) were included in this analysis. The mean age was 43.9 year-old (SD: ± 16.1). Tobacco use was reported by 24% of patients, alcohol consumption by 32.4% and recreational drug use by 4.5% (higher prevalence in males, $p < 0.01$). Use of medications was reported by 64.9% of patients. The most prevalent diseases were: hypertension (22.9%), psychiatric (19.5%) and rheumatologic diseases (15.1%), respiratory diseases (13.4%), diabetes mellitus (10.8%), hematological disorders (7.2%), thyroid diseases (6.5%), liver diseases (6.4%), cancer (6.0%), HIV positive/AIDS individuals, (5.4%) and other cardiovascular diseases (4.17%). Hypertension, hematological disorders, psychiatric conditions, rheumatologic, respiratory and thyroid diseases, cancer, diabetes mellitus and medication use were more prevalent among females ($p < 0.01$). Liver diseases, AIDS and HIV infections were more prevalent among males ($p < 0.01$).

Name: Gustine, Joshua

Practicum Site: Boston University School of Medicine

Location: Boston, MA United States

Title: Identification of Cell Wall Hydrolases as Potential Drug Targets for *M. tuberculosis*

Introduction: For centuries, *Mycobacterium tuberculosis* (TB) has been the leading cause of death from infection worldwide. Recently, many drug-resistant strains have emerged in both developed and developing countries. There is therefore an urgent need to identify new drug targets before more advanced drug-resistant strains develop. Bacterial cell wall hydrolases are enzymes that cleave the cell walls of *M. tb* and other mycobacteria. The goal of this research project was to understand whether hydrolases could increase cell wall permeability, destroy the mycobacteria, or allow for more efficient operation of another antimicrobial drug(s).

Methods: Non-pathogenic *Mycobacterium smegmatis* was used in our investigation because it possesses a similar cell wall structure to *M. tb* and is easy to work with in a BL2 facility. Cell cultures were treated with 6 anti-TB drugs and 10 conventional antibiotics. In addition, seven cell wall hydrolases were added to the cell culture, respectively. The growth of *M. smegmatis* was monitored with OD 650nm, colony-forming units (CFU), and vital staining.

Results: Our data showed that cell wall hydrolases alone do not kill the bacteria. However, when utilizing a combination of hydrolases and many drugs, a significant enhancement in bacterial killing was observed. It was also found that some of the drugs tested had no effect on their own, but developed a synergistic effect when accompanied with a hydrolase in killing bacteria. Thus, this novel research suggests that hydrolases could be a potential drug target for combating the increasing incidence of drug-resistant tuberculosis.

Name: Hare, Theresa

Practicum Site: Boston Medical Center

Location: Boston, MA United States

Title: Quality Improvement Intern- OBGYN

Introduction: Boston Medical Center (BMC) is the largest safety-net hospital in New England. Through its Quality Improvement (QI) projects, BMC strives to achieve its mission to provide exceptional care, without exception, to all of its patients. The Obstetrics & Gynecology (OBGYN) department at BMC uses QI methods to increase the quality of patient care and decrease negative patient outcomes. The goal of this practicum was to contribute to a QI project aimed at reducing the occurrence of VTE (Venous thromboembolism) among post-partum women at BMC. The project aimed specifically to increase the percentage of post-caesarean patients delivering at BMC receiving risk-appropriate thromboprophylaxis by 25%.

Methods: I attended monthly VTE Prevention meetings, Department of OBGYN Morbidity and Mortality meetings, and completed Institute for Healthcare Improvement "Improvement Capability" courses to stay abreast of QI efforts and challenges within a hospital setting like BMC. I created a Process Map to target specific providers to use a new electronic risk-assessment tool that would identify women with increased risk of VTE. I also conducted secondary research on the incidence of VTE in high-risk populations and the cost-effectiveness of appropriate prophylaxis.

Results/Outcomes: The diagnostic tool will identify a woman's risk of VTE and help providers prescribe risk-appropriate prophylaxis, decreasing the occurrence of VTE at BMC. By using QI methodology, we will have created solid buy-in from key providers. Information from my secondary analysis will be used to develop educational materials for those using the tool and assist with the implementation of the risk-assessment methods.

EPIDEMIOLOGY

Name: Henehan, Elizabeth

Practicum Site: Strategies for Youth

Location: Cambridge, MA United States

Title: Program Evaluation Analyst

Introduction: In an effort to facilitate medical and legal collaboration to protect youth facing law enforcement, there is a need to develop tools to assist communication between attorneys and health care providers. Attorneys representing youth in potential police misconduct cases need assistance locating pediatricians who are willing to testify on a child's behalf when the health of that minor may be at risk.

Methods: Using the Children's Hospital Association website and U.S. Health News 2014-15 Best Children's Hospitals ranking, contact and location information was gathered and organized into an Excel software database. Law enforcement officers may use a variety of force when dealing with youth including chemical sprays, handcuffs, shackles, conductive electrical devices, and batons. Pediatric specialty centers that are relevant for dealing with potential health effects from excessive use of force include: pulmonology (n=57), cardiology (n=55), endocrinology (n=55), neurology (n=55), and psychiatry (n=46). The database can be sorted and searched according to specialty, state, city, zip code, and name of hospital (n=218).

Results/Outcomes: Information in this database may serve a variety of functions, the most immediate of which is to facilitate contact with medical professionals who can provide affidavits and/or serve as expert witnesses for youth who have been harmed during a police interaction. The National Campaign Against Indiscriminate Juvenile Shackling has taken an interest in this project and requested early access to the database. The campaign manager is currently using the database to locate medical professionals in each state to demonstrate the physical harms of juvenile shackling.

Name: Henry, Kaitlin

Practicum Site: Dana Farber Cancer Institute

Location: Boston, MA United States

Title: Research Assistant

Introduction: This practicum primarily supported the research efforts of an internal quality improvement study for the Survey and Data Management Core (SDMC), a shared resource group at the Dana Farber Cancer Institute (DFCI).

Methods: This practicum involved qualitative research methods to assess use and perception of the SDMC's work on the Longwood Medical Campus. A four-page interview guide was developed to collect data from area researchers who had not previously used the SDMC for their research. After completing qualitative interviewer training using video guides and in-person interview practice, semi-structured interviews were conducted in person or by phone with physicians and principal investigators in the area. The interviews were recorded and transcribed, then analyzed and coded using NVivo software.

Results/Outcomes: After 15-20 interviews have been conducted, the transcripts will be coded and analyzed for themes and trends among never-users of SDMC. A summary report of the findings will be developed and distributed among SDMC staff to evaluate its outreach and marketing strategies, perceptions of cost and value, and overall perceived research quality among never-users of SDMC.

Name: Hewlett, Meghan

Practicum Site: Boston Medical Center

Location: Boston, MA United States

Title: The Role of Endocrine Disruptors in the Development of Polycystic Ovary Syndrome

Introduction: Despite being one of the most common endocrinopathies among reproductive-aged women, polycystic ovary syndrome (PCOS) is difficult to diagnose and the etiology remains unknown. However, emerging evidence suggests potential associations between prenatal exposure to endocrine disruptors and PCOS. This practicum was devoted to conducting a literature review of the published research investigating the association between fetal exposure to endocrine disruptors and the development of PCOS.

Methods: My role is to comprehensively assess the available animal and human research studies on PCOS that investigate prenatal exposure to three major classes of endocrine disruptors: bisphenol A (BPA), phthalates, and androgenic endocrine disruptors. This review serves to bring further clarity to this area of research and proposes more effective methods for future investigations.

Results/Outcomes: Findings from rodent studies reported that prenatal exposure to BPA results in reproductive and endocrine alterations similar to those seen in PCOS including impaired oocyte maturation, infertility, and dysregulated hormonal secretion. In rats, prenatal phthalate exposure resulted in polycystic ovaries in both first and third generation offspring. Prenatal exposure to excessive androgenic activity in animal models recreated a PCOS-like phenotype that included anovulatory cycling, impaired fertility, and increased visceral fat distribution. Results from the few human studies examining this association were inconsistent due to the limitations of indirect methods of measuring fetal exposure. The findings discussed in this literature review indicate that endocrine disruptors appear to contribute to PCOS development through prenatal exposure and thus may pose one of the greatest hazards to fetal health and development.

Name: Hisoler, Faye

Practicum Site: Boston Medical Center, Department of Family Medicine

Location: Boston, MA United States

Title: Delivering breast cancer screening information to women with intellectual disabilities and their supporters

Introduction: Women with intellectual disabilities (ID) have the same incidence of breast cancer as the general population, but have much lower rates of regular screening mammography and higher breast cancer mortality. This study explores how women with ID prefer to receive breast cancer screening information and how we can effectively help women with ID and their supporters feel empowered to get regular mammography.

Methods: In a previous study, our team developed educational DVDs about mammography for women with ID, their relatives, and their direct support workers to increase mammography knowledge and readiness. Women are randomized to receive just the DVD, the DVD and a skype session with a clinician, or the DVD and a patient navigation visit. We compared satisfaction, knowledge, and changes in attitude across the groups.

Results/Projected Outcomes: Results are still in progress but by the end of the study, our results will show how to provide breast cancer screening and health education to women with ID. Our findings will have important implications for how to address inequity in breast cancer screening and could also be applied to other health topics to address other gaps in health care for people with ID.

Name: Lawal, Oluwadolapo Damí

Practicum Site: Infectious Disease Clinical Trials Unit, Boston Medical Center

Location: Boston, MA United States

Title: Secondary analysis of the SMF study

Introduction: Tuberculosis remains a major public health problem and diagnostic techniques are often fraught with suboptimal sensitivity. These challenges often lead to delay in detection, disease progression and increased transmission of tuberculosis. Many promising diagnostic techniques such as the Small Membrane Filtration (SMF) have been developed lately. The SMF study, a prospective cross-sectional study, was conducted in Uganda by the Tuberculosis Clinical Diagnostics Research Consortium (TB-CDRC); a multidisciplinary team of clinicians, scientists and support personnel whose objectives are to evaluate the efficacy of investigational diagnostic tests and to further improve the accuracy of TB diagnosis. The SMF study postulated that vacuum concentration of sputum followed by smear microscopy increases the detection of Mycobacterium tuberculosis (M.Tb).

Methods: Using a set of quality indicators, this practicum evaluated the performance and operational efficiency of mycobacteriology laboratories involved in the Small Membrane Filtration (SMF) study with respect to sputum microscopy, culture and GeneXpert results. In my role as an intern, I used SAS 9.3 to conduct quantitative analysis of the SMF data and to produce visual presentations of results to communicate results to the TB-CDRC team and participating laboratories.

Results/Outcomes: Upon completion of the analysis, 29.19%, 27.12%, 25.22% and 25.91% of specimens were mtb positive on any culture, MGIT, LJ and Xpert respectively. Results also showed conformity of quality indicators with expected contamination rates, turnaround time and colony counts.

Name: Maloney, Kevin

Practicum Site: Beth Israel Deaconess Medical Center

Location: Boston, MA United States

Title: Project Coordinator - Early Adopters: Characteristics and decisional processes of patients and providers who have utilized HIV pre-exposure prophylaxis (PrEP) during clinical care.

Introduction: Men who have sex with men (MSM) are disproportionately burdened by the HIV epidemic in the United States. To address this disparity, researchers have explored new strategies for prevention. In 2010, the use of daily oral antiretroviral therapy by HIV-uninfected persons, known as pre-exposure prophylaxis (PrEP), was shown to be safe and effective at preventing the acquisition of sexually transmitted HIV infection. Despite excitement for this intervention, very few men have utilized PrEP. This study seeks to describe a population of "early adopters" of PrEP, including clinical experiences and decisional processes.

Methods: We designed a three part study involving patients and providers at a Boston clinic specializing the care of LGBT patients: (1) a survey of the clinic's primary care providers; (2) a survey of all PrEP patients; and (3) a medical records review of all PrEP patients. As project coordinator, I was involved in all levels of study design and implementation, including development of patient and provider surveys and a database for the abstraction of clinical data from medical records.

Results/Outcomes: (1) We enrolled 40 providers and I have finished analyzing the data from this survey; (2) I have helped develop a 30-minute patient survey and protocol for recruitment. Enrollment will begin in April 2015; (3) finally, I used an iterative process, by reviewing 30 health records, to create a database with more than 120 coded variables. I am currently using this database to complete a full medical records review of the PrEP patient cohort.

EPIDEMIOLOGY

Name: Michiel, James

Practicum Site: Pathfinder International

Location: Watertown, MA United States

Title: mHealth Analyst at Pathfinder International

Introduction: Pathfinder International is a leader in utilizing mobile health (mHealth) tools to improve health outcomes around the world. This practicum consisted of two major components—1) assisting Pathfinder in data collection and analysis of mHealth programs in Mozambique and Kenya, and 2) working with the Vietnam Ministry of Health and researchers from Boston University to lead the development of an automated text message system to train community based physician assistants as part of an NIH-funded randomized trial.

Methods: I worked with Pathfinder's Research & Metrics staff to analyze data from mHealth programs in Mozambique and Kenya using SAS and STATA. A major component of this analysis was cleaning, formatting and validating data after it was exported from CommCare (a suite of mHealth tools by Dimagi). Development of the SMS system in Vietnam was performed by a team of developers from the Vietnam MOH with my oversight, including 2.5 weeks of in-person testing and demonstrations in Hanoi.

Results/Outcomes: My analysis was included in presentations to major stakeholders at the mHealth Summit in Washington. Additionally, my analysis appeared in the Guardian as part of an overview of the project. I also co-authored a memo outlining best-practices for mHealth data collection to help Pathfinder achieve maximum statistical power from future mHealth programs. Work on the SMS system is ongoing, but initial testing has been successful and the program is set to launch in late Spring 2015.

Name: Rafison, Brandon

Practicum Site: Boston University School of Public Health

Location: Boston, MA United States

Title: Research Assistant

Introduction: This study aims to estimate the cost-effectiveness of Latent Tuberculosis Infection (LTBI) screenings and therapies in combination risk groups including foreign-born with diabetes, foreign-born on hemodialysis, and foreign-born on immunosuppressive therapy. The purpose of this study is to improve the effectiveness of tuberculosis (TB) control programs in the United States by identifying cost-effective priorities for screening and treatment for LTBI.

Methods: A literature search was performed on PubMed to ascertain the efficacy and toxicity of different LTBI therapies; to ascertain the quality of life while taking preventive TB therapy and the quality of life after having active TB infection; and to estimate the prevalence of LTBI in the three combination risk groups. A Markov decision-analysis model using TreeAge Pro computer software will be constructed to evaluate the effectiveness and cost-effectiveness of using either tuberculin skin test (TST) or interferon-gamma release assays (IGRAs) to screen for LTBI in the three combination risk groups, and to determine effectiveness and cost-effectiveness of various LTBI chemotherapies used for the prevention of TB.

Results/Outcomes: Results from this study will provide information for cost-effective screening and treatment strategies in certain LTBI risk groups. Our findings can potentially set priorities and change national guidelines for screening and treatment of LTBI in these combination risk groups.

Name: Recupero, Audrey

Practicum Site: Tufts Center for the Study of Drug Development

Location: Boston, MA United States

Title: Evaluating the Development of Infectious Disease Medicines

Introduction: The Tufts Center for the Study of Drug Development is an independent, academic, non-profit research group dedicated to develop strategic information to help drug developers, regulators, and policy makers improve the quality and efficiency of pharmaceutical and biopharmaceutical development and utilization. The goal of the practicum was to determine the landscape of infectious disease drug availability over time in order to inform the research-based industry, regulatory agencies, and the public about the nature and pace of pharmaceutical development.

Methods: I researched institutions that existed between 2008 and 2014 that were developing infectious disease drugs. 2008 data was collected using TCDD's library reference materials and 2014 data was collected using internet search engines. From these resources I obtained year of establishment, size of the company, location, the target disease and the development phase of the drug. I then analyzed the data to assess medical countermeasures in infectious disease drug development using pie charts and bar graphs to display visual results. I compared data that was collected in 2014 and analyzed how the companies and rate of development had changed since 2008.

Results/Outcomes: I created a multivariate database of over 353 pharmaceutical companies that can be used to better understand the development of infectious disease drugs over time based the drug development phase, target disease and whether the company was located internationally or in the United States. Analyses from this data may offer guidance to policy makers on measures that may prevent and mitigate the health effects of infectious agents.

Name: Reidy, Megan

Practicum Site: Harvard Pilgrim Health Care Institute

Location: Boston, MA United States

Title: Cancer Survivorship and Surveillance Research Assistant

Introduction: The objectives of my practicum on cancer surveillance are to evaluate: 1) breast MRI use among women with breast cancer and 2) primary care physician's (PCP) comfort level regarding care for cancer survivors. Current guidelines do not recommend breast MRIs for breast cancer survivors, although studies have shown an increase in use. This study aims to better understand breast MRI use and surveillance, and the resulting outcomes. Additionally, the comfort level of PCPs in caring for cancer survivors will be evaluated, as research in this field shows their skills and comfort levels in managing issues related to survivors can be improved.

Methods: Medical claims data from women insured by Harvard Pilgrim Health Care who have a personal history of breast cancer will be analyzed to assess outcomes following breast MRIs (e.g. diagnostic imaging, biopsies). In addition, a survey will be designed and distributed to PCPs in Massachusetts to collect data regarding comfort levels in providing care to cancer survivors.

Results/Outcomes: The deliverables of the study are in progress. A literature review was conducted to collect publications related to breast MRI and a draft of the paper was started. Analysis of the data will be conducted and incorporated into the paper. The PCP survey has been created with input from the Massachusetts Department of Public Health. The Internal Review Board application is currently under review. Surveys are expected to be distributed in May and analysis will follow.

Name: Sakow, Chloe

Practicum Site: Boston University School of Medicine

Location: Boston, MA United States

Title: VDAART Clinical Research Assistant Coordinator

Introduction: A double-blind intervention trial (VDAART) randomized pregnant women to high vitamin D (4,400 IUD/day) or to low vitamin D (400 IU/day) to study the effects of additional supplementation of vitamin D in pregnant women and the incidence of allergies, asthma, and wheezing illnesses in their children. As with any longitudinal research study, VDAART has had problems with participant retention and lost to follow up. The Boston VDAART coordinator identified the need for better retention and communication with our participants, as the staff have difficulty contacting and completing in person visits.

Methods: As the Clinical Retention Coordinator, I was responsible for organizing the 2014 annual retention event with goals of retaining our participants, completing outstanding questionnaires, and making contact with participants who were difficult to reach or lost to follow up. I also assisted in data management, administering various clinical asthma tests, and completing study questionnaires. In addition, I collaborated with the site coordinator to engage our participants in future focus groups to strengthen understanding of clinical research, VDAART goals, and quality improvement.

Results/Outcomes: There were 55 participants that attended the extended, lower cost retention event in 2014 compared to 52 participants that attended the higher cost retention event in 2013, making the 2014 event extremely cost-effective. However, the VDAART 2014 retention event only reached 1 difficult to contact participant and did not reach any of our loss to follow up participants. Further retention efforts should focus on effective communication, community engagement, and focus groups.

Name: Song, Rebecca

Practicum Site: Boston University School of Public Health (BUSPH)

Location: Boston, MA United States

Title: A Prospective Cohort Study of Perceived Stress and Women's Fecundability

Introduction: The Boston University Pregnancy Online Study (PRESTO) is an internet-based prospective cohort study that aims to identify modifiable risk factors for subfertility among reproductive-aged women in the U.S. and Canada. Women attempting to conceive for ≤ 6 menstrual cycles at study entry ($N=1,456$) completed a baseline questionnaire that included the ten-item perceived stress scale (PSS-10) developed by Cohen et al. (1983). Outcome data were updated every 8 weeks for up to 12 months or until reported pregnancy.

Methods: We used proportional probabilities models to estimate fecundability ratios (FR) and 95% confidence intervals (CI). FRs were adjusted for age, cycle, education, race/ethnicity, income, marital status, BMI, smoking status, history of depression or anxiety, and sleep duration.

Results: Women were categorized into four PSS categories: <15 (low stress), 15-19, 20-24, and ≥ 25 (high stress). Higher PSS scores were associated with Black or Asian race/ethnicity, lower income, lower education, current smoking, depression, anxiety, and cycle irregularity. PSS scores of ≥ 25 were associated with a reduced average per-cycle probability of conception compared with PSS scores <15 (FR=0.77, CI: 0.56-1.05). The FR (PSS ≥ 25 vs. <15) was 0.57 (CI: 0.30-1.07) among women who had attempted 3-6 cycles at study entry and was 0.87 (CI: 0.61-1.25) among women who attempted pregnancy for <3 cycles at study entry. Our data show a stronger effect of stress in women attempting to conceive for 3-6 cycles at baseline, suggesting reverse causality. A higher level of perceived stress was not a strong risk factor for delayed conception in our cohort.

EPIDEMIOLOGY

Name: Terhune, Kaylin
Practicum Site: Abington, MA Board of Health
Location: Abington, MA United States
Title: Assessment of The Merged Food Code violations in the Town of Abington

Introduction: The Health Department in Abington is responsible for enforcing the 1999 Federal Food Code through inspection of food establishments, homes, tattoo parlors, and pools. Food establishments are inspected bi-yearly to ensure they are in compliance with the 1999 Federal Food Code and Chapter 10 of the State Sanitary Code 105 CMR.000. These Codes outline safe practices for food establishments to reduce the risk of spreading food borne illnesses; the inspection form uses thirty major categories of violations, with the first twenty two being considered critical, or more dangerous for human health. The Town of Abington has over 100 food establishments.

Methods: I work directly with the Health Agent to 1) perform inspections in each food establish and record data, 2) create and maintain computer-based records of violations, 3) perform analyses to identify problem restaurants and common violations. Previous to this project, there was no database available that would allow one to perform the designated analyses.

Results/Projected Outcomes: The database created will save time and effort for the Health Agent in the future to examine trends and will provide key data on food establishment violations, if an outbreak occurs. The database also allows for generation of summary reports that enumerate problems in the food establishment community of Abington. By following worrisome trends, the Health Department can produce targeted informational programs to best serve their town. In the primary analysis, from June 2013 to December 2014, Abington food establishment violations can be characterized as 123 critical, 995 non-critical, and 331 other.

Name: Wallace, Katrina
Practicum Site: Metamovements
Location: Boston, MA United States
Title: Inner City Community Dance Program; Public Health Impacts

Introduction: Previous studies demonstrate inner-city Hispanic-American children are at greatest risk for obesity, with numbers two times the national average for American children. Also, there are less safe available options for inner-city youth to engage in physical activity; quality and presence of safe adults are important factors in promoting such activity amongst youths. MM and BYCF provide a free, outdoor public event in a low-income, predominantly Latino neighborhood, offering; Latin dance lessons, DJ, musicians, performances, snacks, and more, led by adults, youth leadership members, and volunteers. The purpose of this study was to examine whether this event had a positive impact on the local community, by promoting diversity, exercise, cultural arts, a safe and welcoming environment for all, and health.

Methods: Questionnaires were administered, soliciting participation at the refreshment table, offering a free snack or water in exchange for completing the questionnaires.

Results: The data supports the hypothesis that this event provides a positive impact on the community. 97% felt that dance and health were positively correlated. 73% stated the event added to their current exercise regimen. Over 50% said they that dancing, or it being an outdoor activity, were their favorite attributes about the event. Over 30% attended to try something new, or because it was a free local event. Over 50% were newly exposed by either watching/ listening, trying it for the first time, or coming as a beginner. Finally, 77% felt the event was highly diverse in categories like race/ethnicity, age, and dance styles offered.

Name: Zaghul, Sara
Practicum Site: Whitehead Institute for Biomedical Research
Location: Cambridge, MA United States
Title: Research Assistant

Introduction: Infertility affects 1 in 6 couples worldwide. In more than half the cases, the cause is attributable to the male partner. Sexual reproduction in males is a complex process involving numerous regulatory mechanisms and thousands of genes. Disruption in any of these genes may lead to the production of few or no sperm, termed Azoospermia. Genetic association studies provide a powerful tool to mine the genome for genetic variants that influence an individual's risk of disease. This study aimed to investigate the association between genetic variants and the risk of Azoospermia.

Methods: Three hundred men with Azoospermia (cases) and 300 controls were selected from three fertility clinics in the US and the Netherlands. Participants were genotyped for over 26,000 Single Nucleotide Polymorphism (SNP) loci across the genome. I used the R and SAS software packages to prepare the dataset and compute an Odds Ratio for each SNP. I generated Manhattan and QQ plots to identify erroneous associations, account for multiple testing, and identify SNPs that are significantly associated with the Azoospermia phenotype. I regularly met with the project supervisor to interpret results and plan proceeding steps in the project.

Results/Outcomes: Preliminary analysis resulted in a QQ plot showing deflated p-values. We are unable to infer an association between identified variants and Azoospermia until the data is adjusted for potential confounders. However, a number of detected variants seem to have met genome-wide statistical significance. These variants fall within genes that may have molecular functions that are implicated in spermatogenic failure.

Name: Al Suwaidi, Ahmed

Practicum Site: Health Map at Children's Hospital

Location: Boston, MA United States

Title: Curating and Analyzing Social Media and Publicly Available Data to Conduct Original Epidemiological Research of the Novel MERS-Corona Virus

Introduction: Middle East Respiratory Syndrome Corona virus (MERS-Cov) is a novel virus that was first identified in Saudi Arabia in mid-2012. Since then there have been over 1,000 cases (as of Feb 2015) in 22 countries, 974 of which have been in Saudi Arabia.

HealthMap is an online platform that collects, filters and maps reports of infectious diseases globally through scanning the web, in particular social media, for infectious disease reports in multiple languages (currently English, Arabic, Vietnamese, Chinese and French).

Methods: Part of the internship focused on curation of relevant from irrelevant information and data within the Arabic language feed. The second part of the internship involved working with a team to conduct original research on the epidemiological characteristics of MERS. The first stage involved gathering, cleaning and verifying reports and outcome data for individual case reports of MERS infection in Saudi Arabia.

In The second stage we are currently using the data to conduct reproductive number, mortality risk factor and univariate survival analysis

Results/Outcomes: Thus far the data has yielded several exploratory results, particularly concerning demographics; currently MERS infection in Saudi Arabia yields a 43.8% case fatality, 28.3% of cases have been nosocomial infections and 65.1% of cases have been male. We have also observed a slight rise in the number of sporadic cases after an outbreak in the spring of 2014, as compared to before the outbreak. Final results of the analysis will be discussed in a later publication.

Name: Browning, Rachel

Practicum Site: Fenway Institute - Fenway Community Health

Location: Boston, MA United States

Title: Tackling Recruitment: Efforts to Enroll MSM into Couples Based Study

Introduction: The Fenway Health Institute (TFI) is one of the leading research bodies in Boston focused on LGBTQ health and HIV. In 2014 TFI received a R01 grant from the National Institute of Child Health and Human Development to conduct a randomized control trial intervention study amongst male-male couples. The study, Stronger Together, will demonstrate whether a packaged intervention of Couples HIV Testing and Counseling (CHTC) and a two session dyadic intervention (entitled Partner STEPS) will promote the aims of the HIV Care Continuum Initiative.

Methods: My role was to establish a recruitment initiative. I completed this task by: engaging in venue-based recruitment efforts, presenting study information to community members, attending events aimed at community engagement, managing online recruitment efforts by advertising on social media and Craigslist, identifying events where the potential for engaging with male-couples was high, mobilizing the study team to ensure attendance at all events, and tracking and reporting weekly screening and enrollment data to the research team.

Results/Outcomes: Recruitment efforts were constantly modified in order to maximize efforts to increase enrollment. Online recruitment was transformed by utilizing popular dating applications in addition to existing online recruitment activities (i.e. Craigslist, Facebook, Meet Ups). We also developed initiatives to engage with communities of color. We established partnerships with key stakeholders in order to gain insight about effective methods of engaging with male couples of color.

Name: Cain, Devon

Practicum Site: PharmAccess Foundation

Location: Windhoek, Namibia

Title: mHealth and Evaluation for PharmAccess Foundation Namibia and Program Design for Orange Babies Namibia

Introduction: As a part of PAFN, a not-for-profit organization dedicated to strengthening Namibia's health system, I assisted in the management of a Wellness Screening clinic, the evaluation of PAFN's health education program and the development of efficient mHealth and eHealth tools. As a part of OBN, a welfare organization that supports HIV-positive mothers, I assisted with a situation analysis and an operational plan for 2015, and I was directly responsible for the M&E strategy.

Methods: For PAFN: 1) I organized materials, supervised and analyzed data for a Wellness Screening clinic and developed a report; 2) I wrote the evaluation protocol, developed questionnaires and performed data analysis for PAFN's health education program; and 3) I wrote a mHealth concept note and researched potential mHealth and eHealth opportunities for PAFN, streamlined their current SMS system, assisted with the pilot of a mobile payment system and launched an eHealth education tool. For OBN: 1) I surveyed program sites and reviewed past reports to complete a situation analysis; 2) I led meetings with board members and staff and I conducted a M&E training for staff; and 3) I assisted in creating an operational plan for 2015 and I created the M&E strategy and related tools.

Results/Outcomes: The assessment of PAFN's education program led to a more comprehensive evaluation, and PAFN will be integrating mHealth and eHealth tools into their programs going forward. The situation analysis and operational plan with comprehensive M&E strategy will be used by OBN throughout the rest of the year.

GLOBAL HEALTH

Name: Kogut, Dorie

Practicum Site: Boston Public Health Commission

Location: Boston, MA United States

Title: Harm Reduction/Needle Exchange Program Intern

Introduction: Addicts Health Opportunity Prevention Education (AHOPE) is a state-supported harm reduction program for active IV drug users in the Boston area that sees around 40-70 clients a day. AHOPE's main service is providing clean, free needles through an anonymous exchange at the drop-in clinic. Additionally, AHOPE provides overdose prevention services, Narcan training, referral services to treatment programs, STI testing services, risk reduction counseling, and supplies to prevent the spread of HIV and Hepatitis C.

Activities: AHOPE acknowledged a need for basic educational materials for clients on various topics that directly affect active injecting drug users including abscess care, educational information and treatment options available, since current information was dated, inaccurate or difficult to understand. Therefore, I was tasked to assimilate basic health information used by various public health agencies and create easy to read and comprehensible pamphlets for AHOPE to distribute to clients in the hopes that it would increase STI awareness and testing numbers at the clinic. Ultimately, I created pamphlets on abscess/wound care, syphilis, gonorrhea/chlamydia and began assimilating information on basic safer injection practices.

Conclusions: Currently, our brochure holders must be continuously refilled and there are more open conversations centered around STI's within our target population, as well as a slight increase in STI testing at the clinic. Basic, easy to comprehend materials are essential when working with the public. Oftentimes, this is the only access our clients had to this information in a judgment-free area, so accurate information is crucial.

Name: Kwankam, Delphine

Practicum Site: Clinton Health Access Initiative

Location: Cameroon

Title: Zonan Coordinator, eMTCT

Introduction: The Clinton Health Access Initiative (CHAI) is supporting the Government of Cameroon in its policy of eliminating mother to child transmission of HIV (eMTCT). CHAI is as a major implementing partner to the National AIDS Control Committee (NACC) in expanding eMTCT program in the Center region. The goal of the practicum is to support the Regional Delegation of Public Health in the extension of PMTCT services to all health facilities in zone six which comprises of; Djoungolo, Sa'a, Ntui and Yoko health districts.

Methods: Baseline assessment, training in PMTCT option B+, site level visits and support in data rendering.

Results/Outcomes: 96 baseline assessments completed in three districts; Djoungolo, Sa'a and Ntui. Data from the surveys were entered into Epi-data for analysis. This baseline helped identify existing PMTCT sites and gaps in reproductive health services in general in the zone. Based on existing and potential PMTCT sites identified from the baseline, providers were identified for PMTCT option B+ training. Provide technical and logistic support to trainers and participants during trainings. Administer pre and post-test to assess the aptitude of trainees. Five PMTCT option B+ trainings organized in three health districts and a total of 143 providers trained from 101 health facilities. Conducted 57 site level visits to supervise trained providers in the use of new monitoring and evaluation tools and ensure knowledge sharing among providers between services. I attended five district coordination meetings to collect PMTCT reports from sites, and districts.

Name: Lama, Jasmine

Practicum Site: Harvard School of Public Health

Location: Boston, MA United States

Title: What could reduce bonded/forced labor in India. An evaluation study

Introduction: The Francois-Xavier Bagnoud Center for Health and Human Rights at Harvard University is an interdisciplinary center that works to promote the rights and well-being of vulnerable populations trapped in poverty, oppression and war. As part of the Human Trafficking Program, I helped design the impact evaluation study that will assess the eradication/reduction of bonded/forced labor in villages in Uttar Pradesh (UP), India. Although India abolished bonded/forced labor in 1976, the tradition continues to thrive. ILO estimates there are 11.7 million bonded laborers in India. In 2011, a local NGO called Manav Sansadhan Evam Mahila Vikas Sansthan took initiatives in certain hamlets of Uttar Pradesh to reduce vulnerabilities to bonded/forced labor by empowering the people through education and community awareness. This study will assess the impact of this intervention.

Methods: Over Fall 2014, I conducted a literature review to understand the current situation, worked on the IRB application, drafted the study design and designed the study's questionnaire. My work was mainly focused on the IRB procedure and designing the questionnaire. The questionnaire was based on the pre-intervention survey but new questions were added to measure the success of the program.

Results/Outcomes: The study was approved by the IRB after two official revisions. The questionnaire underwent 5 revisions and was piloted in March 2015. Data is currently being collected in three cohorts (835 households) and is scheduled to be completed by the end of April.

Name: Lopez Cangas, Victoria
Practicum Site: Massachusetts Alliance on Teen Pregnancy
Location: Boston, MA United States
Title: Public Policy Intern

Introduction: Massachusetts Alliance on Teen Pregnancy focuses on advocating and supporting policies that support expectant or parenting teens. Their core belief is that being pregnant or being a teen parent should not deter young people from achieving lifelong goals and experiencing success. To realize this vision, the Alliance helps young people find the necessary resources to achieve their goals. The Alliance is engaged in multiple community activities. In the summer of 2014, the Alliance supported a new policy for expectant and parenting teens in Boston Public Schools. The Alliance spearheaded the community outreach essential to evaluate whether or not the policy was being adopted in the Boston Public Schools. Members of the Alliance attended wellness council meetings at BPS as well as coalition and group meetings that were essential in assessing the issues and developing new strategies to make this policy sustainable. The Alliance also organized the annual Lobby Day, where hundreds of teen parents and their supported rally at the State House to get more support from their legislators and representatives. Teen parents share their experience as teen parents to their legislators and representatives, and various organizations provide data demonstrating their needs.

Methods: I assist in the preparations for Lobby Day by networking and establishing sponsorships, and assisting with event logistics.

Outcomes: The ultimate foal of this work is to convince Massachusetts' legislators to include health education as a line item in the annual budget to help educate and support teens on sexual justice and reproductive health.

Name: Mellor, Janelle
Practicum Site: Brookline Health Department
Location: Brookline, MA United States
Title: Healthy Brookline Volume XVI-Communicable Disease Reporting and Surveillance

Introduction: Healthy Brookline is a series of community health reports produced annually by the Brookline Department of Public Health. Each volume presents data on a particular health issue. Topics have ranged from youth risk behaviors, elder risk factors, and environmental health indicators. The purpose of these reports is to educate and disseminate health information to the Brookline community. This year, I will be publishing a report on disease reporting and surveillance, a topic not yet explored in prior Healthy Brookline reports.

Methods: I am currently working as the lead author of Healthy Brookline Volume XVI. This involves using MAVEN (Massachusetts Virtual Epidemiologic Network) and data provided by the Massachusetts Department of Public Health to identify and analyze confirmed cases of disease during the years of interest (2012-2014). Other tasks include conducting research on past Healthy Brookline reports, specific communicable diseases, and the role of state and local boards of health on disease surveillance.

Results/Projected Outcomes: An integral part of disease surveillance is the dissemination of information to the community. This report will: 1) Define and analyze disease reporting and surveillance 2) Discuss the significance of electronic resources such as MAVEN 3) Report communicable disease trends in Brookline, MA from 2012-2014 compared to Massachusetts and 4) Provide profiles of reported diseases in Brookline. At the conclusion of this practicum, this report will be published as part of the Healthy Brookline series and disseminated to the community.

Name: Melnick, Emily
Practicum Site: Ibis Reproductive Health
Location: Cambridge, MA
Title: Research and Evaluation Intern

Introduction: Ibis Reproductive health conducts quantitative and qualitative research to advance women's reproductive health. As an intern, I supported three projects: 1) a US-based research study on policies surrounding telemedicine and medication abortion; 2) a US-based evaluation of a sexual education website designed for teen girls with epilepsy; 3) a South Africa-based study on access to HIV care. I also provided administrative support.

Methods: In support of the telemedicine research project, I recruited ~6 leaders in the field of telemedicine to participate in the study. I conducted in-depth interviews over the phone. I also transcribed and performed quality assurance checks on the interview data and participated in data coding and code-summary creation using AtlasTi. In my work on the website evaluation project, I worked with the study PI to develop two evaluation surveys based on the DISCERN framework—one for Ibis staff and one for a group of teen evaluators. I conducted a thorough evaluation of the website and summarized data from teen evaluations. I worked to clean data for the South Africa-based HIV study.

Projected Outcomes: Findings from the telemedicine study and the HIV study will be written in academic papers and submitted for publication. The website evaluation data will be used to improve the website and strengthen it as a resource for teens with epilepsy.

GLOBAL HEALTH

Name: Mountcastle, Jacquelyn

Practicum Site: Johns Hopkins Bloomberg School of Public Health and PRISMA ONG

Location: Lima, Peru

Title: Use of affordable mobile technology for community-based interventions to prevent and fight childhood malnutrition and impaired cognitive development in Peru

Introduction: Contrary to Peru's success in almost halving the national prevalence of chronic malnutrition by 28.5% to 17.5% for children under the age of five within the past eight years, the prevalence in northern highland regions has not improved. After organizing a collaboration of the US Naval Medical Research Unit – 6 (NAMRU-6) of Lima, Johns Hopkins Bloomberg School of Public Health, and Peruvian NGO PRISMA, the development of an affordable tablet application was proposed to help local health workers effectively monitor a child's growth and development.

Methods: Two other student interns and I designed the project proposal through the guidance of investigators at NAMRU-6, PRISMA, La Universidad Cayetano Heredia, JHU, and Peace Corps Peru. My main role was to outline the specific objectives, activities, outputs, and projected outcomes over a two-year period. I proposed the sampling plan using community health workers and families living within the areas of Piura where malnutrition rates are over 50%. I was also responsible for ensuring that the mission of the project worked in conjunction with the current efforts of PRISMA, and local health departments.

Results/Outcomes: A two grant proposals were submitted to Gates Global Grand Challenges. I am currently overseeing the project as software engineers and student interns work on the initial application development. With continued support from our collaborators, JHU will fund a small pilot study of the completed tablet application until further funding is available to carry out the full project. Future goals include extending to other regions of Peru.

Name: Muralidharan, Kirithini

Practicum Site: AES World Languages and Cultures Institute

Location: Boston, MA United States

Title: Language as a Barrier to Healthcare for Immigrants and Refugees in South Boston

Introduction: AES World Languages and Cultures Institute (AWLCI) provides free English classes in the South Boston community. This community contains a large number of immigrants and refugees who do not speak English. The current curriculum offered by AWLCI focuses on preparing students to enter work-training programs. I wrote a memo that discusses the extent to which language is a barrier keeping these community members from accessing healthcare and what changes need be made to the current curriculum to address this barrier.

Methods: As Executive Coordinator for AWLCI, I conducted a literature review on the language distribution within South Boston and on the effect of the language barrier on health outcomes of immigrants and refugees. Then I conducted interviews with case managers from Catholic Charities Laboure Center and the Joseph A. Tierney Center, a project manager at the Boston Housing Authority, and staff members at the South Boston Health Center. I also developed interview questions as part of the intake interviews, conducted by the case managers, for the English classes.

Results/Projected Results: The information presented in the memo will be used internally to change the current curriculum to include more vocabulary needed to communicate with healthcare staff. This memo will also as a white paper by the organization to apply for funding to address this issue.

Name: Ni, Yu

Practicum Site: National University of Singapore

Location: Singapore, Singapore

Title: Research assistant

Introduction: GUSTO (Growing up in Singapore Towards healthy Outcomes) is Singapore's largest and most comprehensive birth cohort study. It aims to study if mothers' diet and lifestyle during pregnancy affect their babies' growth after birth. It is a nationwide Epidemiology research that gathers data from pregnancy until the baby is three years old. The study I worked for aimed to figure out the risk factors for myopia among children aged three years old and to provide people with more insight and understanding in the prevention and management of myopia.

Methods: I helped to conduct the eye measurements and surveys for baseline information in KK Women's and Children's Hospital. All the data was entered into the GUSTO system. We finished data collection by the middle of June and started cleaning and analyzing the data by using excel and SAS. After the results were generated, I assisted the professors with performing a thorough literature review, and participated in the first draft of the research paper.

Results/Outcomes: Totally 572 children aged were enrolled into this study. Myopia prevalence was found to be 6.12%, and the overall mean refractive error was 0.86D (SD 1.00) and the mean axial length was 21.74mm (SD 0.68). Parental myopia, longer time spent on hand-held devices and longer biparietal diamete were the positive predictors for development of myopia.

Name: Ni, Yu

Practicum Site: Boston Children's Hospital

Location: Boston, MA United States

Title: Curation Intern

Introduction: HealthMap is a real-time disease tracking system. Based out of Boston Children's Hospital, HealthMap uses informal online resources for disease outbreak monitoring and surveillance. Through automated processes, HealthMap is able to provide for early detection of emerging infectious diseases.

Methods: I helped to curate Chinese feed, ensure correct location is mapped, and refine data collection within the system for Chinese feed. I also assist with maintaining influenza H7N9 case and death report system.

Results/Outcomes: From January until now, we reported the breakings of seasonal influenza, H7N9, measles, H5N1, Dengue, tuberculosis and hand-foot-mouth disease.

Name: Ruiz, Carlos

Practicum Site: Instituto Nacional de Salud Publica de Mexico (INSP)

Location: Cuernavaca, Mexico

Title: Perceptions of conflict of interest in Mexico: Lessons from retail clinics in Mexico City.

Introduction: In Mexico, for-profit entities are increasingly involved in the provision of primary health care services through retail clinics. The increasing usage of retail clinics can have advantages such as reliability and quality of care. However, there is concern that they can also increase risk of biased decision making due to financial models or methods of personnel management that promote loyalty to the organization over professional identity.

Methods: As part of an INSP investigation titled "Analysis of quality of care in retail clinics in Mexico" in collaboration with the Mexican Health Foundation, I participated in a study analyzing the organizational models and perception of conflict of interest in five different Mexican retail clinic models. The study which also informed a PhD thesis on conflict of interest in retail clinics in Mexico, aimed to analyze and describe the organizational structure and financial incentives of care providers. As part of my involvement in this project, I carried out field interviews with eligible physicians in the provision of clinical pharmacy care throughout Mexico City, gathered qualitative data, conducted literature reviews and analyzed study results. Twenty-four physicians working in retail clinics in Mexico City were interviewed between May and July of 2014.

Results/Outcomes: This study found that physical separation between retail clinics and pharmacies as described by government regulations did not seem to influence the degree of financial ties between them. The study results and methodology were described in a 2014 report to the Pharmaceutical Mexican Council.

Name: Shah, Rupal

Practicum Site: Pamoja Tunaweza Research Centre

Location: Moshi, Tanzania

Title: Student Intern

Introduction: Pamoja Tunaweza Research Centre started out as a women's centre where they provided support to women who were affected by violence. The centre's work included also providing healthcare services and peer support. Over the past few years, the centre's focus has grown. It now provides healthcare services to women and men and conducts research.

Methods: One of the projects that I worked on was the Cervical Cancer Health Systems Study. This study was to determine the barriers to effective cervical cancer control, from a patient and healthcare professional perspective. A major component of the study was to conduct key-informant interviews in Swahili, which I assisted with. Another project was to conduct an assessment of the healthcare facilities in the Kilimanjaro region. This assessment provided an overview, based on checklists, of each healthcare facility.

Results: For the Cervical Cancer Health Systems Study, we completed interviews at about six sites. From the data gathered, we ascertain that there is a range of barriers that prevent patients from accessing screening services starting from transportation to lack of knowledge about the services. For the Healthcare Facilities Assessment I conducted interviews at twenty sites. The data has helped to understand the various components of administration, starting from the level of funding each facility receives to the services provided to the number of emergency patients they tend to on a weekly basis. The data obtained from the interviews will assist us in understanding the state of healthcare service provision in the Kilimanjaro region.

GLOBAL HEALTH

Name: Sharma, Abhishek

Practicum Site: Public Health Foundation of India, New Delhi, India

Location: New Delhi, India

Title: Research Intern/Scholar

Introduction: Insulin is an essential medicine needed for people living with diabetes type 1 and type 2. Access to insulin is poor in low and middle income countries, often due to high prices which result from lack of transparency. India has one of the highest number of people living with diabetes, but a little is known about the access to insulin in India. Our objective is to study the insulin access and private market in the Delhi state in India.

Methods: We employed a modified version of the World Health Organization/Health Action International methodology to obtain the information on the prices of all the insulin products available in a randomly selected sample of 60 private-sector retail pharmacies in the Delhi state. We also conducted key-informant interviews with the insulin wholesalers/suppliers to study insulin price components across the supply chain and understand the market dynamics with regard to domestic and international insulin products.

Projected outcomes: Analyzing the collected data on prices of the available domestic and international insulin product across the supply system will help us identify policy concerns regarding insulin access. We are currently in process of obtaining the public-sector procurement and the import prices of insulin to perform meaningful price comparisons with the retail and wholesale prices. We aim to put forth recommendations for improving insulin access with regard prices and utilization.

Name: Smith, Alison

Practicum Site: Many Hopes

Location: East Falmouth, MA United States

Title: How Many Hopes? Design and Implementation of a Monitoring and Evaluation Plan for Many Hopes, an OVC Program in Coastal Kenya

Introduction: Many Hopes is a global network of supporters working to provide housing, education and legal services for orphans and disadvantaged children in coastal Kenya. Many Hopes has an ongoing partnership with the Mudzini Kwetu Centre Trust, which operates the program locally. Mudzini is currently home to 54 children and provides legal support to many more. Though Many Hopes was founded in 2008, the organization has no formal Monitoring and Evaluation (M&E) Plan. Many Hopes has entered a period of rapid growth with institutional funding and new projects on the horizon, and needs a system for collecting quality data in order to manage its growth.

Methods: To develop the M&E Plan, I traveled to Kenya for two months to collaborate with local staff. After conducting a stakeholder analysis to understand the needs for the plan, I completed the following tasks: wrote vision and mission statements; identified goals and objectives; developed a logical framework; selected indicators; developed quantitative and qualitative measurement tools; created a monitoring plan; built two Excel databases; developed training manuals; wrote a data analysis plan; and trained 12 staff members on data collection, entry, analysis and reporting.

Projected Outcomes: The M&E Plan and all related tools will be used to: improve the availability and accuracy of routine data collection for all projects funded by Many Hopes; strengthen donor relationships through transparency and accountability; strengthen leadership and coordination capacity between Mudzini Kwetu and Many Hopes; and provide information on the long-term outcomes of the program model.

Name: Sun, Jennifer

Practicum Site: SER Alzira de Aleluia

Location: Rio de Janeiro, Brazil

Title: WASH Promotion & Creation of an Early Childhood Development (ECD) mHealth App in the Slums of Rio de Janeiro

Introduction: SER Alzira de Aleluia is a local NGO offering education, job training, family support groups, psychological counseling, and youth sports activities to the community of Vidigal, a favela (slum) nestled between two affluent neighborhoods in Rio de Janeiro. An estimated 1.6 million Brazilians reside in favelas like Vidigal, and face insurmountable public health challenges as a result of socioeconomic conditions like poverty, violence, crime, and social exclusion. Impoverished conditions and lack of good water, sanitation, and hygiene (WASH) practices make favela children particularly prone to infectious diseases and experiencing early childhood developmental delays.

Methods: I created a WASH campaign by conducting a literature review, building trust with community members through over 40 community consultations, and participating in the NGO's weekly Family Support Group for caregivers. These interactions with community stakeholders informed work on a free mobile health (mHealth) application for favela caregivers to screen 0-38 month-old children at risk for developmental delays. The creation of the ECD mHealth app also included conducting a literature review of ECD screening tools and mHealth in poor urban settings, building the app using previously validated tools, translating components, piloting the app, and making changes after receiving feedback.

Results/Outcomes: I produced culturally-appropriate WASH educational materials, conducted 7 classes for caregivers, and distributed 100 flyers throughout the favela. Piloting the app introduced ECD concepts to over 15 caregivers, but the long-term goal is to promote ECD education to all favelas and help identify/refer at-risk children once the app is finalized.

Name: Wiseman, Stephanie

Practicum Site: Boston University School of Public Health (BUSPH)

Location: Boston, MA United States

Title: Research Assistant – Extreme Weather Project

Introduction: The harsh winter season led to Boston Public Schools to be closed numerous times, with officials variously citing heavy snow or extreme cold. In conjunction with the professors at the BUSPH, I examined any trends in the closures of schools in Boston, Cambridge, and Lexington and assessed the potential health impacts on children.

Methods: We looked for patterns in closure days by comparing weather patterns, particularly ambient temperature and wind chill, to closure days over the previous ten years. We then used the number of students receiving free or reduced meals from schools as an estimate of children who may not have access to nutritious food on closure days.

Results/Outcomes: So far, I have collected weather data from each of the three locations and going back over 10 years, calculated wind chill, and identified days where either the ambient temperature was below 0 degrees Fahrenheit. I also identified which days posed a possible frostbite risk due to the wind-temperature combination. Information about school closures is still being collected, but available data does not indicate a direct correlation between temperature and likelihood of closure. As more information becomes available, more detailed analysis will take place. Information about the number of students who have received subsidized meals from the district is also still being collected. Together, this information will be used to see if the issue merits further study and develop a mechanism by which officials can more accurately weigh the costs of extreme weather closures.

HEALTH LAW, BIOETHICS & HUMAN RIGHTS

Name: Faber, Ashley

Practicum Site: Maxwell Health

Location: Boston, MA United States

Title: Implementing functionality into the Maxwell Health product to help employers address their requirements and deliverables under the ACA

Introduction: The purpose of the practicum is to learn about how insurance brokers and employers are using technology to meet employer requirements under the Affordable Care Act (ACA). I worked with Maxwell Health, a fast-growing health technology company, to learn about the ways in which their SaaS platform can be used to help employers be compliant with the ACA.

Methods: Through the practicum, I researched employer requirements under the ACA and worked closely with product development to implement functionality to make meeting these requirements a fairly painless process. I learned an extensive amount about how employers and insurance brokers are interacting with the law and leveraging technology to enhance their record keeping and reporting processes. I also served as a constant knowledge source on the ACA and state laws to various members of the Maxwell Health team, including sales, marketing, and product development.

Results/Outcomes: In researching the interaction between the ACA and employers (including the employer shared responsibility, the reporting of the cost of health coverage on the W2, and the required healthcare exchange notices), I found that employers generally do not feel ready to face the reporting requirements to the IRS in the coming years and are looking to technology to help them be compliant with the ACA. Similarly, the guidelines provided by the government are extremely extensive and there is a lot of misinformation floating around about the ACA requirements. Employers are looking outside to brokers and other third parties to help them make decisions related to the law.

Name: Hawkins, Jennifer

Practicum Site: Massachusetts Public Health Association

Location: Boston, MA United States

Title: Policy and Advocacy Intern

Introduction: The Massachusetts Public Health Association works towards policy change that aims to eliminate health inequities and create healthy communities. Priorities include healthy eating and active living, housing and family stability, violence prevention, connecting community health and clinical care, essential public health services and cross-cutting priorities.

Methods: One of my key responsibilities is creating policy materials, such as fact sheets, blog posts, testimony and newsletter articles related to proposed legislation and budget amendments. This involves research, collaboration with outside partners, attending informational meetings and user-friendly synthesis of the bill's text. The goal is to present information in a way that is clear and concise, easy to understand for both legislators and community members alike. I am also involved in distributing these materials to legislators and their aides at the State House, verbally highlighting our priorities and summarizing the most relevant information. I have specifically worked on materials for the Healthy Incentives Program, Massachusetts Food Trust, Massachusetts Earned Income Tax Credit, DPH Violence Prevention, and Mass in Motion funding.

Results/Outcome: The ultimate goal is to get as many of these legislative priorities and budget amendments passed as possible. As we just started a new two-year legislative cycle, the most tangible results will occur after the completion of my practicum. Other successes include completion of factsheets that have been distributed to our 200 state legislators, research and synthesis that was used to give testimony on the Earned Income Tax Credit legislation, and a greater understanding of the legislative and advocacy process in Massachusetts.

Name: Manning, Jill

Practicum Site: Boston Medical Center-Patient Advocacy

Location: Boston, MA United States

Title: Ethics Committee Intern

Introduction: Boston Medical Center (BMC) embraces the mission of community-based care, providing high-quality accessible health services to all as the largest safety-net hospital in New England. The BMC Ethics Committee assists in the resolution of ethical dilemmas that arise within the clinical setting. This service is composed of a multidisciplinary team representing various clinical fields and positions across BMC. The ethics team meets with patient, family members, and staff to lead discussions and offer guidance in moving forward with the decision making process.

Methods: Worked alongside BMC Patient Advocate, Ellen Kolton, MPH to identify common ethical challenges and further understand how operational ethics are applied by: 1) conducting extensive literature research on issues related to specific ethics consult cases 2) Attending monthly Ethics Committee meetings and ad-hoc team consults 3) Generating and disseminating improved ethics resources for the BMC community through the expansion of the Ethics Committee's website that includes members' biographies, articles and policies pertaining to ethics and other related resources, as well as the additional development of user-friendly evaluation survey tool for clinical team participants in Ethics Consults.

Results/Outcomes: Effective and productive ethics operations are dependent upon organizational systems to identify ethical questions, respect all stakeholders, and understand the legal and logistical implications of possible outcomes. Tracking and evaluating ethical consults is an imperative activity of the committee in understanding trends that might be institution/demographic specific, as well as the understanding and implementation of best practice for continued improvement of functional ethics applications throughout the hospital.

HEALTH LAW, BIOETHICS & HUMAN RIGHTS

Name: Pino, Cassandra

Practicum Site: Boston Medical Center

Location: Boston, MA United States

Title: Research Assistant

Introduction: The Atrial Fibrillation health Literacy Information Technology Trial (AF-LITT) is an on-going, prospective study at Boston Medical Center. AF-LITT aims to develop novel, patient-centered interventions to improve quality of life and reduce health care utilization in patients with AF at BMC. My practicum consisted in developing the study methods and foundation to recruit patients from the Hispanic/Latino community, an understudied population in AF. My work prepared the study to conduct novel research in a Spanish-speaking population and provided in-depth exposure to clinical research development and implementation.

Methods: (1) Examined the impact of language barriers on AF care, with a focus on health literacy; (2) Reviewed and accurately translated study material into Spanish; (3) Established culturally appropriate methodology/approach for participant recruitment.

Results/Outcomes: This practicum accomplished: a review of all study documentation and translation of informed consent, study brochure, and study materials into Spanish; successful literature review of the impact of non-English, Spanish-speaking on cardiovascular disease assessment and care, focusing on health literacy. I drafted a review of health literacy in AF in Spanish-speakers identifying that Spanish-speakers with AF likely have limited health literacy and are at increased risks for complications, resulting in increased health care utilization. These efforts will guide the study's on-going intervention to improve patient-centered care and reduce health care utilization in vulnerable patient populations. Future directions include (1) Implementation of the study in Spanish-speaking individuals with AF, using the study materials developed in this practicum. (2) Complete novel assessment of health literacy and AF in Spanish-speaking individuals.

HEALTH POLICY & MANAGEMENT

Name: Ambrosio, Allison

Practicum Site: Massachusetts General Hospital, Mongan Institute for Health Policy

Location: Boston, MA United States

Title: Persons With Disabilities Quality Monitoring Initiative: A PCORI Sponsored Study Through the MGH Mongan Institute for Health Policy

Introduction: The Persons with Disabilities Quality Monitoring Initiative is the intervention arm of a PCORI-funded (Patient Centered Outcomes Research Institute) research project assessing the healthcare needs and desires of individuals with physical disabilities and serious/persistent mental illness. The goals of the intervention are to work with consumers to define pertinent indicators of quality and provide this information back to the healthcare delivery system providing their care. This intervention is a "real-time" reporting tool created by the consumer.

Methods: The core of the project is feedback provided by consumer participants through multiple communication mediums including a website, phone, email, Facebook, and written feedback. Standard Operating Procedures (SOPs) were created in an effort to standardize the process by which the feedback from the participants is generated and studied. These were provided to the grantors (PCORI) as a part of an annual report with required deliverables in an effort to continue to receive funding.

Results/Conclusions: Ultimately, consumers will provide feedback through a multi-modal approach of their satisfaction with their health, the care they receive, and their health plan. This project is being conducted in conjunction with the Disability Policy Consortium who will collect the feedback based on the created SOPs and compile the reports to the intervention arm practices to be incorporated into the continued care they provide. If feedback is adopted by practices, this will improve the care dispensed to participants and further empower those with disabilities and serious/persistent mental illness to manage their own healthcare and recognize and report quality issues.

Name: Berthaud, Frantz

Practicum Site: Dana Farber Cancer Institute

Location: Boston, MA United States

Title: Prior Authorization Centralization Pilot in Hematologic Malignancies

Introduction: Prior authorization for medications is a cost-savings feature of a patient's prescription benefit plan that aims to ensure the appropriate use of selected prescription drugs. Providers at the Dana-Farber/Brigham and Women's Cancer Center have long expressed dissatisfaction with the arduous process to gain approval for their patients' medications requiring prior authorization. The practicum focused on developing a designated prior authorization position and creating a centralized and standard process for management of medication prior authorizations for Hematologic Malignancy patients.

Methods: With a team consisting of outpatient pharmacy leadership, pharmacy technicians and a pharmacy benefit specialist from the access management department, points of deficiency were identified in the current prior authorization process. A survey was created and disseminated to mid-level practitioners and administrative staff and qualitative interviews were conducted to understand current methods for obtaining prior authorizations. Once data was collected, a process flow map was created to map out current processes, target problems, and devise new work flows. Lastly, a follow-up survey was disseminated following the implementation of the new position and process.

Results/Outcomes: Within the timeframe of the practicum, 154 prior authorizations were completed from start to finish. We grasped a better understanding of the prior authorization process and provided thoughts on a plan for the most effective and efficient way to handle them moving forward. Results of the pilot indicated that a centralized prior authorization process saves staff on average 3.8 hours per week. To note, several roadblocks were identified and the new process necessitates further evaluation.

Name: Berzin, Olivia

Practicum Site: RTI International

Location: Waltham, MA United States

Title: Analyst

Introduction: RTI International, under contract to the Center for Medicare & Medicaid Innovation (CMMI) has been charged to assess the success of the Maryland All-Payer Model. To do so, RTI will use qualitative and quantitative information (e.g., focus groups, interviews, claims data, etc.) to evaluate whether Maryland has moderated and controlled health care spending and how, and what impact the model has on the quality of care provided in the state.

Methods: I worked closely with senior researchers to identify and learn about Maryland's Health Services Cost Review Commission's current efforts to measure and monitor the quality of care provided under the all-payer model. Furthermore, we worked to outline our plans for evaluating quality of care and develop specifications to do so using both existing datasets and Medicare claims data.

Results/Outcomes: Over the course of the practicum, a comparison between Medicare's quality of care initiatives and those Maryland has agreed to undertake as part of its latest all-payer waiver with Medicare was created. I also led the development of specifications to measure Prevention Quality Indicator #90 using data from Medicare's Chronic Condition Warehouse.

HEALTH POLICY & MANAGEMENT

Name: Canigueral Vila, Maria Nuria
Practicum Site: Novartis Vaccines
Location: Cambridge, MA United States
Title: Development Project Manager, Influenza

Introduction: The current standard of prevention for seasonal influenza fails to address significant medical needs of the most vulnerable populations. Evidence shows the lowest vaccine efficacy (<60%) and highest influenza-related hospitalization rates (>40%) in children and the elderly. To address the need for more effective vaccines for these groups, Novartis uses adjuvants to enhance vaccine efficacy. The objective of this practicum was to support cross-functional management of a portfolio of programs focusing on development of adjuvanted influenza vaccines for children and the elderly. Programs included a Phase III pivotal clinical trial and the first license application in the US for a specific product.

Methods: Program management was based on continuous integration of input from different functions (e.g. Clinical, Regulatory, Commercial, Quality) to track execution of activities against objectives and to identify key cross-functional issues requiring further discussion for resolution. Specific tasks included: (1) developing options for business strategy decision-making; (2) organizing and preparing cross-functional and taskforce meetings; (3) tracking action items with team members; (4) participating in relevant functional meetings; and (5) reporting milestone status through maintenance of program dashboards.

Results/Outcomes: The support provided over 4 months contributed to achievement of several milestones and to key recommendations for this year's business strategy. This will eventually lead to licensure and launch of superior influenza vaccines for children and the elderly around the globe. Successful development of such vaccines is one step closer to alleviating suffering and enhancing the quality of life of these populations.

Name: Chuang, Yiing-Harn
Practicum Site: Boston Medical Center
Location: Boston, MA United States
Title: The Impact of Acupuncture Treatment on the Utilization of other Hospital Services at an Urban Safety-Net Hospital

Introduction: Little is known regarding the interaction between acupuncture and bio-medical healthcare. In particular, the relationship acupuncture and total cost of care has not been characterized. This project used utilization analysis of the Medical Center's Acupuncture Program data to understand the cost-benefits of acupuncture and provide input and interpretation of results.

Methods: We performed a retrospective review of total hospital visits and associated charges among patients who received acupuncture free of charge at a large safety-net hospital 2006-2013. Inclusion criteria were defined as: receiving Medicare or Medicaid insurance, 18 years of age and one or more on-site acupuncture appointments. Patients were stratified into 5 groups based on number of acupuncture visits: 1-3, 4-6, 7-9, 10-12, 13-15 treatments. The total number of hospital visits and total associated costs were compared 6 before and 6 months after initiating acupuncture.

Results/Outcomes: 329 patients met our inclusion criteria. A statistically significant difference between before and after acupuncture total health charges was not observed. Patients with 1-3 treatments (N=221) incurred a mean \$2,415.35 increase in total charges after initiating acupuncture (p=. 558), whereas patients with more than 3 acupuncture treatments (N=107) demonstrated a net mean \$1,809.79 decrease in total charges after initiating acupuncture (p=. 398). The average savings per patient was greatest for those receiving 10-12 acupuncture treatments (N=12): \$14,013.86 (p=0.353). This study suggests that offering free acupuncture is not likely to increase the total cost of care. In addition, this study suggests a previously unreported relationship between number of treatments and total health care costs.

Name: Ganti, Rohan
Practicum Site: Boston University School of Medicine
Location: Boston, MA United States
Title: Student Research of the FiF mobile application of Boston University school of Medicine

Introduction: Recently, faculty at the Boston University School of Medicine (BUSM) developed the Finding Information Framework application (app) or FIF to assist medical students in building skills utilizing Evidence Based Medicine (EBM). The FIF is an educational algorithm that guides students on how to ask a clinical question and then assists them in finding the most appropriate online resource, to help the transition into the clinical year of medical schools. This current study aims to assess the aesthetics as well as functionalities of the FIF mobile app by surveying current medical students.

Methods: The author presented initial outlines of the survey to the research team following a review of relevant studies. From this, the final survey was created and submitted for Boston University (BU) Institutional Review Board Approval (IRB) for a study on human subjects. A recruitment email, requesting volunteers to participate in the survey study, was sent to the third and fourth year medical students.

Results/Outcomes: Data were categorized into four sections: (1) preliminary questions, (2) app-specific questions, (3) clinical questions, and (4) open-ended questions, divided into two parts. Ease of use and aesthetic appeal received higher scores than potential future use of the app. Clinical question responses varied significantly.

Discussion: The survey assessing the FIF mobile app shed light into potential areas that the research team should address in further improvements to the app. A major limitation of the study was the small sample size. Further studies would help in further validating the results gained in this study.

HEALTH POLICY & MANAGEMENT

Name: Hadrava, Matthew

Practicum Site: Fenway Community Health

Location: Boston, MA United States

Title: Health Policy Research Fellow

Introduction: People living with HIV/AIDS (PLWHA) face significant challenges in receiving proper health care for the disease. Though access to care has been improved since the implementation of the Affordable Care Act, there is still a significant disparity in the availability and affordability of health services. AIDS Service Organizations (ASOs) and Community Based Organizations (CBOs) have historically bridged the gap between formal health care organizations and PLWHA through the provision of a wide array of services from testing and case management to legal assistance. Due to the changing climate of health care in the United States and the unreliability of discretionary Ryan White Program funding, many of these ASOs and CBOs are now being challenged with remaining open.

Methods: I was brought on at the Fenway Institute to research new and existing resources concerning organizational restructure. I performed an extensive literature review on improving organizational sustainability. Drawing on webinars and documents produced by The Fenway Institute, the TARGET Center and third party-resources, I developed an issue brief and resource library, which is available to all organizations.

Results/Outcomes: The brief concluded that leaders and employees of ASOs and CBOs are eager to improve their organizational viability. Recommendations to these organizations included diversifying income sources, considering an organizational restructuring, performing an organizational self-assessment to assess viability, merging with other organizations, or responsibly closing their doors (ensuring employees and patients are linked to work and care respectively). The resource library included linkages to technical assistance and informational resources.

Name: Iranmanesh, Nacim

Practicum Site: Dimock Health Center

Location: Boston, MA United States

Title: Human Resources Intern at The Dimock Center

Introduction: The Dimock Center is a non-profit community-based organization that provides comprehensive services to Boston's urban neighborhoods. Dimock offers nearly one hundred programs to over 40,000 individuals, spanning from health care services to mental health services to child and family support programs. To provide all these services it is necessary to have the appropriate staffing which is linked to compensation and benefits, worker's compensation and many more human resource processes. Alongside the VP of Human Resources, we used performance management measures to create job descriptions that are competitive within the job market.

Methods: Through Joint Commission accreditation regulations and researching of community center competitors, a job description template was developed and approved by the senior management team at The Dimock Center. Using Excel spreadsheets, a compiled list of all the job positions at The Dimock Center helped develop a road map to determining the managerial staff responsible for each position. Employing the roadmap and the job description template, all managerial staff contributed to their employee's job descriptions and the new competitive job descriptions comparable to the market were created.

Results/Projected Outcomes: Through performance management, these new job descriptions will help employee performance, retainment, compensation and benefits and many more human resources processes. The Dimock Center now has an accredited job description template in which they can use for their annual mandatory job description updates.

Name: Johri, Radhika

Practicum Site: Quintiles Consulting

Location: Cambridge, MA United States

Title: Consulting Analyst Intern

Introduction: Quintiles is the world's leading provider of biopharmaceutical services. Quintiles help their clients transform drug development and commercialization by linking business strategy, industry expertise and deep data to deliver unique and impactful business insights. The Advisory Services team provides consulting support to achieve client expectations through the development, implementation, and delivery of consulting services.

Methods: As a Consulting Analyst Intern within Decision Modeling Consulting, I assist Analysts, Senior Analysts, Project Managers and Directors with Directors, Engagement Managers, and Senior Analysts with tele-depth interviews, qualitative and quantitative data analysis and preparation of final reports. A majority of the engagements were market landscape assessments and opportunity assessments that helped the clients with understanding their marketplace and strategic positioning.

Results/Outcomes: I completed portions of final reports with all data findings, analyses, and evaluations for various projects throughout the internship. Additionally, I will also be delivering an internal final PowerPoint presentation at the end of my internship to the Advisory Services team about emerging biologics for autoimmune diseases.

HEALTH POLICY & MANAGEMENT

Name: Lin, Jennifer

Practicum Site: Cedar Clinic - Massachusetts Mental Health Center

Location: Boston, MA United States

Title: Research Student

Introduction: The CEDAR Clinic is a research clinic with a focus on the detection, assessment and treatment of psychosis in the early stages. While interning at the CEDAR Clinic, I have focused my work on two programs - the Prevention Collaborative and the Parent Support Group. The Prevention Collaborative is a group of mental health practitioners and advocates that meet quarterly to promote various initiatives. The focus of the initiative for this year is screening for the early detection of psychosis. The Parent Support Group is a support group for parents with psychosis. The purpose of this practicum was to assist in research that would help guide decisions regarding the next steps in terms of the Prevention Collaborative and its initiative of promoting screening for early psychosis as well as to contribute to the outreach efforts of the Parent Support Group.

Methods: A systematic review of psychosis risk screening tools in help seeking populations and the general population was conducted. Outreach for the Parent Support Group was conducted via contacting providers and reaching out to support groups. A flyer on parental mental illness for Post-Partum Day at the State House was also created.

Results/Outcomes: The next major step has been established for the Prevention Collaborative and will focus on incorporating psychosis screening into the behavioral health screening process at the Boston Public Schools. As a result of outreach efforts, the parent support group was able to enroll enough members for a second iteration of the group.

Name: Liu, Bert

Practicum Site: Boston Medical Center

Location: Boston, MA United States

Title: BMC Geriatrics Quality Improvement Intern

Introduction: Use of the emergency department (ED) by geriatric patients for non-emergent health issues results in decreased continuity of care between geriatric patients and their providers, overutilization of the ED, and attributes to higher costs for both patients and the hospital.

Methods: Analyzed VOC data, process maps, and root cause analysis and identified multiple inefficiencies, particularly lack of patient literacy regarding primary care provider information and access to clinic resources after business hours. Facilitated implementation of PDSA cycle to address these problems. Conducted semi-structured interviews to patients and caregivers (n=43) to assess patient preferences for take-home reminder of primary care provider (PCP) and clinic contact information. Distributed patient take-home magnets to patients and educated patients about their PCP and the availability of clinic resources after business hours. Performed chart reviews and conducted semi-structured interviews to assess patient behaviors of likelihood to use ED and patient knowledge of primary care provider and access to clinic resources after business hours. Conducted data analysis and assisted in poster development for presentation at the Annual American Geriatrics Society Conference.

Projected Results/Outcomes: Increased patient likelihood to contact the geriatric clinic before going to the ED and patient knowledge of PCP and access to clinic resources after business hours. There was a decrease in ED visits by geriatric clinic patients for non-emergent health issues. Distribution of take-home magnets with PCP and clinic resources after business hours is a sustainable, high impact and low effort intervention to decrease ED visits for non-emergent health issues.

Name: Mackin, Sarah

Practicum Site: Boston Public Health Commission

Location: Boston, MA United States

Title: Community and Stakeholder Engagement Strategies - Assessment, Development and Evaluation

Introduction: In Massachusetts, nearly 3 people die because of accidental overdose; and opioid overdose has now surpassed motor vehicle accidents as the leading cause of injury death among adults in the United States. Over the last 8 years, Massachusetts has employed several strategies to address the overdose crisis, including expanding access to naloxone and training potential bystanders (including active drug users) to become overdose responders. In 2014, approximately 20% of fatal overdoses in the city of Boston occurred in public restrooms. Throughout the fall and winter of 2014-2015, I worked with Boston Public Health Commission in order to design a 'Safer Bathrooms' campaign to local businesses about overdose prevention.

Methods: Throughout the course of this project, I helped conduct a needs assessment, developed overdose prevention + education materials for businesses, and created safer bathroom protocols. I created 'heat maps' using real-time data provided by Boston EMS, BPD arrest records for drug offense, and data gathered during focus groups that will be continuously updated and used to inform targeted outreach strategies

Results/Outcomes: Over 400 businesses in 5 different neighborhoods of Boston in were given 'Safer Bathrooms' campaign materials and OD response protocols, along with overdose prevention and education. The campaign was so successful that other cities/towns in Massachusetts have begun to use and adapt Boston's 'Safer Bathrooms' materials for their own local overdose prevention efforts.

HEALTH POLICY & MANAGEMENT

Name: Mohamud, Deman

Practicum Site: Management Sciences for Health

Location: Medford, MA United States

Title: African Strategies for Health Project

Introduction: The purpose of this internship is to provide support to Management Sciences for Health's African Strategies for Health (ASH) project. The ASH project works across the technical areas of maternal, newborn and child health, infectious diseases, health systems strengthening, monitoring and evaluation, and advocacy and communications. This internship has a specific focus on regionalization in Africa, including the use of mobile technology, integration of services and integration with/or delivery.

Methods: The trend towards regionalization will be examined by researching and documenting best practice health interventions in Africa and the regional actors who are leading and supporting this work, conducting research for a landscape analysis of African regional bodies engaged in health that culminates in drafting materials that support the strategic communication of ASH's activities and results.

Results/Outcomes: The final product of this internship serves to inform growing literature that builds a case for regionalization in Africa, what it entails and how it intersects with healthcare from a donor perspective. As the economic landscape shifts and global health funding stagnates, this project serves to understand the role and influence of regional actors in Africa.

Name: Mulpuri, Kedar

Practicum Site: Boston Medical Center

Location: Boston, MA United States

Title: Utilizing Electronic Health Records to Determine the Cost Effectiveness of Diabetes Treatment Regimens

Introduction: According to the Centers for Disease Control and Prevention, diabetes mellitus afflicted an estimated 29.1 million Americans in 2012. For the same year, the American Diabetes Association estimated that the cost of diabetes in the United States was approximately \$245 billion. The purpose of this study is to develop a methodology for the live analysis of the cost effectiveness of diabetes treatment regimens by data mining electronic health records (EHRs).

Methods: The study can be described as an observational/non-interventional intent-to-treat analysis with the data collected from the EHRs of patients seen at the Diabetes Outpatient Program of Boston Medical Center. The metrics collected for multivariate regression analysis include Hemoglobin A1c (HbA1c), body mass index, gender, age, and relevant anti-diabetic drug history. Patient fixed effects were also included. An informal cost effectiveness analysis of these results will involve comparing HbA1c reductions associated with the treatments and their retail prices at local pharmacies.

Results/Outcomes: While it is not expected that these results will be as accurate as those collected through randomized clinical trials, the hope is data mining and analyzing the EHRs of large populations through this approach will reveal some truth on the cost effectiveness of diabetes treatment regimens in practice. Future studies should consider the addition of a quality-of-life survey (e.g., EQ-5D) taken at the time of measurement.

Name: Murphy, Caitlin

Practicum Site: Boston Medical Center

Location: Boston, MA United States

Title: Quality Improvement Intern

Introduction: Boston Medical Center cares for approximately 120 infants exposed to opioids in-utero every year. This accounts for 12% of infants with Neonatal Abstinence Syndrome (NAS) born in Massachusetts annually. In order to improve neonatal care for this population, Boston Medical Center's Pediatrics Department is conducting ongoing quality improvement projects in order to evaluate and update the protocol used to treat infants with NAS to make care as efficient and effective as possible in order to reduce the overall length of stay for this population.

Methods: This practicum involves medical record abstraction, data collection and analysis, and utilizing Institute for Healthcare Improvement (IHI) methodology to improve the current protocol for NAS. The quality improvement approach involves the development of a project charter, creating a cause and effect diagram, analyzing run charts, and developing recommendations to update the current NAS protocol.

Results/Outcomes: Based upon the data analyzed and patterns identified, updates will be made to the NAS protocol. The hope is that through quality improvement efforts to update the NAS protocol, infants with NAS will be able to go home sooner as the treatment for NAS improves and becomes more standardized. By reducing length of stay for NAS infants these infants will be able to go home sooner to the benefit of both the infant and the infant's family. Reducing length of stay also reduces healthcare costs associated with this population.

HEALTH POLICY & MANAGEMENT

Name: Sherer, Jason
Practicum Site: Boston Medical Center
Location: Boston, MA United States
Title: Boston Medical Center Lung Nodule Clinic

Introduction: Boston Medical Center (BMC) is an urban safety-net hospital that, prior to the establishment of the BMC Lung Nodule Clinic (LNC) in July 2014, had no standardized process for clinic follow up of pulmonary nodules. Studies show 20-30% of lung cancers initially present as incidental pulmonary nodules and despite recommendations from the National Comprehensive Cancer network and Fleischner Society, patients still receive care inconsistent with guidelines. The BMC LNC was established as a resource to provide prompt evidence-based evaluation and treatment plans for pulmonary nodules.

Methods: We reviewed the medical records of patients referred to the BMC LNC from July 2014 to January 2015. Clinic volume, no show rates, patient demographics, nodule size, recommendation made from clinic, adherence to initial recommendation, referral source, PCP practice location, and lung cancer diagnosis with staging were recorded.

Results/Outcomes: A total of 101 appointments were made for LNC in the first 7 months. There was an equal distribution of new patients referred for nodules sized $\leq 4\text{mm}$, 4-6mm, and $>8\text{mm}$. There were 58 new and 20 follow up appointments with a total of 53 radiological test ordered and 13 referrals to the Thoracic Oncology Clinic for new to LNC patients. The analysis demonstrates the feasibility of a multi-disciplinary approach to evidence-based lung nodule care, its potential as a revenue source, and the need for additional support via nurse practitioner and patient navigator to support clinical follow up and contact patients for appointments.

Name: Widman, Brooke
Practicum Site: Massachusetts State House
Location: Boston, MA United States
Title: Graduate Student Researcher, Joint Committee on Health Care Financing

Introduction: The Joint Committee on Health Care Financing is one of 27 legislative committees of the Massachusetts legislature. The committee evaluates all legislative and policy matters concerning the establishment, alteration and funding of health care and public health assistance programs, including fiscal matters relating to health care policy, Medicaid, MassHealth, and the commercial health insurance market.

Methods: Primary responsibilities centered around researching the continuing evolution of the state Medicaid Program, state healthcare reform under Chapter 224 of the Acts of 212, and the state SIM grant implementation. Specific activities included: 1) Attending and summarizing hearings on revenue and meetings held by the Massachusetts Health Policy Commission, the Massachusetts Health Connector Authority, and the Massachusetts Association of Health Plans, 2) Drafting memos and writing research reports on federal Medicaid expansion waivers, the Medicare Sustainable Growth Rate repeal, trends in public-to-private cost shifting, and the Massachusetts SIM award grant, and 3) Assisting the Committee Director prepare for the current session's bill hearings by compiling research and testimony on new and refilled bills.

Results/Outcomes: The research and reports written on implementation of the SIM grant, federal Medicaid expansion waivers, and cost-shifting will provide the foundation for upcoming state legislation regarding the continued evolution of the state Medicaid program and continued implementation of Chapter 224 of the Acts of 2012. These efforts will continue to shape the direction of state health care reform.

Name: Wineland, Carolyn
Practicum Site: Milford Hospital
Location: Milford, CT United States
Title: Hospital Administration projects in policy, Risk Management, and Human Resources

Introduction: Milford Hospital is a small community hospital attempting to maintain its status as one of the last few independent community hospitals in Connecticut. Over the summer of 2014, the hospital was preparing for a visit from the Joint Commission. The hospital's policies were very outdated and needed to be updated and standardized. Additionally, Risk Management had to address various problems that came up unexpectedly such as depositions, autopsy complications, and addressing communication problems among medical staff. Lastly, Milford Hospital needed a continuing medical education program to offer its staff.

Methods: In order to complete these projects, training was completed on updating policies and each hospital was updated systematically. For Risk Management issues, staff reached out to parties involved and conversed with lawyers about issues. In order to instate a continuing medical education program, close communication with the education company allowed for the appropriate choosing of courses that would be most relevant for Milford Hospital medical staff. Additionally, the courses were completed so that questions from staff could be answered when the program was eventually implemented.

Results/Projected Results: Each of Milford Hospital's policies were updated appropriately, ensuring the hospital's preparedness for an evaluation by the Joint Commission. Various Risk Management issues were improved and some were completely resolved. Milford Hospital successfully rolled out the continuing medical education program, offering its staff the opportunity to earn credits for free.

HEALTH POLICY & MANAGEMENT

Name: Yelavarthi, Vamshi

Practicum Site: Boston University School of Medicine

Location: Boston, MA United States

Title: Medicare Reimbursement Discrepancies for Hand Surgeons

Introduction: This practicum examined the 2012 Medicare provider utilization and payment data from the Centers for Medicare and Medicaid Services (CMS). This data was released in April 2014 as an effort to make the United States (US) healthcare system and Medicare more transparent and accountable. This analysis focused on orthopaedic hand surgeon reimbursement data to discern reimbursement discrepancies in different regions of the US as well between urban and rural providers.

Methods: This practicum involved the creation of an extensive database and comprehensive data analysis for the data available through CMS. Data was collected and tabulated into a database for any procedures that hand surgeons were reimbursed via Medicare fee-for-service (FFS). A comprehensive list of every hand surgeon was found through the Wall Street Journal data search tool in order to stratify surgeons by both name and location. The types and number of procedures performed and the amounts paid to each of these providers was recorded.

Results/Outcomes: It is important for the US healthcare system to become more transparent regarding payment methods for physicians. During the data collection, it was apparent that regional discrepancies do exist in regard to Medicare FFS payments. The use of this data will help physicians, in particular hand surgeons, to determine both their expected charges and anticipated reimbursement rates based on the procedures they do and regions they operate in. Fundamentally, dramatic differences in payment for similar procedures should be mitigated through the transparent documentation of payment data.

MATERNAL & CHILD HEALTH

Name: Abdul Rauf, Nazifa
Practicum Site: Boston Medical Center
Location: Boston, MA United States
Title: Data Collection Research Assistant

Introduction: Breast cancer is the most common type of cancer to affect women in the US. In 2014, over 2.8 million women reported a history of breast cancer, which accounted for 39,620 deaths. The impact of breast cancer on women's health is immense but the burden is greater on women with intellectual disabilities (ID). Women with ID get breast cancer at the same rate as the general population but have significantly lower mammography rates. Additionally, breast cancer mortality rates are higher among women with ID probably because they are diagnosed at a later stage. Mammography is the most effective way to detect breast cancer early and women with ID face important barriers to breast cancer screening.

Methods: The goal of this study is to gain knowledge about the most effective ways to provide screening and communicate health education to women with ID. Our team utilized a DVD-based education about breast cancer, developed by our team in collaboration with women with ID. We investigated how women with ID prefer to receive information on mammography and how we can empower them and their caregivers to get regular mammography. Our team compared 3 groups of women that received: 1) the DVDs only, 2) the DVDs and a Skype session with a clinician, and 3) the DVDs and a visit with a patient navigator. We looked at satisfaction, knowledge and changes in attitude.

Results/Outcomes: This is an ongoing study with participants still being recruited and interviewed for data collection.

Name: Acevedo, Kimberlyn
Practicum Site: Binding Health Project
Location: Boston, MA United States
Title: Research Communication Strategist

Introduction: The Binding Health Project (BHP) is a public health and medical student-led study on the practice of chest binding (the binding or compression of the chest). BHP has been working to create a knowledge base that currently does not exist around the practice of binding in the transgender, intersex, and gender nonconforming community. The purpose of this practicum project was to create and implement a strategic dissemination plan for the data gathered from the BHP survey.

Methods: BHP's online survey generated responses from 1,800 female-assigned-at-birth (FAAB) and intersex people in 37 countries. I determined that utilizing a community based participatory research (CBPR) dissemination framework is the most appropriate framework for disseminating results. I developed priority actions to take in the next three months and researched stakeholders as well as community engagement opportunities for the BHP to pursue. I also developed information materials in consultation with a graphic designer and I pilot tested the materials with 3 participants.

Results/ Outcomes: Because this is the first study on chest binding, this practicum will work to ensure that BHP's findings are made accessible to transgender and gender nonconforming individuals who bind or are interested in binding. During this three-month dissemination period, circulation of BHP's online information materials will be carefully monitored using web analytics on the popular social media sites used to publicize findings (e.g. Tumblr, Facebook, Twitter). Additionally, community engagement activities like workshops and conference presentations will be logged to keep track of how many people have interacted with BHP's results offline or in person.

Name: Arshad, Sadia
Practicum Site: Repeal Hyde Art Project
Location: Boston, MA United States
Title: Leadership Intern

Introduction: The Repeal Hyde Art Project (RHAP) creates dialogue about abortion access and reproductive justice through collaborative arts and sharable graphic content created by social work student Megan Smith. She established the Project to engage people, especially those from marginalized communities, via social media to speak more openly of their perspectives and experiences with abortion with a reproductive justice framework. The scope of my practicum involved increasing awareness of the Project via social media utilization, creating a Leadership program evaluation, establishing communication guidelines, and engaging in stakeholders relations with reproductive and sexual health agencies throughout the country.

Methods: The purpose of establishing communication guidelines was to provide consistency in the messages disseminated by the Project and on point with a reproductive justice framework. The utilization of social media allowed me to foster stronger relationships with more supporters of the Project as well as engage with people who may not be as interested in abortion, activism, or reproductive justice and present these issues to them with the aid of artwork. In order to fully engage with stakeholders and raise awareness of the Project to the general public, I have tabled at national conferences in Boston, Amherst, and Chicago and formed relationships with outreach managers at national reproductive and sexual health organizations.

Results/Outcomes: To date, the Project has increased followers on all social media platforms, successfully integrated use of new social media software, incorporated its first Leadership Program cohort, built stronger relationships with existing organizations, and formed more relationships with reproductive and sexual health agencies.

MATERNAL & CHILD HEALTH

Name: Boyd, Charlotte
Practicum Site: Partners in Sex Education
Location: Newton, MA United States
Title: Conference Co-coordinator & Educator

Introduction: Partners in Sex Education (PiSE) is an organization dedicated to providing comprehensive sexuality education that is age and stage appropriate to youth throughout the greater Boston area. The curricula designed to involve families and promote communication includes topics such as healthy relationships, puberty, STDs, contraception, and gender & orientation.

Methods: Working as a team and independently, I have two roles: Conference co-coordinator and Educator. As conference co-coordinator my role is to promote PiSE's Networking & Community Building Conference, solicit sponsorship and donations, procure food & materials for participants, and monitor and manage during the course of the conference. In addition, present my own workshop on online healthy relationships and provide strategies other educators can use to engage youth in their social media use and decision-making. As an educator I use established and self-created lesson plans to teach youth on a variety of topics related to sexuality education.

Results/Outcomes: Sexual health is an important part of overall health. Therefore, it is important educators have the resources and information they need to provide accurate and comprehensive information. PiSE's conference is one of the ways we can help these educators. At the end of this practicum PiSE will: 1) Possess a database of local health and wellness educators; 2) Possess a database of potential donors and text for future donation requests; 3) Gain a greater presence in the community through advertising and PR; 4) Gain additional curricula on topics that are currently lacking.

Name: Costanzo, Corey
Practicum Site: The Chill Foundation
Location: Burlington, VT United States
Title: Youth Development Intern

Introduction: Adolescents constitute a vulnerable population in urban underserved areas. As an intern, I coordinated a youth development program serving Boston underserved youth. This program's mission is to build self-esteem and life skills through snowboarding. Each season the Burton Chill Foundation serves 100 adolescents ages 10-16 from Roxbury, Dorchester, Mission Hill, and South Boston. This season three deaf children from Framingham and five children from Worcester also participated. Many adolescents in Chill are in foster care or state custody, have behavioral problems, or social/emotional issues.

Methods: Lessons were completed on the bus and reinforced on snow. Each week had a theme: patience, persistence, responsibility, courage, respect, and pride. I managed volunteers, helped in grant writing, and taught lessons. I organized fundraising events, entered pre and post program questionnaire data, and conducted a program evaluation.

Results/Projected Outcomes: The goal of Chill is to instill self-esteem, confidence, and self-efficacy. Outcomes included providing data about underserved populations and how to better serve these youth. Recommendations included completing lessons before the bus ride to ensure participation, allowing participation for multiple seasons, and generating a follow-up method, such as an alumni volunteer day or through a website children can update with their accomplishments. Also recommended were adjustments on the program survey and focusing the target population by making both nights per week Boston children, or one night Boston and one Worcester/Framingham, allowing common issues present in each population to be addressed effectively.

Name: Cyr, Mallory
Practicum Site: Next Step Fund
Location: Cambridge, MA United States
Title: Program Development Assistant

Introduction: Next Step is a nonprofit organization supporting young adults living with serious illnesses. Next Step aims to give young adults who are transitioning to independence the confidence to initiate "courageous conversations" related to their future. For those with progressive illnesses, conversations may include end of life care or where they want to receive care if their condition worsens. Although palliative care may lower health care costs and prolong life, studies have shown that a barrier is families' unwillingness to accept it. In collaboration with Courageous Parents' Network, a video is being created, discussing the value of palliative care teams in transition and how conversations should be initiated and conducted.

Methods: I conducted research to find data regarding existing palliative care models and if these techniques have been incorporated in transition planning for young adults. I created scripts and questions for qualitative interviews for video content, and worked to identify parents, providers, and young adults with diverse diagnoses and experiences to share insight regarding accessing palliative care services, and appropriate ways to create dialogue.

Results/Projected Outcomes: Little is known about the impact of palliative care on the quality of life for young adults. This project has raised awareness, and continues to shift focus from end of life to quality of life for youth and their families. The video will be added to the existing library within Courageous Parents Network and used as a tool for providers and practices interested in strengthening transition processes for young adults with complex conditions.

MATERNAL & CHILD HEALTH

Name: Fuqua, Stephanie
Practicum Site: Boston Medical Center
Location: Boston, MA United States
Title: Pediatrics Quality Improve Intern

Introduction: As part of the quality improvement team in the Department of Pediatrics at Boston Medical Center, I assisted in a project aimed to modify the NAS pharmacy algorithm to reduce infant length of stay. At BMC's Project RESPECT, women with substance abuse disorders are offered obstetric care and many of the infants born to these women are prenatally exposed to prescribed or illicit opioids. As a result, some of these newborns experience Neonatal Abstinence Syndrome (NAS) where they can experience withdrawal symptoms. NAS often requires morphine treatment and results in an extended hospital stay averaging 10-30 days at BMC. The purpose of this practicum was to track patient data and to continuously learn from, modify, and test the NAS algorithm until a final protocol is implemented.

Methods: I worked with the Pediatric Quality Team: 1. to learn quality improvement theories and strategies using the IHI Model for Improvement; 2. to track patient data through in-depth chart audits using Epic Systems; and 2) to analyze the patient progress using run charts to further investigate the algorithm.

Results/Projected Outcomes: As patient data is continuously analyzed and critical thinking is done around additional interventions to reduce length of stay, a final protocol will be implemented within the Department of Pediatrics at BMC. It is projected that this algorithm will result in a reduced length of stay for infants with Neonatal Abstinence Syndrome, as well as the best treatment plan for every child.

Name: Hudson, Dantia
Practicum Site: Boston University Fitness and Wellness Center at Blackstone
Location: Boston, MA United States
Title: Graduate Assistant BU FitWell at BCYF Blackstone

Introduction: According to the Boston Public Health Commission (BPHC), one-third of all Boston Public high school students had a Body Mass Index (BMI) considered overweight or obese. However, when broken down by race/ethnicity, 35% of Black and Latino students had BMI scores within these ranges compared with 27% of White students. Access to nutritious foods, recreational opportunities, decent housing, and safe neighborhoods has an impact on community obesity levels. In an attempt to decrease the disparity between Boston communities, Boston University partnered with the Blackstone Community Center to create the Boston University Fitness and Wellness center (BU FitWell). Located within the South End and Lower Roxbury community, the Blackstone Community Center is currently surrounded by 6 housing developments. Collectively, these housing developments house 1,328 family units, all within walking distance of the fitness center. The purpose of this practicum was to collect quantitative data to determine current barriers faced by residents prohibiting their use of the fitness center.

Methods: Practicum activities included: 1) Survey development 2) Data Collection, 3) Data Analysis. Surveys were administered in various community spaces within the South End community with an emphasis on teenagers ages 14-18.

Results/Outcomes: After the community surveys have been collected, an analysis will be conducted using a statistical software program. Programmatic recommendations will be provided to the Blackstone and Boston University staff in order to gain a better understanding of service gaps and barriers to access of those in the targeted region.

Name: Jensen, Tenille
Practicum Site: Planned Parenthood League of Massachusetts
Location: Boston, MA United States
Title: Internal Training Intern

Introduction: In collaboration with program staff, I developed a sexual education toolkit for Planned Parenthood League of Massachusetts' (PPLM) health care providers. The toolkit showcases best practices within the clinical setting that facilitate effective adolescent sexual health care. This toolkit was designed to serve as a comprehensive resource for clinical staff in facilitating an environment in which adolescents regard sexual health as important, and health care providers as a trusted and utilized source.

Methods: I began by creating a literature review of best practices found within adolescent sexual health. The Internal Training Department then collaborated with youth from PPLM's high school Get Real Teen Council and college Campus Organizing Program in order to identify gaps in adolescent sexual health care and the barriers adolescents face. The toolkit was introduced and taught to PPLM clinical staff by our Youth Advocates during our Youth-Friendly Services Training on March 4th.

Results/Next Steps: Overall, 64.71% of the clinical staff who attended the training strongly agreed that the training materials were useful and found the information on mandatory reporting the most insightful component. In addition, 58.81% strongly agreed that the toolkit identified the needs of young people accessing sexual and reproductive health care. The integration of this toolkit into PPLM's clinical sphere bridges the gap between health care providers and their adolescent patients by improving the cultural competency of providers and the overall delivery of sexual health services. The continuation of this project will further strengthen PPLM's comprehensive care to adolescents and partnerships throughout the Greater Boston medical community.

MATERNAL & CHILD HEALTH

Name: Leahy, Kathleen

Practicum Site: Boston Healthcare for the Homeless Program

Location: Boston, MA United States

Title: Improving Rates of Colorectal Cancer Screening In Respite Patients at Barbara McInnis House

Introduction: As part of the research team at Barbara McInnis House, a Boston-based respite center for homeless patients run by Boston Healthcare for the Homeless, I participated in a Quality Improvement Project aimed at improving rates of colorectal cancer (CRC) screening with FIT (fecal immunochemical testing) among patients staying in respite. Colon cancer is the third most diagnosed cancer among men and women in the United States. Screening for colon cancer, beginning at age 50 or earlier for those with family history, allows for the identification and removal of pre-cancerous lesions and has been shown to reduce deaths from CRC. The homeless population often lacks access to health care and receives little in the way of preventative care or cancer screening. Our study targets eligible homeless patients who are staying in respite, where FIT testing can take place more easily and FIT cards are collected directly by respite staff.

Methods: I conducted an extensive literature review and met with several stakeholders to determine ways to improve CRC screening in respite. We developed an intervention and conducted one PDSA cycle.

Results: After one PDSA cycle, we have observed an increase in the number of FIT tests given to patients, from an average of 9 per month to 47 in the month of March 2015. We plan to conduct further PDSA cycles with the goal of developing a sustainable CRC screening program at Barbara McInnis House.

Name: Moccia, Anthony

Practicum Site: ROCA

Location: Chelsea, MA United States

Title: Data Analyst

Introduction: For my practicum I served as a data analyst at Roca, Inc. in Chelsea, Massachusetts. Roca's mission is to disrupt the cycle of incarceration and poverty by helping young people transform their lives. Roca serves two main populations: young men involved in the criminal justice system, and young mothers. As a data analyst at Roca, I am working directly with the data from the High Risk Young Moms Program (HRYMP). My job is to assist with analysis and organization of program data.

Methods: The first activity is analyzing data from the High Risk Young Moms Program (HRYMP) using SAS. Statistical analysis will be run to assess program effectiveness. Another activity is producing an annotated bibliography on the topic of how to measure mother-child interaction. The purpose of this project is to provide easy access to resources that will enable smoother grant writing and study design. The last activity is assisting in transferring Roca's data from multiple database into one database. This will help the program with organization of data.

Results/Outcomes: The projected outcome from the data analysis of the HRYMP data is to have an assessment of the program effectiveness in terms of the main outcome which is work force readiness. The analysis will assess program effectiveness. Another projected outcome is providing an in depth annotated bibliography to be used as a resource for future grant writing. The last projected outcome is an organized data base. This projected outcome will provide the organization with a more organized and an easily accessible database.

Name: Morrissey, Laura

Practicum Site: Friends of the Children - Boston

Location: Boston, MA United States

Title: Evaluation Intern

Introduction: Friends of the Children – Boston (Friends-Boston) is a non-profit organization whose mission is to promote generational change by providing 12 years of transformative, comprehensive mentoring to youths from high-risk communities. The overarching goal of the services provided by Friends-Boston is for their youths to graduate high school and succeed in college.

Methods: In collaboration with the Director of Program and Evaluation as well as the Development and Evaluation Associate, my role within Friends-Boston was to help with the evaluation component of the program. My work was focused primarily on structuring and framing questions used to evaluate youth progress as well as on designing an assessment that was used to evaluate program performance in regards to the use of social work interns as mentors. In addition, one long-term goal of Friends-Boston was to incorporate group mentoring into their current model. I contributed to the development of the structuring and evaluation processes of this component of the program.

Results/Outcomes: By the end of the semester, Friends-Boston was able to evaluate their program performance as it related to their use of social work interns as mentors, and gain valuable insight into how to improve this part of their program. As we moved our data collection to a new database, we were also able to restructure some of the assessments that were being used to track youths' progress.

MATERNAL & CHILD HEALTH

Name: Pezzoni, Ashleigh
Practicum Site: Boston University School of Public Health
Location: Boston, MA United States
Title: Student Intern

Introduction: As part of the research conducted through the Department of Community Health Sciences at Boston University School of Public Health, I assisted on a study on teen dating violence, Project RealTalk. The goal of Project RealTalk is to determine the effectiveness of a brief motivational interview-style intervention with youth ages 15-19 years old. The purpose of this practicum was to gain skills related to longitudinal follow-up with a hard to reach population. My role was to conduct contact checks and also to collect primary data (i.e., follow-up surveys), as well as determine ways to minimize loss to follow-up within our study population.

Methods: I worked with the lead research assistant of the teen dating violence study: 1.) to communicate with participants to ensure correct forms of communication; 2.) to meet with participants to conduct 3-month and 6-month follow-up surveys; 3.) to determine the most effective way to communicate with participants: phone call, text, email.

Results/Outcomes: The contact checks are a necessary component to the Real Talk study to minimize loss to follow-up, and provide researchers with the best form of communication for the participant. The follow-up surveys will continue to take place until the end of the study in order to determine the efficacy of motivational interviewing as an intervention strategy with teens.

Name: Potter, Allison
Practicum Site: Homeless Prenatal Program
Location: San Francisco, CA United States
Title: Families Moving Forward Intern, Homeless Prenatal Program

Introduction: The Homeless Prenatal Program (HPP), a family resource center located in the Mission neighborhood of San Francisco, CA, provides peer-based case management, health education, and community based programs that focus on housing assistance, parental support, child development, educational advancement, substance abuse, domestic violence, family unification, and emergency support of basic needs. The Families Moving Forward Program is a five-year demonstration grant that provides intensive case management, housing, and other services through the supportive housing model to high-risk families in the child welfare system. The projected outcomes are to reduce child welfare contacts; reports of child maltreatment, child removals, and time in foster care and foster care placements.

Methods: Practicum activities included: 1) Assisting team case managers in direct service activities such as health education, housing searches, Section 8 applications, and navigating case plans; 2) Interviewing/surveying staff and clients about the program, services provided, and delays in process; 3) Conducting a literature and resource review, assessing capacity, and creating a curriculum for a workshop/new programming on life skills development; and 4) Implementing this workshop for the general pool of clients and preparing the program for implementing the workshop at a supportive housing unit that will be acquired.

Results/Outcomes: Practicum work resulted in the reduction of activities of team case managers with growing caseloads. This provided me with exposure to intensive case management within the supportive housing model. Deliverables included the establishment of the life skills workshop, which streamlines case management activities to clients and prepares clients for permanent housing, parenting, and household management.

Name: Scannell, Megan
Practicum Site: Ibis Reproductive Health
Location: Cambridge, MA
Title: Ibis Reproductive Health- Research Intern

Introduction: Ibis Reproductive Health is an international nonprofit that performs clinical and social science research on reproductive health issues. This project's goal was to gather the policies regarding reproductive health care for military servicewomen, including coverage and provision of contraceptives and abortion, in order to compare the current policies of the United States to other countries and analyze any global trends or norms across countries. Policies and issues that pertain to women serving in militaries are often neglected and controversial, as women are a minority in most militaries.

Methods: Data was sought from 74 countries that 1) allow women to serve in the military and 2) have legalized abortion. A range of indicators was surveyed including questions regarding general health care coverage, coverage for contraception and abortion, and provision of abortion for women serving in their country's military- domestically and during deployment. Recruitment included researching and sending the survey to embassies, ministries of health and defense, military hospitals, NGOs, and researchers of military health. Data was collected, organized and coded to compare the responses of different countries and elicit meaningful themes.

Results/Projected Outcomes: This data should create the first compilation of all international military reproductive health policies. For the first time, it will be possible to identify trends and gaps among global reproductive health care for servicewomen. When data collection is completed, it will be summarized to create a publicly available report. These findings will be used to inform United States military policies and help inform other countries as to how their policies compare to other nations.

MATERNAL & CHILD HEALTH

Name: Zhang, Yan

Practicum Site: Boston Medical Center

Location: Boston, MA United States

Title: Data Entry and Analysis Research Assistant

Introduction: Women with intellectual disabilities (ID) get breast cancer at the same rate as women without disabilities, but have much lower rates of getting regular mammograms. Their higher rates of breast cancer deaths is probably due to breast cancers being discovered later, when cancer it's harder to treat. Women with ID face important barriers to getting regular breast cancer screening. Our team has worked collaboratively with women with ID to develop DVD-based education about breast cancer screening for self-advocates, direct support workers and family members. The DVDs have been evaluated and shown to be effective, however, we lack knowledge about the best ways to provide cancer screening and health education to women with ID. In this study, we explored how women with ID prefer to receive cancer screening information, and how we can effectively help women with ID and their supporters feel empowered to get regular mammography. Our findings (Comparing 3 groups: only receive DVDs, receive DVDs + skype session with clinician, and receive DVDs + patient navigator visit) have important implications for how to best address inequity in breast cancer screening. Our results could also be applied to other health topics, to address other gaps in health care for people with ID.

Methods: The activities i have done so far are data collection and data entry. Accurate interviewing/data collection and data entry are critical for the analysis of the effectiveness of the program and assessing the best method for the ID population in mammogram advocate.

Results/Outcomes: In progress

SOCIAL & BEHAVIORAL SCIENCES

Name: Chiao, Christine

Practicum Site: Boston University School of Social Work

Location: Boston, MA United States

Title: Research assistant for the Asian Women's Health Initiative Project at the BU School of Social Work

Introduction: The Asian-Women's Health Initiative Project (AWSHIP), based at the Boston University School of Social Work, aims to better understand the mental health and sexual health of young Asian-American women. Our current project aims to assess mental health care utilization among young Asian-American women who are sexual minorities. Additional information is needed to assure that that mental health interventions for this population will be developed for culturally appropriate for use. The purpose of this practicum was to assist with this research endeavor.

Methods: Practicum activities included: 1) Analysis of cross-sectional data on 701 Asian-American women aged 18 to 37 residing in the greater Boston area; 2) Utilization of the data for the crafting and submission of an academic journal article; 3) Organization of the data analysis and results will be utilized for writing a current IRB submission and future grant proposal.

Results/Outcomes: 18.4% participants identified as being lesbian or bisexual. Statistical analysis showed that identifying as lesbian or bisexual is significantly associated with increased odds of experiencing psychiatric diagnosis, depressive symptoms, and suicide ideation in the last year. Models also indicated that status as a sexual minority is significantly associated with increased odds of any access to mental health care in the past year, and forgone medical care.

Name: Chung, Emma

Practicum Site: Brookline Department of Public Health

Location: Brookline, MA United States

Title: Tobacco Control Program Intern

Introduction: The Brookline Department of Public Health Tobacco Control & Prevention Program aims to limit youth access to tobacco products, provide technical assistance for multi-unit residential buildings that want to go smoke-free, connect residents to resources on smoking cessation, and work with local high school students to challenge tobacco industry tactics aimed at youth. The purpose of this practicum was to contribute to efforts that reduce youth access to tobacco products through enforcement of the new tobacco flavored product ban.

Methods: Practicum activities included: 1) Determine which tobacco cigarillos are potentially flavored and on the market 2) Create a database of banned flavored products 3) Recruit youth via advertisements in the paper and posters in the high school for compliance check, and 4) Conduct inspections of various retailers to maintain adherence.

Results/Projected Outcomes: Retailers of tobacco products now utilize this database to determine which products they can put on their shelves. Recruited youth now conduct compliance checks of all retailers. Retailers are given compliance posters during inspections and reminded about compliance checks and current tobacco policies.

Name: Coleman, Sarah

Practicum Site: Massachusetts General Hospital

Location: Boston, MA United States

Title: Project Coordinator

Introduction: Cancer is a major public health problem in the United States, and routine screenings are an important part of cancer prevention. However, research has shown that cancer screening may lead to distress, deterring people from adhering to recommendations. There is limited research on the subject and no comprehensive systematic review of distress within or across different types of screening and cancers. This review examines to what extent distress is a potential barrier to adherence to the U.S. Preventive Services Task Force Recommendations on cancer screenings.

Methods: A systematic review of English articles was done through academic search engines Ovid MEDLINE (1946 to present) and PsychINFO. The review considers the levels of psychological distress in different types of screening from randomized controlled trials and observational studies in the United States with adults over 18. Only studies with distress measured two weeks before or within one month after cancer screening were included.

Results/Outcomes: 5,388 articles were initially found using the databases. Using a systematic coding scheme of inclusion and exclusion criteria, 2,928 studies were discarded by title and 2,194 were discarded by abstract. 148 articles were final review to determine their eligibility for data extraction. As of present, 27 studies are being extracted and summarized following a systematic scheme. The first studies analyzed were breast cancer and mammography screenings and show varying levels of distress. Identifying levels of distress across various screening protocols and diagnosis can inform policy around cancer screening recommendations for the US.

SOCIAL & BEHAVIORAL SCIENCES

Name: Daoui, Halla

Practicum Site: Boston Children's Hospital,

Location: Boston, MA United States

Title: Healthmap Graduate Intern

Background: HealthMap, a real-time infectious disease tracking system based at Boston Children's Hospital, informs hypotheses regarding epidemiology and transmission dynamics. Middle East Respiratory Syndrome Coronavirus (MERS-CoV), a new viral respiratory illness, is currently under surveillance. In 2012, the first case of MERS was reported in Saudi Arabia (KSA). MERS appears to be endemic to Arabian Peninsula area, and the majority of cases are from KSA. An additional 974 MERS cases has been diagnosed and 422 (greater than 40%) of those persons diagnosed died. Much is still unknown about MERS-CoV and the mechanism by which MERS spreads is unclear though zoonotic transmission is a hypothesized means. MERS-CoV is also associated with various comorbidities that include renal and kidney diseases. The purpose of this practicum was to assist the research activities associated with better understanding its epidemiology and environmental elements.

Methods: Practicum activities included: 1) collaborative data collection of greater than 1000 reported MERS cases from various countries; 2) with a focus on KSA, access and review of multiple secondary data sources to identify multiple status variables regarding gender, age, healthcare history, heart failure, renal disease, diabetes, and symptomatic and asymptomatic nature; and 3) Data analysis that explored themes associated with outbreak and sporadic cases, gender and age distribution, and risk factors of mortality.

Results: Data analyses continues and work on multiple publication related to outbreak and sporadic cases, survival analysis, and reproductive number of MERS continues. Currently available information pertains to abnormal age distribution of MERS, and discussion of hypothesized behavioral drivers of MERS transmission.

Name: Faraone, Cleo

Practicum Site: Oregon State University Reproductive Health Lab

Location: Corvallis, OR United States

Title: ManaStats Validation Project Intern

Introduction: ManaStats database, operated at the Oregon State University Reproductive Health Lab, is the largest source of information on known outcomes for out of hospital births in the U.S. It compiles data on midwife attended homebirths and allows comparison of the U.S. birthing system to other, more progressive countries which allow or encourage midwife attended births, with better outcomes. Use of the database is voluntary and the collection form is improved every few years including the most recent which includes more variables. The purpose of this practicum was to contribute to the data validation process.

Methods: Practicum activities included: 1) collaborate in a team process to complete the work; 2) acquire and complete data entry with one tenth (1,300) of the health charts that had been submitted; 3) develop parameters to identify ambiguous variables; and then 4) validate the data.

Results/Projected Outcomes: Completion of this project will allow for the ManaStats database to be used by other researchers and policy makers. This is particularly timely as this data suggests that homebirth is safer or as safe as hospital birth and will inform the dialogue and political debate about the value of different birth options. As midwife-attended homebirths are still illegal in many states, data analyzed will likely contribute important information that supports an increase birth options for all women.

Name: Hickson, Jonathan

Practicum Site: Boston Medical Center

Location: Boston, MA United States

Title: Research Assistant

Introduction: Historically, there has been a disproportionately higher occurrence of low birthweight pregnancies among black and African American women compared to other racial groups. Low birthweight has been associated with increased infant mortality and chronic health conditions later in life. As there are no contributing biological factors identified in this reality, a retrospective study was designed to evaluate if Centering group prenatal model can be used to successfully manage and ameliorate this health disparity between African American infants and other racial groups.

Methods: A data base of 1500 patients who had prenatal care in the Centering model and standard model at Boston Medical Center between the years of 2010-2013 was used for this project. This project is to clean the existing data for analysis. Data base data was confirmed with chart extraction for missing data were completed for 1300 prior patients and organized into a shared protected excel spreadsheet. Information was collected for number of pre-natal visits, smoking history, prior caesarian, type of delivery, history of perinatal sexually transmitted infections, and initiation of breastfeeding, length of time breastfeeding, post-partum attendance and choice of post-partum contraceptive method at 6 week postpartum follow-up visit. The data for this part of the project has been completed, but not yet compared to other centering groups.

Results: Current processes involves, matching different chart coding between survey and chart extracted data to make a comparative outcome analysis. It is the analysis will demonstrate if Centering will decrease pregnancy complications for minority women who receive care at an urban academic medical center as it has in previous studies.

SOCIAL & BEHAVIORAL SCIENCES

Name: Kaur, Pawandeep
Practicum Site: Boston Public Health Commission
Location: Boston, MA United States
Title: Intern, Boston Public Health Commission

Introduction: Boston Healthy Start Initiative (BHSI) aims to reduce disparities in infant mortality and adverse perinatal outcomes by improving women's health, promoting quality services and strengthening family resilience. BHSI funds 10 sites which include community based health centers, hospitals and a health care agency focused on the homeless which primarily serves residents of the Boston neighborhoods of Dorchester, Mattapan and Roxbury. To achieve the goals of BHSI, Boston Public Health Commission (BPHC) will also work with partner organizations as members of a broad, collective impact Community Action Network (CAN). The purpose of this practicum is to create a report on the first year of CAN's progress and to provide tools and resources to create continuity between the CAN leadership meetings and membership meetings.

Methods: Practicum activities include: 1) organizing and attending CAN leadership meeting and membership meetings; 2) developing templates for CAN meeting notes and work group gatherings; 3) synthesize meeting notes to create action steps and disseminate work plans; and 4) integrate data from the four different working groups into one cohesive document.

Results/Outcomes: It is anticipated that the report will help identify strategies that mitigate the barriers that working groups likely will encounter while implementing the annual agreed upon mission of the CAN. It will also highlight resources and anticipated time commitment required for each group to effectively complete assigned tasks.

Name: Kendall, Owen
Practicum Site: Martha Eliot Health Center
Location: Jamaica Plain, MA United States
Title: Researcher on the interrelationship between grassroots fitness and community wellness (Grassroots fitness in Boston: an exploratory evaluation)

Introduction: Physical activity promotion has emerged as a public health priority. Grassroots community fitness programs have emerged as a promising approach. However, no studies to date have evaluated their defining characteristics or impact.

Objectives: 1) Develop an operational definition of grassroots community fitness based on shared program characteristics. 2) Identify unique attributes of grassroots community fitness relevant to physical activity promotion. 3) Explore potential impact mechanisms based on qualitative data gathered from a sample of grassroots community fitness participants.

Methods: Conducted interviews with 25 participants of November Project (NP), a grassroots community fitness program based in Boston, MA. Interview questions evaluated NP's impact on participants' physical activity and their overall physical, mental, and emotional well-being. To evaluate shared characteristics among grassroots community fitness programs, Google Scholar was used for an Internet search. Keywords included community, fitness, grassroots, free, group, and workout.

Results/Outcomes: Presently completing interviews and analyzing data. Preliminary findings suggest grassroots community fitness programs commonly include free/no-cost participation, decentralized leadership, an emphasis on social networking, and utilization of existing built environment infrastructure. NP participants identified social networking as a primary source of engagement, alongside peer support. Participants reported the impact of NP on their physical and emotional health as overwhelmingly positive. Grassroots community fitness holds promise as a scalable approach for promoting physical activity. Utilization of social networking may have additional benefits beyond physical activity alone. Further research is needed to clarify the impact of grassroots community fitness on population-level physical activity.

Name: Mehta, Hasti
Practicum Site: Boston Medical Center
Location: Boston, MA United States
Title: BMC Digital Media Intern

Introduction: Boston Medical Center and its associated 15 community health centers network provide care for the diverse populations in the city of Boston. An academic medical center of this magnitude embraces a broad range of communication mechanisms among multiple components. The purpose of my practicum was to contribute to these efforts while enhancing my health digital media communication skills in a hospital setting.

Methods: Practicum activities included assisting with the following initiatives: 1) Web design and development of a web communication strategy, 2) Pre-/post-production work on a patient experience film, 3) Implementation of a visual documentation strategy for an internal emergency preparedness training program, and 4) Employment of new technologies and methods to create digital content for hospital staff.

Results/Outcomes: My professional capacities to apply social and behavioral science principles were enhanced in several process areas: assessment, project development including pre-/post-production work, budget creation, team management, web/media implementation of digital media technologies, and creation of a final training video that highlights appropriate behaviors during an emergency situation. I also learned how to interact with key stakeholders to further the goals of the hospital's emergency preparedness program.

SOCIAL & BEHAVIORAL SCIENCES

Name: Sforza, Nicole

Practicum Site: Fenway Institute - Fenway Community Health

Location: Boston, MA United States

Title: Program Logic Model and Evaluation Plan Development Practicum/Epidemiology Team Intern

Introduction: Partner STEPS, developed by members of the Epidemiology Team at The Fenway Institute, is a couples-based intervention for serodiscordant male couples with the goal of increasing linkage to care, retention in care, and treatment adherence to attain viral load suppression for the HIV positive and to decrease the frequency of seroconversion within the relationship. The Partner STEPS intervention encourages male-male couples to anticipate potential barriers to HIV care and medication adherence and problem-solve solutions through two one-hour couple-based sessions and weekly phone calls. The purpose of this practicum was to create a process evaluation plan for the intervention pilot study that will be implemented Spring/Summer 2015.

Methods: Development of the evaluation plan included several activities: 1) construction of a logic model in conjunction with intervention authors; 2) construction of survey tools to be administered to participants to understand effectiveness of intervention delivery, helpfulness of intervention materials, and interventionist competence; 3) construction of survey tools to be administered to interventionists after training to assess satisfaction; and 4) offer suggestions for improved recruitment and intervention delivery tracking.

Results/Outcomes: Quantitative and qualitative feedback will be utilized to improve intervention materials and delivery. Dissemination of findings will inform any future implementation of the Partner STEPS intervention.

Name: Shaw, Emily

Practicum Site: MA Department of Public Health

Location: Boston, MA United States

Title: Intern, Massachusetts Department of Public Health; Bureau of Family Health and Nutrition; Division of Pregnancy, Infancy and Early Childhood

Introduction: Massachusetts is one of eleven states that has adopted the Center for the Social and Emotional Foundations of Early Learning (CSEFEL) Pyramid Model Framework to promote the social emotional development, competence, and school readiness of young children birth to age 5. The Massachusetts Department of Public Health, Division of Pregnancy, Infancy, and Early Childhood facilitates training sessions for early childhood caretakers as well as an annual summit to improve professional infrastructure surrounding the Pyramid Model. The purpose of this practicum was to assist with these efforts.

Methods: Practicum activities included: 1) preparation of presentations and materials necessary for caretaker training sessions, 2) participation in inter-agency meetings and conference calls to discuss and plan the Pyramid Model Summit, and 3) contribution to a Summit presentation about the use of the Pyramid Model in Massachusetts.

Results/Outcomes: The caretaker training, "Understanding and Supporting Children Impacted by Trauma" has been conducted at five separate sites, reaching about 100 participants. The Third Annual CSEFEL Pyramid Partnership Summit will take place on April 27, 2015, with approximately 200 attendees. The practicum also provided exposure to the daily setting and tasks of state government employees who focus on early childhood issues in public health.

Name: Suridis, Elaina

Practicum Site: Boston Children's Hospital Pediatric Research

Location: Boston, MA United States

Title: Research Assistant for Program in Sudden Unexpected Death in Pediatrics

Introduction: Sudden unexpected death in pediatrics is the sudden death of a child or infant that is unexplained after a review of the medical history, autopsy, and death scene investigation. As part of a research program that is offered to families around the world at no cost, the team reviews medical records, autopsy reports, and a complete history on the immediate and extended family to help participants understand, to the greatest extent possible, how this terrible tragedy may have happened. The goal of performing this research is to determine the mechanisms and causes of sudden death in children.

Methods: I worked alongside the study coordinator and physicians to: 1) develop an extensive list of characteristics to gather information on and study, including exposure, illness, treatment, genetics, and behavior, 2) create a REDCap research database, 3) enter data, and 4) look for trends.

Results/Outcomes: The over-riding hypothesis is that sudden and unexplained death in infants and children is comprised of a group of disorders that can be defined by careful analysis of the cases, based upon autopsy report, materials collected by the medical examiner, medical records, and an extensive family medical history. At the conclusion of the program there will be a greater understanding of sudden unexpected death in pediatrics, highlighting underlying risks and vulnerabilities.

SOCIAL & BEHAVIORAL SCIENCES

Name: Swerdlow, Benjamin

Practicum Site: City Of Revere, Healthy Community Initiatives, Revere on the move

Location: Revere, MA United States

Title: Revere on the move healthy markets intern

Introduction: The city of Revere, MA is implementing the Healthy Markets Initiative, an effort aimed at reducing obesity and fostering nutrition in food deserts throughout Revere. The effort strives to improve healthy nutrition by promoting the sale and consumption of fresh fruits and vegetables in corner stores throughout the city. The purpose of this practicum was to participate in assessment, planning and implementation efforts.

Methods: Assessment activities included determining the variety of healthy products the stores offer, and owners' willingness to stock fresh fruits and vegetables. A small scale community assessment will gauge local residents' behaviors and attitudes regarding fruit and vegetable consumption. Planning activities included identifying implementation strategies for Revere Food Week, an event in which healthy corner stores have the opportunity to promote their products to the public. This includes recruitment of healthy corner stores. Implementation activities included posting signage that promotes healthy products within stores, assisting healthy stores with SNAP applications and helping these markets to start websites that increase sales.

Results/Outcomes: Several outcomes are anticipated, including: increased access and sale of fresh fruits and vegetables in Revere food deserts and improved agency capacity to address nutritional public health challenges

Name: Walter, Ashley

Practicum Site: Boston University School of Public Health

Location: Boston, MA United States

Title: Research Assistant

Introduction: Healthy People 2020 recognizes early childhood caries as a serious and increasingly prevalent disease affecting young children in the United States. Disparities in oral health status and access to care warrant the need of new approaches to reduce dental caries among children, including the integration of oral health into pediatric primary care. Boston University School of Dental Medicine's Center for Research to Evaluate and Eliminate Dental Disparities (CREEDD), in collaboration with the University of Maryland School of Dentistry, is studying the barriers and facilitators of oral health integration in six federally qualified health centers (FQHCs), three in Massachusetts and three in Maryland, that provide pediatric well-child care. In this two-state, multi-site qualitative study, numerous key-informant interviews and multiple direct observation site visits were conducted to assess oral health integration.

Methods: Activities as the team's research assistant included: 1. Assisting in the development and formatting of quantitative data spreadsheets, key-informant interview questions, and direct-observation checklists for six FQHCs; 2. Aiding in formulating and finalizing list of codes used to code transcribed interviews in NVivo Qualitative Data Analysis Software; 3. Coding 16 transcribed key-informant interviews from the six FQHCs; 4. Assisting in theme development and analysis of qualitative data; 5. Co-conducting three direct observations in FQHCs in Massachusetts.

Results/Outcomes: Once analysis of data is completed, a final report will be written, highlighting the barriers and facilitators of oral health integration into pediatric primary care, proposing suggestions for uses of current resources, and supporting future policy development.

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