

**Boston University** School of Public Health

# Student Practicum Abstracts

Summer 2015



# BUSPH STUDENT PRACTICA SUMMER 2015

The BUSPH Office of Public Health Practice is pleased to present the Summer 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?*

**29 Cities and Towns**  
**9 States across the U.S.**  
**11 Countries**





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**Name:** Mohammad Eslami  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA  
**Title:** Intern

**Introduction:** The goal of our study was to construct and validate a robust risk prediction model for patients undergoing carotid endarterectomy (CEA).

**Methods:** Vascular Group of New England (VSGNE) and Vascular Quality Initiative (VQI) databases were queried for patients who underwent CEA. Pre-operative variables as well as use of statins, beta-blockers, urgency of the operation and symptomatic neurological status were entered into a logistic regression model as predictors of the composite adverse outcomes. Backward elimination (alpha level of 0.2) was then used to select a more parsimonious model. Calibration was performed to measure how closely predicted outcomes agree with observed outcomes. The predictive value of the model was assessed via C-statistic. The external validation was then performed using VQI sample after excluding those in VSGNE sample (VQI-VSGNE) following similar method. Chi-square test was used to compare the two groups.

**Results/Outcomes:** A significantly higher rate of adverse outcomes was noted for the VQI sample (5.21%, n=12,075) compared with VSGNE sample (4.49%, n=8,661) ( $p < 0.017$ ). The discriminating ability of the model on the VSGNE is substantial ( $C = 0.712$ ) and the model fit is good (Hosmer-Lemeshow lack of fit test  $p = 0.494$ ). The discriminative ability of the VSGNE model remained substantial in the external data (VQI-VSGNE) ( $C = 0.703$ ). This externally validated model provides a simple and reliable method to risk stratify CEA patients using their pre-operative conditions. A risk score based on this model can reliably stratify patients according to their risk of adverse outcomes after CEA.

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**Name:** Adam Garcia  
**Practicum Site:** Tufts University  
**Location:** Boston, MA  
**Title:** Active Schools Acceleration Project Research and Evaluation Intern

**Introduction:** Childhood obesity is a prominent public health concern and is especially pronounced among marginalized populations. ChildObesity180 is an organization at Tufts University Friedman School of Nutrition Science and Policy aimed at identifying effective approaches, and meaningfully implementing initiatives to reduce childhood obesity. Working with the research and evaluation team, I worked to collect and compile data from an ongoing study, manage and compile past survey data, assess accelerometry literature for data adjustment methods, and statistically analyze accelerometry data from an RCT.

**Methods:** Data Collection: Following training, site visits were made to schools in Gloucester and Everett, MA, to collect data for the Fueling Learning through Exercise (FLEX) study, which was then cleaned and entered into a database using standardized protocols. Survey Aggregation: After identifying the necessary dataset and relevant SAS program files, I worked to develop a SAS program linking multiple stages of survey data and an external demographic dataset by school name, handling issues created by user-generated input. Literature Review: A brief literature review was conducted to explore and identify the best practices for accelerometer data error variance reduction. Statistical Analysis: Accelerometer-derived variables were adjusted for within-subject variance and for the effect of wear-time, using methods informed by the literature review. Statistical analyses were conducted upon baseline data from the study using SAS 9.4

**Results/Outcomes:** Significant protective effects were found between vigorous activity/ moderate-to-vigorous physical activity (MVPA) recommendations and participant BMI-z score. Dietary variety was found to be significantly and inversely associated with BMI-z score when adjusted for MVPA.

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**Name:** Daniel Gu  
**Practicum Site:** Blue Cross Blue Shield of Massachusetts  
**Location:** Boston, MA  
**Title:** Actuarial Intern

**Introduction:** High medical expenditures have been driven in part by high-cost cases and conditions. At Blue Cross/Blue Shield of Massachusetts (BCBSMA), beyond traditional pricing /reserving roles, the Actuarial & Analytic Services department works to accurately project medical expenses resulting from these high-cost conditions. In addition to forecasting future expenses, the department is involved in prevention/wellness programs to improve the overall health of the member population. As a part of this, Health Risk Assessments (HRAs) are analyzed to assess participation and outcomes in these programs. Results are reported to accounts to help set goals for improvements in their wellness participants.

**Methods:** I worked on three projects over 13 weeks. (1): I summarized cost trends and projections using Visual Basic and SAS/SQL macros to pull data from a database and generate Excel reports based on ICD-9 codes for high cost claimants/conditions (HCCs). (2) I developed an Excel tool to aid in calculating "blended" trends, combining cost trends based on facility type, physician fee-for-service, ancillary/pharmacy, and capitated/global payments, leaving functionality to expand to future quarters. (3) I am working on a project to summarize HRA results for accounts, using Excel to categorize and aggregate individual level data for each account.

**Results/Outcomes:** The HCC reports will be used to assist accounts in managing and budgeting for future costs for expensive cases. The blended trends have been used to project future costs in state rate review submissions. The HRA reporting will enable BCBSMA in advising accounts about performance and future improvements in their wellness programs.

# BIostatISTICS

**Name:** Naomi Negash

**Practicum Site:** Boston Medical Center, Department of Family Medicine

**Location:** Boston, MA

**Title:** Research Assistant

**Introduction:** The Integrative Medicine Program at the Boston Medical Center Department of Family Medicine is conducting a randomized controlled clinical trial for patients who have chronic pain and depression. The study seeks to evaluate Integrative Medicine Group Medical Visits (IMGV) as a treatment for chronic pain and depression. Patients in the control group continue to seek care from their Primary Care physicians for their pain while patients in the intervention group participate in the 9-week IMGV program. The IMGV curriculum combines the well-known Mindfulness-Based Stress Reduction program created by Jon Kabat-Zinn with health education and integrative medicine therapies.

**Methods:** I evaluated both the BPI and PHQ-9 score for changes from the baseline interview to the 9-week interview. In order to assess the effectiveness of the IMGV, I ran two-sample t-tests to compare the BPI and PHQ-9 scores of both the control and intervention groups

**Results/Outcomes:** The results of the two-sample t-tests within the IMGV revealed no significant differences in BPI Severity ( $p=0.962$   $t=-0.05$ ), BPI Interference ( $p=0.704$   $t=-0.38$ ), or PHQ-9 ( $p=0.879$   $t=0.15$ ) scores from the baseline interview to the 9-week interview.

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**Name:** Rebecca Persson

**Practicum Site:** Boston Collaborative Drug Surveillance Program

**Location:** Lexington, MA

**Title:** Intern

**Introduction:** 5-alpha-reductase inhibitors (5-ARIs) and alpha-blockers (ABs) are approved to treat benign prostatic hyperplasia (BPH). The BCDSP is conducting a pharmacoepidemiological study of possible side effects of 5-ARIs, including erectile dysfunction (ED).

**Methods:** Along with the co-investigator, I conducted a nested-case control study to compare the risk of ED among users of 5-ARIs and ABs in the Clinical Practice Research Datalink, a large, prospectively collected database of clinical records. My responsibilities included study design (development and validation of outcome, exposure and covariate definitions) and analysis (case-control analyses in SAS). We identified cases of ED among a cohort of men with BPH treated with 5-ARIs and/or ABs and matched up to 4 controls to each case on age, calendar year and clinical practice.

**Results/Outcomes:** We identified 5,768 cases of ED and 23,060 controls. The adjusted odds ratio (adjOR) for ED was 0.94 [95% CI 0.85, 1.03] for 5-ARI users compared to users of ABs. Compared to AB users with less than 6 months of BPH, patients with 5 or more years of BPH had increased risk of ED regardless of exposure: adjOR for ARI users= 2.49 [95% CI 2.08, 2.97] and adjOR for AB users= 2.77 [95% CI 2.48, 3.10]. These results will inform the FDA in its decision whether to approve 5-ARIs for the prevention of prostate cancer in healthy men.

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**Name:** Emily Singeltary

**Practicum Site:** Massachusetts Department of Public Health

**Location:** Boston, MA

**Title:** Intern

**Introduction:** In 2001, the Massachusetts Department of Public Health received funding from the US EPA to develop a program to monitor bathing beaches' safety and communicate testing results to residents. As a part of this program, I collect weekly samples at 20 beaches in Wareham for laboratory testing.

**Methods:** I collect samples at a uniform depth of 3 feet. I record the time, water temperature, and weather conditions for each sample, along with the general beach conditions including presence of trash, waste solids, algae, and birds. Samples are then examined for Enterococci indicator organisms in marine water and E. coli indicator organisms in fresh water. If a sample exceeds 104 colony forming units (cfu) per 100 milliliters in marine water or 235 cfu per 100 milliliters in fresh water, a second sample is taken within 24 hours. Elevated bacteria levels in the second sample result in beach closure. If the geometric mean of 5 samples at a single beach exceeds 35 cfu /100 mL in marine water or 126 cfu/100 mL in freshwater, the beach closes.

**Results/Outcomes:** Weekly and bi-weekly sampling produced 5 marine samples above the Enterococci threshold of 104 cfu/100 mL and 3 geometric mean violations exceeding the threshold of 35 cfu/100 mL. This resulted in 7 beach closings from 5/19/15 to 7/28/15. Regular monitoring of recreational waters is an important part of preventing illness in coastal communities. Swimming in water with high levels of bacteria can cause gastrointestinal illness, respiratory illness, rashes, and other dermatological issues.



**Name:** Yashan Zhong  
**Practicum Site:** Health Dialog  
**Location:** Boston, MA  
**Title:** Analyst Intern

**Introduction:** Health Dialog is a part of Rite Aid family and is a total population healthcare service provider that offers risk-bearing entities. It provides customers with an integrated suite of services driven by powerful analytics. In the practicum, I assisted in a project called "Sentiment Analysis of Social Media (Twitter) Data by Using R". The goal of the project is to develop R source code to R functions that can mine customer sentiment and trend by data mining techniques and then re-use the R source code for any selected topic sentiment analysis.

**Methods:** This project involved a systematic literature review about data mining and sentiment analysis. Then, by using the knowledge from literature review and R skills, build up "Data import module", "Analysis module" and "Data visualization module". Finally, conduct the sentiment analysis of the social media data (Twitter data) by applying the three modules.

**Results/Outcomes:** Data import module, Analysis module and Data visualization module have been successfully developed. The sentiment analysis with topics "CVS" and "Rite Aid" have been successfully accomplished with mining customer's sentiment and opinions toward "CVS" and "Rite Aid" by classifying tweets as positive, negative, and neutral using data mining techniques. The developed modules could be used for other social media services (Facebook, Google + etc.) after updating API and modifying data clean modules or for other topics by changing the key word in the modules.

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# ENVIRONMENTAL HEALTH

**Name:** Erin Ash  
**Practicum Site:** Massachusetts Water Resources Authority  
**Location:** Chelsea, MA  
**Title:** MWRA Water Quality Intern

**Introduction:** The MWRA monitors water quality at eight Boston harbor beaches. This program provides daily water quality updates to protect public health. Beach advisories are posted if enterococci levels are too high. The EPA uses fecal indicator bacteria (FIB) to signify the presence of pathogenic bacteria and viruses in the water. The EPA may shift their indicator from the currently used FIB (enterococci and E. Coli) to bacteriophage for water quality testing. If the EPA uses bacteriophage as an indicator, this impacts wastewater monitoring from MWRA's facilities and the MWRA's harbor monitoring projects, as both are currently sampling for enterococci. The objective of this practicum was to post daily beach water quality updates and to conduct a literature review about bacteriophage as an indicator of fecal contamination in water. This project provided the MWRA with an update about current literature and implications for their water quality monitoring programs.

**Methods:** Internet-based research was conducted using peer-reviewed articles and government websites to collect information about bacteriophage monitoring in water. Beach enterococci levels were obtained daily from an MWRA laboratory.

**Results/Outcomes:** Coliphage is a bacteriophage that infects E. Coli. Coliphages are better indicators of viruses than current FIB. While some limitations for detection do exist, coliphages are a better indicator of the presence of viruses in fecal contaminated water than enterococci and E. coli. If the EPA uses coliphage as a new indicator, it will affect the MWRA's current water monitoring methods for the Boston harbor, rivers, and reservoirs and wastewater effluent.

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**Name:** Abigail Atkins  
**Practicum Site:** Lexington Office of Community Development  
**Location:** Lexington, MA  
**Title:** Improving awareness of the requirement to restrict and exclude sick food workers

**Introduction:** Every year there are approximately 48,000,000 cases of foodborne illness in the United States and many are caused by the improper handling and preparation of food by sick food workers. The Town of Lexington Office of Community Development- Health Division surveyed food establishments to ascertain if they had a plan in place to restrict or exclude ill employees. The purpose of this practicum was to develop a "user-friendly" packet that Lexington food establishments could use to design a sick food worker restriction/exclusion plan.

**Methods:** Lexington food establishments were asked on their most recent permit application whether or not they had a sick food worker restriction/exclusion plan. A follow-up survey was sent via Survey Monkey to determine the gaps in knowledge and ask the food establishment owners if they find the currently available documents from the Massachusetts Department of Public Health useful.

**Results/Outcomes:** A "toolkit" was developed based on survey results as well as conversations with food establishment owners. This toolkit includes: a letter to persons in charge explaining the general guidelines for restricting/excluding sick food workers as well the purpose of the packet, a summary of the "Employee Health" section of the FDA food code, a chart outlining the appropriate response to certain employee illnesses and symptoms, a memo for churches and charities that handle food, a template food worker illness reporting agreement and a brochure for managers. This packet will be distributed during inspections and as needed in the future.

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**Name:** Candace Hubner  
**Practicum Site:** Massachusetts Department of Public Health  
**Location:** Boston, MA  
**Title:** Shutesbury Board of Health Environmental Health Intern

**Introduction:** Shutesbury is a rural community where the population is distributed in a non-uniform manner which leads to challenges of emergency management in situations of reduced service and mobility. There is a need to identify and assist residents with critical care issues and utilize community resources in an emergent situation.

**Methods:** I adapted a list of every home address from the Emergency Management Team (EMT) of Shutesbury to strategically assign each home address to one of forty neighborhoods. I created a comprehensive survey which we sent out to all households (n=831) that included questions about critical medical conditions and volunteer capabilities. I entered data into a Microsoft excel spreadsheet and Google Earth Pro.

**Results/Outcomes:** There were 41 responses indicating serious medical conditions and 102 responses indicating different volunteer capabilities. Information regarding volunteers was used to identify 31 neighborhood organizers that will be used to relay messages during an upcoming test drill. The surveys provided insight about which areas in the town need the most assistance during times of urgent situations, and were effective in gathering information about medical conditions and volunteers. Discontinuous neighborhoods on the EMT neighborhood list were evident once I gained a visual with mapped data, and measures are being taken to check the accuracy of list. I helped draft a test drill and a meeting has been set to practice the drill. In the future, we plan to implement a test drill town-wide. We hope to share the plan with abutting rural towns in need of emergency planning.

# ENVIRONMENTAL HEALTH

**Name:** Michelle Kwock  
**Practicum Site:** Cambridge Public Health Department  
**Location:** Cambridge, MA  
**Title:** Public Health Intern

**Introduction:** The Environmental Health Unit enforces local environmental health regulations and helps people in Cambridge understand and assess potential threats from hazardous materials in their homes, neighborhoods, and workplaces. During my practicum, I was responsible for preventing vector-borne diseases, investigating body art and bodywork therapy regulations, assembling smoke-free parks Story Maps, and educating the public about environmental health topics at community events.

**Methods:** Vector-borne disease prevention involved passing the catch basin applicator exam to obtain a permit, applying approved larvicides in catch basins, checking whether the larvicides applied was effective in controlling the Culex mosquitoes, and visiting parks to ensure mosquitoes-borne disease prevention signage is up and visible. I also looked up bodywork therapy regulations for local health boards and determined whether their rationale were associated with public health, researched bodywork modalities, and created a list of bodywork establishments and therapists in Cambridge. The Story Maps required photographing the smoke-free parks and pinpointing locations. I browsed for brochures and flyers featuring environmental health topics and tabled at the Hoops 'N' Health Fair.

**Results/Outcomes:** We treated almost 6,000 catch basins in Cambridge and no larvae were found during the efficacy check. My report on whether to regulate bodywork therapy is near completion and so far, regulating consists of more disadvantages than advantages. The 36 smoke-free parks Story Maps is in development and would be available online next month. Overall, more residents are aware of the Cambridge Public Health Department and better inform of the work we do at the environmental health unit.

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**Name:** Sharon Lee  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA  
**Title:** Environmental tobacco smoke migration in multi-family housing after building energy retrofits

**Introduction:** Most exposure to environmental tobacco smoke (ETS) occurs in the home. In multi-family housing, ETS particles can move between smoking and non-smoking units due to airflow movement influenced by building characteristics, resident behavior and seasonal changes. Capturing these airflow movement complexities is challenging but necessary to quantify ETS infiltration magnitude and to identify the factors driving infiltration. The goal of the practicum is to study changes in ETS infiltration using a previously developed building simulation model.

**Methods:** We simulated a low-income multi-family housing complex using CONTAM – a building simulation program that was parameterized to represent Castle Square Apartments in Boston, MA. We tracked airflow and ETS movement across units and estimated the impact that building interventions (e.g. weatherization, energy retrofits) and human behavior (e.g. window opening, operation of localized exhaust fans) have on ETS exposure across two seasons. ETS infiltration was tracked for all adjacent apartments, allowing for quantification of the ETS source unit.

**Results/Outcomes:** Results suggest an overall reduction of ETS PM2.5 infiltration following building energy retrofits. Seasonal temperature shifts, building conditions and resident behaviors can modify infiltration magnitude and directionality into adjacent units. Work completed during this practicum contributes to the CASTLE project (A Comprehensive Asthma Simulation Tool of Energy retrofits), a simulation study with the objective of modeling the impact of building-wide energy retrofits on indoor environmental exposures.

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**Name:** Rachel Pieciak  
**Practicum Site:** Superemos Foundation  
**Location:** Esteli, Nicaragua  
**Title:** Characterization of Behaviors and Health Effects Related to Agrochemical and Pesticide Exposure in Mirafior, Nicaragua

**Introduction:** As part of a preliminary study presented to Boston University School of Public Health by Superemos, a nongovernmental organization that works closely with the local Ministry of Health (MINSa) and the Ministry of Environment and Natural Resources (MARENA), I investigated and characterized behaviors related to agrochemical exposure in Mirafior, Nicaragua.

**Methods:** Prior to my arrival in Nicaragua, I gained approval from the Institutional Review Board through BUSPH and MINSa to conduct human subjects research abroad. I conducted a comprehensive literature review to develop survey materials that would assess individual behaviors that impact an individual's exposure to agrochemicals. From this research, I developed survey materials, translated them to Spanish and obtained approval from Superemos and our partnering governmental organizations. In Nicaragua, Superemos, MINSa and MARENA designated eight communities of interest as the study population. Leaders in each community recruited individuals to participate in the study. Utilizing surveys and one-on-one interviews, I gathered information on work and individual behaviors that impact the level of exposure to agrochemicals.

**Results/Outcomes:** The data collected led to a more comprehensive understanding of the lifetime exposure to agrochemicals in this region. Information on the use, of personal protective equipment (PPE) provided an interesting opportunity for future projects to educate employers and community members on the necessity for PPE in agricultural occupations. This study prompted ongoing interprofessional relationships with national organizations such as MINSa and MARENA and local organizations such as the regional public health department, Superemos, and the university (Facultad Regional Multidisciplinaria, FAREM) in Estelí.

# ENVIRONMENTAL HEALTH

**Name:** Melissa Rodriguez-Vodak

**Practicum Site:** Superemos Foundation

**Location:** Esteli, Nicaragua

**Title:** Characterization of Behaviors and Health Effects Related to Agrochemical and Pesticide Exposure in Miraflor, Nicaragua

**Introduction:** Superemos is a non-profit organization that works closely with the Ministry of Health (MINSa) in Esteli, Nicaragua. Both organizations expressed concerns regarding the largely unregulated use of agrochemicals in the rural area of Miraflor. This project was proposed to Boston University to have students conduct a preliminary study to investigate behaviors and health concerns that may be related to agrochemical exposure in this region.

**Methods:** Superemos, MINSa and the Ministry of Environment and Natural Resources (MARENA) selected eight communities in Miraflor to recruit participants for the study. Interviews were conducted in Spanish, which consisted of a health survey, exposure behavior survey and urine dipstick analysis. I administered the health survey and performed the urinalysis in four communities.

**Results/Outcomes:** We completed 206 interviews from which we determined demographic, average and frequency data. I am responsible for reporting the following health results for all eight communities: an average composite health symptom score, the percentage of individuals receiving medical attention and where they receive it, the top three most prevalent diseases reported, and information on the types of medications people take. This information provides us with a better understanding of health and the availability of health resources for people living in these communities. This preliminary study has allowed BU students to develop interprofessional relationships with national and local organizations of Nicaragua. Additionally, since there has been limited research in Miraflor investigating this topic, this study provides a foundation for understanding agrochemical use and health in this region to inform future studies.

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**Name:** Kirby Valentin

**Practicum Site:** Superemos Foundation

**Location:** Esteli, Nicaragua

**Title:** Characterization of Behaviors and Health Effects Related to Agrochemical and Pesticide Exposure in Miraflor, Nicaragua

**Introduction:** As part of a research team comprised of four student researchers, I assisted in a study in Miraflor, Nicaragua to characterize behaviors related to agrochemical exposure and to gather data on health outcomes possibly related to exposure. The goal of this project was to better understand the health of the population and help bring safer practices related to use of agrochemicals.

**Methods:** 1.) Developed a survey to determine individual behaviors that impact exposure to agrochemicals, specifically pesticides 2.) Conducted one-on-one interviews and surveys with residents of eight Miraflor communities to better understand and characterize concerns and behaviors related to agrochemical and pesticide exposures 3.) Took urine samples as a secondary measure to assess health outcomes. The samples were used to look for evidence of kidney or liver dysfunction, diabetes, infection, or dehydration 4.) Utilized basic statistical methods to summarize behaviors related to agrochemical and pesticide exposure and health symptoms.

**Results/Outcomes:** Identified prevalent health symptoms and conditions related to agrochemical and pesticide exposures in the eight communities of interest. Created a comprehensive list of what chemicals residents are using and how often they are using them. Summarized behaviors related to exposure to agrochemicals as well as urine examination data. Provided recommendations on safer behaviors related to agrochemical use and future research in this area. As part of the team, I am responsible for presenting the results of the urine examinations.

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**Name:** Taylor Williams

**Practicum Site:** Toxics Action Center

**Location:** Boston, MA

**Title:** Student Data Analyst

**Introduction:** The town of Burrillville RI is the site of a natural gas compressor station along the Algonquin natural gas pipeline. Burrillville residents have expressed concern about the noise emitted from the station, particularly at night. Spectra Energy Corporation, the company that owns the pipeline and facility, has proposed to expand the compressor station, which would add more horsepower to the facility and likely increase the noise emissions. The overall goal of this project is to characterize the intensity and extent of noise being emitted by the Burrillville compressor station. Residents suspect that the station is already operating above permitted levels for noise. Thus, an expansion of the station may exacerbate the issue.

**Methods:** Through placement of the CEL-633 dosimeter in community member's homes, we are determining whether the fuel compressor facility is running within prescribed Federal Energy Regulatory Commission (FERC) regulations.

**Results/Outcomes:** The noise monitoring will provide the community with the data necessary to determine whether the facility is currently in compliance with regulations and estimate the noise levels that can be expected following the expansion of the compressor station. Community members may use these data to inform their communications with Spectra about the current and potential future noise levels associated with the fuel compressor facility in Burrillville.



**Name:** Lisa Abramovitz  
**Practicum Site:** Brigham and Women's Hospital  
**Location:** Boston, MA  
**Title:** Research Assistant

**Introduction:** Sarcoidosis is a systemic granulomatous disease responsible for a wide variety of symptoms and illnesses. The disease primarily affects the lungs, which are involved with more than 90% of cases. As part of the research team for a sub-study of the Nurse's Health Study II (NHSII) at Brigham and Women's Hospital, I analyzed sarcoidosis using data from the NHSII cohort. The primary purpose was to identify demographic and geographic characteristics associated with having sarcoidosis.

**Methods:** 1) I reviewed, cleaned and processed NHSII surveys, 2) conducted an extensive literature review of the etiology and epidemiology of sarcoidosis, 3) analyzed the NHSII data using SAS (descriptive statistics, t-test, logistic regression), and 4) wrote a report based on the statistical analyses findings.

**Results/Outcomes:** The analyses included 116,430 nurses. There were 114 prevalent sarcoidosis cases at baseline in 1989 and 388 prevalent cases by 2014. Nurses who had sarcoidosis at baseline and by 2014 had a higher average age (at baseline) compared to nurses without sarcoidosis (36.66 vs 34.36, 35.71 vs 34.36). Compared to white nurses, black nurses had about five times the odds of having sarcoidosis at baseline and four times the odds of having developed sarcoidosis by 2014. Geographically, nurses living in the Northeast, Midwest, and South had higher odds of having sarcoidosis, compared to nurses living in the West, with nurses living in the Northeast having the highest odds (about two-fold). These findings were statistically significant ( $P < .001$ ). In conclusion, demographic and geographic characteristics, such as age, gender and geographic location are important predictors of having sarcoidosis.

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**Name:** Valerie Banner-Goodspeed  
**Practicum Site:** Beth Israel Deaconess Medical Center  
**Location:** Boston, MA

**Title:** EPVent2: A randomized controlled trial of mechanical ventilation directed by transpulmonary pressure in patients with acute lung injury / Study Coordinator

**Introduction:** Acute Respiratory Distress Syndrome (ARDS) is a form of respiratory failure that develops in patients with other trauma and organ failures. There is no commonly accepted treatment for ARDS, and the mortality rate approaches 40%. This practicum consisted of coordinating a federally-funded, multi-center randomized clinical trial of mechanical ventilation strategies to treat patients with ARDS.

**Methods:** As part of managing the EPVent2 trial, I focused on three areas: Staff support and communications. I held bi-weekly teleconferences attended by the NHLBI Program officer and staff from all study centers. I also worked with hospitals joining our trial to get them activated and fully trained. Study material management. During this time we amended the study protocol and overhauled the electronic data collection system. Data quality. I helped evaluate data entry in real time, working with local and external study staff to ensure completeness and accuracy of data entry.

**Results/Outcomes:** Work in this practicum has had an impact at several levels: most immediately, we added an additional recruiting center and improved study documents for all study staff. At the level of the hosting institution, we have leveraged our experience from EPVent2 to secure additional federal funding. At a national level, we have used study data to inform planning of new studies in a clinical trials network. At the macro public health level, the impact remains to be seen. When the study is complete, we hope the results will inform treatment decisions for future patients with ARDS.

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**Name:** Kimberly Barrett  
**Practicum Site:** Regeneron Pharmaceuticals Inc.  
**Location:** Tarrytown, NY  
**Title:** Graduate Intern

**Introduction:** Regeneron Pharmaceuticals Inc. is in the latter stages of development for a biologic rheumatoid arthritis (RA) drug. Before submitting the drug for approval to the FDA, several scientific and economic models need to be generated in order to show the drug's benefits. One in particular is the budget impact model (BIM) which evaluates the potential economic impact resulting from the introduction of a new pharmaceutical agent. Before developing a BIM the company wanted knowledge on how existing RA drugs in the market place designed their own models.

**Methods:** I conducted a systematic literature review (SLR) on budget impact models for RA biologics. The primary objective of the SLR was to identify budget impact models of biologic DMARDs in moderate to severely active RA patients. Next, the PICOS-T criteria was developed in order to create robust inclusion and exclusion criteria. Using this criteria a search strategy was created and implemented. The initial search returned 77 articles from various databases and grey literature. After screening the articles, 39 models remained.

**Results/Outcomes:** There was a variety of drugs captured in the SLR, including Enbrel, Humira, and biosimilars. The most frequent time horizon used in the models was 5 years. The majority of the models utilized the same cost elements in calculating budget impact, which were drug acquisition, administration, and monitoring. The most common outcomes were total budget savings, total annual cost, and the cost per member per month. The models greatly differed by perspective and scenarios assessed demonstrating the versatility of BIMs.

# EPIDEMIOLOGY

**Name:** Hannah Bowen  
**Practicum Site:** Massachusetts Department of Public Health  
**Location:** Boston, MA  
**Title:** Medical Record Review of Encephalitis Patients

**Introduction:** Rabies and eastern equine encephalitis (EEE) are rare, high-consequence infectious diseases. Prompt identification of human cases is critical to appropriate clinical care and public health intervention. Confirmation of EEE virus infection triggers mosquito-control action; a confirmed rabies case necessitates contact tracing and infection control measures. MDPH is often asked to make diagnostic testing recommendations on encephalitis patients.

**Methods:** I reviewed a convenience sample of medical records of patients evaluated for human rabies and/or EEE testing in Massachusetts from 2003-2015 to identify clinical and diagnostic patterns in encephalitis patient care. As part of this effort, I (1) developed a chart abstraction tool, (2) extracted and organized information into a database, and (3) examined the data for consistent features.

**Results/Outcomes:** Rabies cases were more likely to present on admission with abnormal reflexes, paresthesia, and borderline abnormal MRI scans. The initial presentation of confirmed EEE cases was similar to that of patients with encephalitis of other and unknown etiologies. A distinct disease course was observed in confirmed rabies cases, with autonomic and unusual neurological abnormalities preceding signs and symptoms already evident at presentation in many of the non-rabies patients. Comparison of future encephalitis cases to these findings may help guide MDPH recommendations. The range of identified diagnoses reinforces the importance of considering non-infectious etiologies in the differential for encephalitis patients. Next steps include (1) use and evaluation of the database in encephalitis consult calls and (2) additional medical record review, particularly of retrospective EEE cases, to increase the database's size and scope.

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**Name:** James Carrier  
**Practicum Site:** Rhode Island Department of Health  
**Location:** Providence, RI  
**Title:** Development of a Standardized Toolkit for Disease Intervention Specialists (DIS)

**Introduction:** The Division of Infectious Disease and Epidemiology at the RI Department of Health is responsible for monitoring infectious diseases, managing individual cases, and responding to disease outbreaks. A recent Division reorganization resulting in a merger of the HIV and STD programs, coupled with recent staff turnover highlighted the need for the creation of standardized protocols and tools to be used by DIS, the staff primarily responsible for conducting patient interviews and notification services to HIV- and STD-positive index cases and their sexual partners.

**Methods:** I worked collaboratively with existing DIS and staff supervisors in the newly created HIV/STD Program to: 1) merge separate surveillance and partner services protocols between the two programs into singular protocols to be used by the combined program; 2) create new, efficient and effective surveillance tools to be used by the DIS; and 3) collate and construct training materials and timelines for use in training newly hired DIS.

**Results/Outcomes:** The development of this DIS toolkit will both increase the efficiency of existing procedures and activities completed by the current DIS as well as serve as a go-to guide and training manual for new and current DIS for any question that may arise in the completion of their primary job duties. An evaluation looking into the effectiveness of the new toolkit in terms of index case and partner services outcomes has been planned for late 2015/early 2016.

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**Name:** Ashwini Chitrambalam  
**Practicum Site:** Boston University School of Medicine  
**Location:** Boston, MA  
**Title:** Student Intern

**Introduction:** In 2013, there were 9 million TB cases across the globe, 26 % of which were from India. There is a clear gender inequality in India with male to female Tuberculosis disease (TB) cases ratio of 2.2. What is unknown is whether these gender differences are also seen in Latent Tuberculosis Infection (LTBI) and whether there are differences in infection rates by age. We analyzed data from the Indo-US Regional Prospective Observational Research for Tuberculosis (RePORT) cohort in India. Tuberculin skin test data from household contacts (n =398) of active TB cases (n =123) were used to assess the interaction between age and gender and LTBI.

**Methods:** The practicum activities involved were: 1. Cleaning data, 2. Designing shell tables and statistical analysis plan 3. Performing descriptive analysis of data (using SAS 9.3) including plots of LTBI by age and gender 4. Applying generalized linear model accounting for correlated data to explore the relationship between interaction of age and gender and LTBI, adjusting for confounders.

**Results/Outcomes:** The prevalence of LTBI among female household contacts was 74/222 (33.33%) and among males was 38/155 (24.52%). Crude analysis shows that among women there is a significant difference in LTBI distribution with increasing age (p-value 0.031). However, a similar observation was not seen in men (p value 0.547). Final model development and analysis is ongoing. The study result will enable us to understand whether the observed differences in gender age distribution in LTBI cases are due to inherent biological differences or variances in exposure to the disease.



**Name:** Caroline Ciocca  
**Practicum Site:** Maine Medical Center Research Institute  
**Location:** Portland, ME  
**Title:** Student Intern

**Introduction:** Pediatric appendiceal carcinoid tumors are rare and poorly understood in the field of pediatric surgery. The infrequent and often incidental discovery of a carcinoid tumor upon appendectomy has greatly limited the data available to generate evidence-based treatment recommendations in pediatric cases. Since the malignant potential of appendiceal carcinoid tumors remains unclear, it is important to critically evaluate current therapeutic recommendations established in adults and translate their relevance to children. The objective of this study was to analyze pediatric appendiceal carcinoid tumor cases from two large, national databases to determine if the application of adult National Comprehensive Cancer Network treatment guidelines is appropriate in pediatric cases.

**Methods:** Pediatric cases were selected from the National Cancer Database and the Kids' Inpatient Database, allowing for the examination of over 400 cases of this rare diagnosis. SAS statistical software was used to analyze each database cohort for patterns in the frequency and distribution of tumor characteristics and surgical interventions.

**Results/Outcomes:** The results of this investigation lacked sufficient evidence to reject the ongoing use of adult appendiceal carcinoid tumor treatment guidelines in pediatric cases. In order to establish a more effective treatment approach in children, a concerted and comprehensive data collection effort is necessary to capture complete and disease-specific information for future analyses. A pediatric appendiceal carcinoid tumor registry or multi-site prospective cohort study (with longitudinal follow-up) would aid in accomplishing this data collection goal.

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**Name:** Rachel Ciuryla  
**Practicum Site:** Shire Pharmaceuticals  
**Location:** Lexington, MA  
**Title:** Summer Intern, R&D QAC Registries and Late Phase Trials

**Introduction:** Shire is a midsized pharmaceutical company, headquartered in Ireland, who specializes in rare diseases. I worked within Research & Development in the Registry & Late Phase (RLP) Quality Assurance & Compliance (QAC) team focusing on clinical compliance. As a newly formed group, RLP QAC is developing a compliance framework for conducting late phase research. The QAC team is leading an effort to identify and better understand the differences in international compliance requirements for post-marketing non-interventional studies compared to clinical trials. In a series of workshops, a cross-functional team of Shire stakeholders is reviewing standard operating procedures (SOPs) to determine if they are appropriate for late phase research.

**Methods:** My role was to support the efforts of the RLP QAC team in the on-going SOP assessment and development process, which included: Researched and compiled a summary of international informed consent and privacy regulations/guidelines for 35 countries; Reviewed and became familiar with interventional and non-interventional study SOPs and compliance standards, including the use of good clinical and pharmaco-epidemiology practices; Prepared an excel spreadsheet for use in workshops; Supported ongoing framework efforts by scheduling workshop sessions through October 2015.

**Results/Outcomes:** The goal of the workshops is to have SOPs that are consistent across study types and compliant with good clinical practices. The RLP QAC team hopes to finalize study SOPs by the end of 2015. The information collected on international informed consent and privacy regulations/guidelines will be used by the team to prepare these study SOPs.

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**Name:** Kayla Donohue  
**Practicum Site:** Boston Public Health Commission  
**Location:** Boston, MA  
**Title:** Implementing Addiction Recovery Programs and Evaluating Treatment Methods

**Introduction:** The Bureau of Addiction Prevention, Treatment and Recovery Services at the Boston Public Health Commission (BPHC) offers a variety of programs and resources aimed at preventing addiction and supporting the treatment and recovery of those impacted by substance abuse. Two new programs include: Women's Wellness, which creates Behavioral Health Homes and coordinates addiction-related, mental health, and primary care services to enhance the recovery process for local women, and Peer to Peer, which supports recovery through a research-based community initiative that relies on peer education through the Save and Recovery Center and individualized recovery plans. The objective of this practicum was to assist in the implementation of Women's Wellness and Peer to Peer.

**Methods:** I was responsible for: 1) collecting, processing, and analyzing data related to the delivery of addiction treatment for both programs, 2) ensuring important deadlines were met, and 3) assisting in the recruitment of clients through marketing and formation of community partners. I also developed a webinar series to educate bar and night club staff on drug abuse, sign and symptom recognition, and protocols to minimize drug-related incidents.

**Results/Outcomes:** Patient recruitment is ongoing and timely. The goal is to reach 250 women for the Women's Wellness Project and 210 men and women for the Peer to Peer Project by program completion. These programs are scheduled to continue for at least the next three years, over which data will continue to be collected and analyzed. The webinar series is set to launch in September.

# EPIDEMIOLOGY

**Name:** Monika Drogosz  
**Practicum Site:** Massachusetts Department of Public Health  
**Location:** Jamaica Plain, MA  
**Title:** Millis Board of Health Intern

**Introduction:** My role at the Millis Board of Health was to lead the Lyme disease study team in creating a plan to increase awareness and reduce the incidence of Lyme and other tick-borne illnesses in the community.

**Methods:** A brief survey was created to assess how many households have been directly impacted by Lyme and other tick-borne illnesses. Fact sheets were created and included on the Millis Board of Health website with educational information regarding Lyme disease, protective measures, and deer deterrent techniques. Other educational material was displayed on Millis' local cable channel. A meeting with the Massachusetts Department of Fish and Game was arranged to discuss support for the implementation of a deer management program. A comprehensive analysis of viable private and town land was performed to determine options for the program.

**Results/Outcomes:** Data from the survey will be analyzed towards the end of the internship. The educational materials have aimed to raise awareness regarding the severity of Lyme and other tick-borne illnesses. It was learned that Millis has an exceptionally high deer density, averaging around 30 deer per square mile. Studies have shown a strong correlation between deer density and Lyme incidence; thus, a deer management program was proposed as a solution. As a leader on the study team I have proposed a three-pronged approach: continued education of K-12 children about prevention and checking for tick bites, continued education of residents and organizations about safe areas on recreational and private properties, and the implementation of a deer management program.

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**Name:** Brady Dubin  
**Practicum Site:** Dana Farber Cancer Institute  
**Location:** Boston, MA  
**Title:** Research Assistant, Survey & Data Management Core, Dana Farber Cancer Institute

**Introduction:** The Survey & Data Management Core is an agency that provides researchers within the Dana Farber/Harvard Cancer Center network both qualitative and quantitative consultation in the realm of study design and research methods. The Core is composed of experts in a wide variety of research methodologies and analyses and has provided its services to a broad spectrum of research projects. The primary goal of this practicum was to conduct an internal quality initiative assessment for the Core by conducting qualitative interviews concerning research interests and service needs with members of the DF/HCC network.

**Methods:** In order to complete this project, the practicum provided Qualitative Interviewing training by the Core's qualitative expert. Training videos, presentations, and materials were extensively reviewed and hours of qualitative practice were logged before conducting formal interviews with potential participants. This project also included other classic components of studies, such as participant recruitment, interview transcriptions, data coding, and data analysis.

**Results/Outcomes:** The qualitative interviews conducted provided the Core with important suggestions for improving and expanding its use within the DF/HCC network, including complimentary initial consultations in order to establish working relationships and better understand project needs. In addition to furthering the Core's understanding of research needs in order to offer specialized services, this project also prompted the development of marketing ideas/ways to inform the DF/HCC network of the Core's expertise and full range of services, such as using the internal DF/HCC network as a platform to recommend and remind internal departments of Core services.

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**Name:** Mohammad Faridi  
**Practicum Site:** Dana Farber Cancer Institute  
**Location:** Boston, MA  
**Title:** Evaluating Program Performance Based on Utilization of Services at CCEP

**Introduction:** Historically, race and class have affected cancer incidence, treatment and mortality; leading to widespread disparities in cancer outcomes. Underrepresented patients are less likely to utilize supportive services and participate in clinical trials due to several factors including decreased access, structural barriers, and distrust in medical research. The Cancer Care Equity Program (CCEP) was established in 2012 at DFCCI to bridge the gap between research efforts on disparities and outreach efforts. We assessed the performance of the program based on utilization of services.

**Methods:** As a Research Assistant, I studied CCEP protocol and operations and assisted the Principal Investigator with the study design, database management, cleaning and quality assurance. Research questions were devised based on study objectives and available data. We defined utilization of services based on attendance at referrals and/or follow-up visits. Statistical analyses were computed using SAS v. 9.4; a binomial proportion test was conducted to assess if utilization rate at CCEP was statistically different from what is observed at other cancer clinics with similar population and programs.

**Results/Outcomes:** We found utilization of services at CCEP at 0.976 or 97.6% (95% CI 0.95, 0.99;  $z=3.35$ ;  $p\text{-value}=0.004$ ). The results are statistically different compared to a study with a maximum utilization of 89.8% in a similar population and program. CCEP aims to identify patient care patterns and health outcomes to actively improve on the program's performance. We believe that CCEP would serve as a model to bridge health disparities gap in cancer care in similar outreach programs elsewhere.

**Name:** Cecelia French  
**Practicum Site:** Portland Public Health Division  
**Location:** Portland, ME  
**Title:** Student Intern, Portland Defending Childhood

**Introduction:** Portland Defending Childhood is a Department of Justice federally funded project working to address childhood exposure to violence. The Second Step curriculum was implemented as part of the project's prevention plan in two elementary schools in Portland, ME. Second Step is a curriculum that focuses on social/emotional learning and tackles behavior problems and classroom safety while promoting support and success. A related survey (DESSA) was used for assessment of Second Step's efficacy and completed by teachers at the beginning (pre) and end (post) of the school year. The DESSA measures social/emotional competencies on four scales (skills for learning, empathy, emotion management, and problem solving) and cumulatively. The scope of this practicum was to enter, manage, and analyze the 800+ DESSA surveys.

**Methods:** All data were entered by hand, converted to T-scores and missing data was averaged or deleted according to the DESSA manual. The main focus was to determine if there was an improvement on each scale and cumulatively from the pre survey to the post. Paired T-tests were utilized to determine if significant differences existed in T-scores, pre vs post. Analysis was also performed after adjusting for sex, grade, and school via F-tests (equality of variance) and paired/unpaired T-tests. All analysis was performed in Microsoft Excel.

**Results/Outcomes:** It was found (at a 0.05 level of significance) that all T-scores (on all scales, cumulative and after adjustment for sex, grade and school) improved throughout the course of the school year.

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**Name:** Christina Gentile  
**Practicum Site:** Randolph Board of Health  
**Location:** Randolph, MA  
**Title:** Intern

**Introduction:** In 2014, there were 103 cases of Latent Tuberculosis Infection (LTBI) from Randolph. Notification and education of high risk LTBI cases is important. There is no protocol for LTBI follow up when notification is received. The goals of this project are to: determine which cases are high-risk, and to design a protocol to inform and educate high-risk LTBI cases about treatment options and the importance of starting and/or continuing treatment.

**Methods:** A literature review was conducted using PubMed and protocols from the state/federal level to determine which cases were considered high-risk. Brochures on LTBI, a notification letter, and a telephone script to assist the caller in answering questions were created.

**Results/Outcomes:** The literature reviews showed that cases that are at high-risk of progression to active TB disease include: people who had an increased likelihood of being exposed to someone with active TB disease, those with a weakened immune system, and children. A protocol was also established to organize LTBI cases into high and low risk categories as an effective way to ensure that high-risk cases are contacted first, and educated enough to make an informed decision regarding treatment. One obstacle to this approach is ineffective communication with those who do not speak English well or at all. It may impact treatment of high-risk individuals. Another obstacle is that it may be difficult to locate some individuals because of invalid contact information. Contacting their providers could aide in updating contact information. To overcome these obstacles, translated materials would be helpful.

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**Name:** Rebekah Goldstein  
**Practicum Site:** Boston University Goldman School of Dental Medicine  
**Location:** Boston, MA  
**Title:** Student Data Analyst

**Introduction:** Relatively little research has been conducted on trends in oral public health. The Goldman School of Dental Medicine however, has been doing extensive research to provide more insight into the field. The Dental Longitudinal Study (DLS), which is a subset of the Normative Aging Study, a longitudinal study that began in 1963 by the VA, has been used by researchers at the Dental School for decades to study oral health trends. Another longitudinal study, the Black Women's Health Study (BWHS), has recently been used in order to address oral public health trends among black women.

**Methods:** For the BWHS oral health study, I worked with a dentist to assess the oral health status of about 80 study participants who volunteered to come in for appointments. Data collected included the presence or absence of teeth, denture status, mobility, periodontal measurements, etc. I then coded the data sheets and entered them into a database for future statistical analysis. Many SAS datasets were created for the DLS, and I sorted through them to begin to develop a dataset dictionary to make them more comprehensive and to improve my data management skills.

**Results/Outcomes:** The data collected through the BWHS oral health study is ready to be analyzed to shed light on the oral health issues among black women. The creation of the DLS dataset dictionary should make it easier for others outside of the department to navigate through the datasets and for them to understand from where the information originated.

# EPIDEMIOLOGY

**Name:** Sarah Gould  
**Practicum Site:** Boston University Center for the Study of Traumatic Encephalopathy  
**Location:** Boston, MA  
**Title:** Research Intern, Boston University Chronic Traumatic Encephalopathy Center

**Introduction:** High-contact sports are ingrained into the cultural fabric of the United States. Unfortunately, the cost to the bodies and minds of the athletes are not always considered or even known. My practicum site was a research center for Chronic Traumatic Encephalopathy, including its neuropathology, risk factors, and methods for diagnosis during life. My purpose as a research intern was to ensure that the LEGEND (Longitudinal Examination to Gather Evidence of Neurodegenerative Disease) study continued to run smoothly.

**Methods:** I collected data by conducting neuropsychological tests (BTACT) and history-taking interviews (medical, educational, professional and athletic) via telephone with study participants. I developed and maintained confidential relationships with participants, answered their logistical questions, trained incoming interns, and prevented loss to follow up—all vital aspects of an epidemiological study. I also directed participants to CTE resources, facilitated participation in the Brain Donation Registry, and encouraged genetic sample collection.

**Results/Outcomes:** Personally, I developed competencies in neuropsychological testing and the conduct of a prospective cohort study. On a broader scale, although the data collection and analyses are still ongoing, the data I gathered will help to legitimize CTE's recognition as a public health problem, give credibility to the disease and its risk factors, and expand collective knowledge of a disease that some scientists still don't believe exists. Eventually, the data I've collected will help diagnose CTE during life, allow those with CTE to receive tailored healthcare, reduce the burden of disease, and lead to preventive measures across all levels of athletics.

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**Name:** Rachel Hinnenkamp  
**Practicum Site:** Massachusetts Department of Public Health  
**Location:** Boston, MA  
**Title:** Research Assistant: Childhood Lead Poisoning Prevention Program

**Introduction:** Childhood lead exposure is a major public health concern, especially for children under six years old. In Massachusetts, the Childhood Lead Poisoning Prevention Program (CLPPP) collects all venous and capillary lead screening results and conducts case management and environmental intervention services. Over the practicum period, I conducted an evaluation data analysis project on screening practices and voluntary interventions.

**Methods:** My practicum goals were to: assess the reliability of capillary screening using venous as the gold standard, compare the testing methods of Massachusetts to those of high risk communities within MA, determine the rate of follow-up confirmatory testing over time, and assess the effectiveness of voluntary case management and environmental intervention services in lowering blood lead levels. I used the MA CLPPP database, SAS and Microsoft Access to conduct the project.

**Results/Outcomes:** It is important for providers and parents/guardians to understand the consequences of choosing capillary over venous screening. The results of my practicum support the Bureau of Environmental Health's (BEH) emphasis on venous compared to capillary screening. They also back up BEH's support of the licensing waiver for the point of care LeadCare II testing device, and will be presented to the Centers for Disease Control and Prevention (CDC) as part of a grant presentation. My research will be used to improve consistency of intervention services data, will influence the organization of the new CLPPP database, and will be used to inform upcoming regulatory decisions. The methods I developed will be used for further analysis by CLPPP staff.

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**Name:** Michaella Latkovic  
**Practicum Site:** Millenium: The Takeda Oncology Company  
**Location:** Cambridge, MA  
**Title:** Global Development Operations at Takeda Oncology

**Introduction:** Takeda Oncology is preparing to submit a New Drug Application (NDA) to the United States (U.S.) Food and Drug Administration (FDA) and to submit a marketing authorization application in the European Union (EU) for Ixazomib, an oral proteasome inhibitor for patients with relapsed and/or refractory multiple myeloma. The purpose of this practicum was to gain professional experience in study conduct management and the process of drug inspection and marketing approval.

**Methods:** I worked with Global Development Operations at Takeda to help prepare for a Medicines & Healthcare Products Regulatory Agency (MHRA) inspection and a mock FDA inspection for two of the clinical trial studies under the Ixazomib program. I performed Trial Master File (TMF) reviews, updated patient recruitment data in the clinical trial management software, managed submission of study documents into the TMF, and assisted in planning and executing strategy of gathering all functional area documents for both studies to ship to London for MHRA inspection (MHRA Readiness Project). These tasks required coordinating with multiple functional areas including: Regulatory Affairs, Clinical Supply, Biostatistics, Bio-Analytical, Manufacturing, Clinical Operations, Legal, and Data Management.

**Results/Outcomes:** The MHRA inspection is still ongoing, however we were able to complete the critical document assembly and categorization and successfully shipped all study related materials on time to the inspection site in the UK. Additionally, review by the Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency (EMA) resulted in the program being granted accelerated assessment status.

**Name:** Yun Ling  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA  
**Title:** Evaluation Intern

**Introduction:** The Spring Break Challenge is a faculty/student collaborative project for the New England Public Health Training Center (housed at BUSPH). Spring Break Challenge provides a hands-on, community-based learning experience in Boston's South End, for students from the BU School of Social Work, School of Public Health, and Sargent College. During this one-week intensive program students help to design and execute a community-based planning project focused on parent engagement in health and wellness programs delivered at the Blackstone Community Center. Students will work directly with public housing residents and other community members. Through the Spring Break Challenge students will build skills in key informant interviews, focus groups, needs and asset assessment, outreach, and qualitative research.

**Methods:** I designed an evaluation strategy, modified quantitative and qualitative evaluation tools, implemented the evaluation, analyzed the data, and provided a written report. The evaluation covered satisfaction with the Spring Break Challenge (students, faculty, and community members) and change in knowledge (students).

**Results/Outcomes:** Overall, participants were moderately to strongly satisfied with SBC experience (ratings out of 5, where 5 = strongly satisfied; N=21, mean = 4.5, mode = 4, range= 4-5) Highlights of the week: Positive interdisciplinary team work opportunity, practical skills and experimental learning aspect working directly with the South End community, excellent experience in community engagement work and future community involvement.

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**Name:** Beth Maclin  
**Practicum Site:** Harvard Humanitarian Initiative  
**Location:** Cambridge, MA  
**Title:** Migration to Artisanal Mining Sites in Eastern Democratic Republic of the Congo

**Introduction:** Artisanal and small-scale mining (ASM) presents an income source for between 500,000 and two million people in the Democratic Republic of Congo (DRC). Many migrate to mining towns in search of new economic opportunities; migration, however, can result in severed social networks and the potential for exploitation. In 2014, the Women in War program at the Harvard Humanitarian Initiative surveyed 998 people living in and around ASM sites in South Kivu province, DRC. The purpose of this practicum was to understand how the experiences of residents and migrants in the study sample differ.

**Methods:** This practicum involved two activities. The first was conducting literature reviews on ASM globally; migration decision making; and displacement decision making. These reviews framed the analysis of survey data using SAS, which was the second component of the practicum.

**Results/Outcomes:** Of the people surveyed, 412 were migrants. Migrants had greater odds of exchanging sex for protection (OR= 3.17, 95%CI 2.094, 4.789), access to work (OR= 1.98, 95%CI 1.269, 3.076), and money (OR= 2.91, 95%CI 2.086, 4.056). Among female participants, migrants were more likely to experience harassment (OR=1.62, 95%CI 1.031, 2.552). Despite having similar access to potentially protective resources, like association membership, migrants had increased odds of negative outcomes, like exchanging sex and experiencing harassment. The analyses resulted in an accepted conference abstract and a peer reviewed article draft.

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**Name:** Jordana Mangan  
**Practicum Site:** Boston University Center for Global Health and Development  
**Location:** Boston, MA  
**Title:** Research Assistant

**Introduction:** Longitudinal studies are often plagued with issues of missing-data resulting in bias. It is therefore essential for investigators to analyze and discuss their studies keeping the potential effects of missing-data in mind. We sought to understand (i) how authors typically deal with missing-data; (ii) how authors report/discuss the issue of missingness; and (iii) whether there are standard "best practices" in the literature.

**Methods:** In order to address these questions a review was performed of HIV/AIDS literature on repeated CD4 count and HIV viral-load measures published in the last five years. Reviewed studies contained  $\geq 2$  repeated measures of CD4 count and/or HIV viral-load. Twenty-five papers with CD4 count and 25 papers with viral-load as endpoints were included. During the course of this review it became evident that while authors were willing to adjust for missing-data during follow-up if measurements were missing from baseline there was a proclivity towards dropping the corresponding participants from data analyses entirely. In order to assess the implications of this practice, we will simulate longitudinal data with either baseline or follow-up values missing-at-random and then compare the performance of complete-case-analysis against multiple-imputation, single imputation, and inverse-probability-weighting, in mixed effects models.

**Results/Outcomes:** The literature review was tabulated showing measurement methods, statistical models for study analysis, use of imputation, complete-case-analysis, or inverse-probability-weighting as well as author discussion of missing-data-related bias. A comparison of slopes from MAR data at the two time points will be performed. Adjustment methods will be compared on slopes and intercepts graphically.

# EPIDEMIOLOGY

**Name:** Scott Minkin

**Practicum Site:** Massachusetts Department of Public Health

**Location:** Boston, MA

**Title:** Healthy Community Initiatives Intern, City of Revere

**Introduction:** Revere is experiencing a rising rate of youth obesity. The population is aging at a higher proportion than the MA average, and many residents are low income or live in designated environmental justice communities. There is a lack of physically active transportation options for all road users. Inexpensive, active forms of transportation for a wide spectrum of ages are feasible in Revere. The goal of this project was to create a policy to drive urban planning practices which facilitate "Complete Streets" - active forms of transportation, where streets are designed for all road users (e.g. motorists, cyclists, pedestrians). Secondary goals included ensuring infrastructure already in progress was installed per plan and identifying future infrastructure opportunities.

**Methods:** After the policy was drafted, it was shared with stakeholder groups including city residents, real estate developers, members of Revere's traffic commission, and the chamber of commerce. Outreach was done via email, materials distributed at city events and to stakeholders. Planning and execution of infrastructure installation was ensured by email and meetings with the city's department of public works and the engineering office, who were working together to install the updated infrastructure.

**Results/Outcomes:** The policy will guide road repairs to be done for implementing complete streets. The policy will also qualify the city for grants to continue building Complete Streets in the community, and grow self-efficacy amongst residents to use physically active forms of transportation. The city is new to Complete Streets but residents are open to the potential health and economic benefits of the program.

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**Name:** Nastaran Mobasherzadegan

**Practicum Site:** Massachusetts Department of Public Health, Bureau of Healthcare Safety and Quality

**Location:** Boston, MA

**Title:** Quality of Care in Dialysis Facilities in Massachusetts/Graduate Student Intern

**Introduction:** Recent findings have shown high rates of infection control deficiencies identified by Massachusetts Department of Public Health (MDPH) surveyors as well as an increase in the number of cases of suspect Hepatitis C virus (HCV) requiring investigation at dialysis facilities within the Commonwealth. An action plan needed to be implemented to ameliorate the situation and protect dialysis patients.

**Methods:** Initially, I conducted a literature review of the current research regarding dialysis quality. Then, an analysis of Centers for Medicare & Medicaid (CMS) data and MDPH survey data using SPSS statistical software was completed. To analyze the data, the CMS five star rating (1-5) of dialysis facilities was used as a proxy for dialysis quality. Regression analyses were done to identify associations between five star rating (quality of facilities) and other factors associated with quality such as profit status of the facility, percentage of patients with adequate dialysis score, and percentage of patients with vascular catheter in use for 90 days or longer.

**Results/Outcomes:** Initial findings indicate dialysis facilities that have a higher percentage of patients with a vascular catheter for 90 days or longer are significantly associated with having a lower five star rating. Long-term use of catheters have been associated with higher rates of infections and it is hypothesized that additional analyses will provide findings that demonstrate an association between five star ratings and infection control deficiencies. However this analysis is ongoing. Further education on catheter practices in facilities may be needed to improve quality.

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**Name:** Stephanie Moore

**Practicum Site:** Carlisle Health Department

**Location:** Cambridge, MA

**Title:** Intern

**Introduction:** Tick borne diseases (TBD), are a serious issue in Massachusetts. In 2014, 748 confirmed and 320 probable cases of Lyme disease (LD) were reported to the Massachusetts Department of Public Health (MDPH) from Middlesex County, where the Town of Carlisle resides. Being a rural community, Carlisle also has residents interested in raising livestock which presents issues, both to the environment and public health.

**Methods:** As part of my practicum, I conducted a literature review examining the effect deer management has on LD incidence; updated the TBD section of the town's website with the data from the CDC and MDPH; created a patient symptoms checklist; and created a best practices for animal keeping brochure which was sent out with the town's animal license.

**Results/Outcomes:** While the literature review provided mixed findings about the effectiveness of deer management, it will be a helpful source of information as the town moves toward creating a plan that will decrease LD incidence in the area. The updated website will be a resource for residents interested in tick facts, prevention tips, as well as information about symptoms for different TBD. The patient symptom checklist will better communication between patients and physicians, which will lead more people to being properly diagnosed with TBD. Finally, the best practices for animal keeping brochure will inform animal owners about manure management and animal health in order to decrease the risk of environmental and health issues in Carlisle.

**Name:** Yojin Park  
**Practicum Site:** Massachusetts Department of Public Health  
**Location:** Boston, MA  
**Title:** Sports Concussion Internship

**Introduction:** This internship focused on examining the trends of sports concussion laws and policies from the 50 states for the Division of Violence and Injury Prevention at Massachusetts Department of Public Health (MA DPH). This research was designed to examine the similarities and differences across each state and inform Massachusetts policy maker on future sports concussion law regulation.

**Methods:** This research involved comparing sports concussion laws and policies amongst the 50 states. I organized the data into different categories to see whether the state requires training for coaches, return-to-play, return-to-learn, or whether the regulation applies to only public schools or all schools, along with many other categories. Then I created charts using a map software in order to highlight similarities between states.

**Results/Outcomes:** This research should show which states has advanced in their policies/laws since they were made. Also the research will be able to highlight how strict or loose the policy is compared to neighboring states. Based on the research, MA DPH can utilize this information to see which areas of sport concussion policy to focus more in the future, or which directions the Massachusetts sports concussion regulation should go.

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**Name:** Julie Petersen  
**Practicum Site:** Boston University School of Social Work  
**Location:** Boston, MA  
**Title:** Factors associated with HIV testing among sexually active, 1.5 and 2nd generation American- Chinese, Korean, and Vietnamese women

**Introduction:** Since 1985, AIDS incidence among US women increased 20-fold. While HIV prevalence is lower among Asian American (AA) women, recent incidence is higher compared to Hispanics, whites, and African Americans. This cross-sectional analysis aimed to (1) assess HIV testing and knowledge among young, sexually active AA women and (2) identify a profile for women at risk for transmission yet unlikely to be tested. We hypothesized HIV knowledge would be associated with testing.

**Methods:** AA women 18-35 years and 1.5 or 2nd generation were recruited from the Boston area for the Asian Women's Action for Resilience and Empowerment (AWARE) trial. Those completing the clinical eligibility evaluation between February 2014 and June 2015 were included. Bivariate associations with HIV testing were assessed. Multivariable logistic regression with backward selection was performed.

**Results/Outcomes:** Among 116 participants, 42% reported prior HIV testing. Mean HIV knowledge was 74.2+-18.6% (i.e., 33.4+-8.4 of 45 questions). Treatment (57% of 4) had the lowest category-specific score, followed by prevention and HIV versus AIDS (71% of 13 and 3, respectively) and general transmission (73% of 9). On average, women previously tested had 3.9 more correct responses than women never tested ( $p = 0.02$ ). Overall knowledge was not significantly associated with testing, after adjustment for condom use in the past 3 months and history of anal sex ( $p = 0.15$ ). Treatment-specific knowledge, adjusted for condom use and anal sex, was significant ( $p = 0.02$ ). These findings suggest targeted education may increase testing. Strategies should be developed to increase timely treatment and reduce future transmission.

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**Name:** Kruti Shah  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA  
**Title:** Clinical Research Assistant

**Introduction:** As a research assistant, my primary responsibility was to assist Dr. Nawfal Istfan with data cleaning and analysis of a longitudinal bariatric database. We reviewed the data extracted from the electronic medical records of 2547 patients who underwent RYGB (Roux-en-Y gastric bypass surgery (RYGB) is a treatment for patients with Class III obesity, especially in the presence of type 2 diabetes) at BMC from March 2004–June 2015 in order to analyze post-operative diabetes relapse. We also evaluated the variability of weight loss between 3 racial groups (Caucasian, Black and Hispanic) to determine whether this variability impacts the changes in lipid profiles and hemoglobin A1C levels.

**Methods:** We reviewed extracted data of patients' medical records who had bariatric surgery (laparoscopic gastric bypass, laparoscopic gastric banding, and laparoscopic sleeve gastrectomy) at BMC from March 2004 through June 2015. We focused on chronic medical conditions that are commonly found in bariatric surgery patients particularly dyslipidemia, type 2 diabetes, osteoarthritis and hypertension. In order to include only the patients who had already achieved post-RYGB plateau weight, we evaluated the mean weight loss for the total patient population at monthly intervals after the surgery date. Also, we prepared a list of patients who suffered from medical conditions of interest before and after surgery.

**Results/Outcomes:** Results of these analyses confirmed the team's previous observations of variable weight loss outcomes by racial group, and further showed clinically significant racial differences in lipid profiles and A1C levels.

# EPIDEMIOLOGY

**Name:** Vrushabh Shah  
**Practicum Site:** Tufts University  
**Location:** Boston, MA  
**Title:** Graduate Intern at the HNRCA Nutritional Epidemiology (NEPI) Laboratory

**Introduction:** The United States Department of Agriculture (USDA) Jean Mayer Human Nutrition Research Center on Aging (HNRCA) is one of six human nutrition research centers in the US supported by the Agricultural Research Service (ARS), which is the research arm of the USDA. In 2013, the Nutrition Epidemiology lab at the HNRCA developed a Comprehensive Fiber Database aimed at capturing and organizing published literature from 1946-2013 examining dietary fiber intake and 9 physiological health outcomes of interest. Currently, there is a large and growing amount of literature pertaining to fiber, which has led to a need to systematically organize it. The objective of my practicum was to utilize this database and employ evidence mapping methodology to synthesize existing literature on a specific fiber of interest— resistant starch.

**Methods:** My responsibilities included (1) assisting with the process of updating the database with new literature published since 2013, (2) completing a detailed review and cleaning of published literature about resistant starch, which is of particular interest to the HNRCA research team, and (3) creating an evidence map to summarize the existing body of literature examining resistant starch and health.

**Results/Outcomes:** Upon conclusion of my project, I will produce an evidence map summarizing existing literature on resistant starch. My evidence map will utilize descriptive statistics as well as graphical displays of data. The evidence map will ultimately provide information on research gaps and identify potential areas for future research.

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**Name:** Rachelann Tripp  
**Practicum Site:** Boston University Goldman School of Dental Medicine  
**Location:** Boston , MA  
**Title:** The Clinical Validation of Oral Health Among Participants in the Black Women’s Health Study (BWHS)

**Introduction:** Black women in the United States have higher rates of numerous chronic diseases. Poor oral health is associated with cardiovascular disease, type 2 diabetes, cancer, and mortality. This study is a pilot study with the purpose to determine the accuracy of self-reported oral health for future analysis of self reported health measures. The validity of self reported oral health within our sample could have larger impacts throughout the national BWHS cohort.

**Methods:** I worked with the Principle Investigator, data manager, and Dentist to: 1) enroll subjects, 2) record oral health information 3) code and enter subject information 4) perform date cleaning, and 5) utilize SAS for preliminary data analysis. Subjects completed a mailed self-reported oral health questionnaire and were then invited to the Boston University Henry M. Goldman School of Dental Medicine Clinical Research Center to receive an oral health assessment. We recorded the number of present teeth, cavities, fillings, tooth mobility, as well as pocket depth (mm), recession (mm), and bleeding on probing, which were recorded on six sites per present tooth.

**Results/Outcomes:** Our study population consisted of a sample of 77 women who were current participants in the BWHS and live within the area. Within our sample (utilizing CDC disease criteria) 44% had no or mild periodontal disease, 11% had moderate periodontal disease, and 20% had severe periodontal disease. Individuals with periodontal disease had higher rates of self-reported tooth and gum distress, obesity, age, and tobacco use. At the time of analysis demographic and questionnaire responses were not available.

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**Name:** John Usseglio  
**Practicum Site:** Massachusetts Health and Relationships Project  
**Location:** Austin, TX  
**Title:** Health and Relationships Project (HARP) Research Assistant

**Introduction:** The Health and Relationships Project (HARP) is studying the correlations between relationship markers and health outcomes. HARP aims to create public policies and programs that encourage couples to take better advantage of available care, as well as improve training for physicians to teach couples how to support one another through illness and injury. As a research assistant, I have been primarily working on recruiting new patients for the study.

**Methods:** I worked with a program coordinator: 1.) to collect patient contact information from marriage records located at the Massachusetts Office of Vital Statistics; 2.) to create electronic lists of potential participants for use by the HARP staff at the University of Texas; 3.) to identify Boston residents who are married and between the ages of 35-65; 4.) to help with initial data analysis.

**Results/Outcomes:** We have contacted 6,945 same-sex couples; 1,078 have completed the initial survey, for a participation rate of 15.5%. HARP recently began reaching out to heterosexual couples to participate. To date, more than 7000 letters have been sent, specifically to heterosexual women living in Boston. The goal is to recruit and enroll as many couples as possible in order to improve the power of the data analysis. Once the enrollment is completed, we can begin to analyze the trends we see in the data.



**Name:** Merry Yuan  
**Practicum Site:** Dana Farber Cancer Institute  
**Location:** Boston, MA  
**Title:** Research Assistant

**Introduction:** At the Survey and Data Management Core at Dana-Farber, my practicum focused on evaluating an HPV education intervention. This intervention examined minority communities' level of knowledge, awareness, and attitude of HPV and using a pre- and post-questionnaire, tested whether their HPV education presentation changed those factors or not. Participants were teens and parents of a Hispanic/Latino community. The intervention had been implemented and my role was to evaluate the effectiveness of the program.

**Methods:** After completing various survey methodology trainings, I created a survey collection database via RedCap to enter the data that had been collected. Using data analysis, I examined whether the intervention was successful in changing the participants' knowledge, awareness, and attitude about HPV. I utilized various statistical tests to identify questions that showed statistically significant changes pre- vs. post-questionnaire and using only significant questions, created a knowledge and attitude score. And I examined the frequency levels of awareness.

**Results/Outcomes:** This study enrolled 41 teens and 5 parents. It is ongoing and due to the small amount of parent participants, I only analyzed the teen data. For the knowledge score, there was a statistically significant improved knowledge score in the post-questionnaire (P-value = <0.0001). For the attitude score, there was also a significant improved attitude score in the post-questionnaire (P-value = 0.0124). For awareness, 65% have heard of HPV and 63.41% have heard of the HPV vaccine before the intervention. Overall, the intervention seems successful in increasing HPV knowledge and attitude among teens of at-risk minority communities.

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**Name:** Grace Ajayi  
**Practicum Site:** Global Health Fellows Program II  
**Location:** Washington, DC  
**Title:** PEPFAR HIV and AIDS Care and Treatment Data Analysis for Targeted Impact

**Introduction:** The Office of HIV/AIDS Technical, Leadership, and Research division provides technical guidance to advance USAID's PEPFAR efforts. PEPFAR 3.0 has refocused its vision to include data driven targeting of key geographical areas and programs servicing PLHIV to improve HIV incidence rates. The division plays a critical role in this pivot by providing technical assistance and leading research efforts to improve partner countries' HIV services across the continuum of care (COC).

**Methods:** My activities included (1) data analysis of 36 country and site-level FY2014-2015 PEPFAR care and treatment indicators reported by PEPFAR partners (2) an abstract creation based on a literature review of evidence-based ART adherence interventions to achieve virologic re-suppression for PLHIV in low and middle income countries (3) assisting with Phase I implementation and evaluation protocol development of USAID's first Test and Treat Pilot Study in Senegal through an in-county site visit, development meetings with stakeholders and partners, and interviews with key populations.

**Results/Outcomes:** PEPFAR 3.0's goal of achieving sustainable epidemic control of HIV is dependent on sound data for greater impact. Analysis of PEPFAR country HTC outputs helped to identify shortcomings for service targets across the COC and assisted the TLR division with prioritization of TA needs in 27 countries for the upcoming year; furthermore, analytic research results will provide the Care and Treatment team with evidence-based interventions to be considered for implementation in the field and test and treatment feasibility study results will identify efficient and effective intervention strategies for ART eligibility expansion in resource limited settings.

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**Name:** Ahmed Al Suwaidi  
**Practicum Site:** Boston Children's Hospital, HealthMap  
**Location:** Boston, MA  
**Title:** Arabic Speaking, Infectious Disease Data Curation and Analysis Intern

**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.

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**Name:** Kelley Ambrose  
**Practicum Site:** Zambia Center for Applied Health Research & Development  
**Location:** Lusaka, Zambia  
**Title:** Southern Africa Mother Infant Pertussis Study Internship

**Introduction:** The Southern Africa Mother Infant Pertussis Study (SAMIPS-1) is an epidemiological burden-of-disease study being led by the Zambia Center for Applied Health Research and Development in partnership with Boston University's Center for Global Health and Development. The main objective is to measure the incidence of severe and non-severe pertussis among Zambian infants in an area of high maternal HIV seroprevalence. SAMIPS-1 will also provide critical information for future studies examining the maternal Tdap vaccine as a strategy to reduce the prevalence of infant pertussis. The purpose of my practicum was: 1) to aid the SAMIPS-1 study team, and 2) to explore methods for measuring gestational age (GA) in a low-resource setting, a key component for future maternal vaccination trials.

**Methods:** In coordination with health workers at Chawama Mini-Hospital, I reviewed delivery records and registries from the past year and collected data on labor and delivery complications, timing of antenatal care appointments, as well as estimated delivery dates as compared to actual delivery dates. I also supported the organization and cleaning of data and designed an inventory tracking system for the laboratory team.

**Results/Outcomes:** The organizational support I provided to the current study team will help ensure high quality baseline data, while the quantitative data and qualitative information gathered on the methods of GA measurement currently used will prepare the team for a future vaccine trials. The limitations of the methods used, however, were also highlighted, and serve as a snapshot of the challenges faced in low-resource settings.

# GLOBAL HEALTH

**Name:** Jessica Autrey

**Practicum Site:** International Center for Diarrheal Diseases Research

**Location:** Dhaka, Bangladesh

**Title:** Field Experience Intern

**Introduction:** AHC in facilities during childbirth is documented as a problem worldwide, yet there are not many estimates of its prevalence. Women often report physical abuse, verbal abuse, emotional abuse, neglect, and other types of abuse during childbirth. In Bangladesh, there are currently no prevalence estimates about the extent of this problem. Icdrr,b is currently conducting a study in 30 districts of Bangladesh and hoping to understand the magnitude and circumstances under which AHC during childbirth occurs, coping mechanisms, how AHC affects place of delivery, and correlates in order to inform policy and programs.

**Methods:** For the practicum, I: 1. Reviewed the research protocol; 2. Participated in a field visit; 3. Maintained notes on 46 studies reviewed; 4. Wrote a literature review of studies provided by icddr,b and searched for using the terms “abuse in health care during childbirth” and “childbirth experience Bangladesh” through Pubmed and Google Scholar, published from April 2014-July 2015; 5. Completed a data entry template.

**Results/Outcomes:** The literature review will contribute to the background section in the final paper and the data entry template will be used to enter data, when all of the interviews are complete. By conducting such a broad study, icddr,b will be contributing to the literature in a novel way and will be able to create effective interventions specific to Bangladesh.

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**Name:** Shauna Biggs

**Practicum Site:** Society for Emergency Medicine India

**Location:** Trivandrum, India

**Title:** KIMS and SEMI Graduate Researcher

**Introduction:** As part of the research collaboration between Boston University and Society for Emergency Medicine India (SEMI), I was part of the study team working in India to document and understand the use of pre-hospital care and to quantify and describe the epidemiology of ambulance use in India. This was a retrospective chart review that collected indicators including patient demographic information, patient complaints, diagnoses, outcomes, transportation time, and transportation distance.

**Methods:** As one of four research assistants on the team, I spent 9 weeks in India collecting data specified by the Principle Investigator. The work conducted included: 1) a literature review on existing studies; 2) extracting data from both paper and medical records at three (of the four) study sites across India; 3) generate graphic displays of preliminary findings for the stakeholder presentation; 4) codifying raw data in excel sheets for statistical analysis; and 5) to assist in the development of the manuscript.

**Results/Outcomes:** In total, 17,541 medical charts were analyzed throughout the four study sites in India, with 1,831 of those records being used for data extraction. The preliminary findings were presented at the interim presentation hosted by SEMI, to both Indian and American donors and stakeholders.

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**Name:** Asia Brice

**Practicum Site:** ANOVA Health Institute

**Location:** Johannesburg, South Africa

**Title:** Student Intern (Monitoring and Evaluation)

**Introduction:** Anova’s Health4Men (H4M) program delivers compassionate health care for men who have sex with men (MSM) in South Africa. H4M currently collects sexually transmitted infection (STI) data, however the clinical surveillance system is not very efficient: the data collected is not analyzed to find STI incidence or prevalence nor is it reported to stakeholders. National STI treatment guidelines and a lack of donor support for STI research amongst MSM contribute to this inefficiency.

**Methods:** I developed and piloted an organizational protocol for STI surveillance. I reviewed more than 30 sources regarding worldwide STI data collection procedures then completed a process evaluation of the H4M system to determine its current performance. Additionally, I analyzed data back to 2012 to establish STI trends. With this information, I created three tools: a Patient STI Risk Assessment, a Patient Visit History sheet, and a Patient Visit form as a part of the new protocol. I piloted these tools in one of the clinics and delivered a presentation with results and recommendations to Anova.

**Results/Outcomes:** I trained the clinic staff to use and score the new tools and explained the methodology used to create the integrated STI database so that staff or another intern can use and add to it. I will use my results to create an opinion piece about the need for stakeholder emphasis on STI surveillance amongst MSM.

**Name:** Bethany Bryant  
**Practicum Site:** Institute for Pediatric Innovation  
**Location:** Cambridge, MA  
**Title:** Student Intern for Drug Reformulation Project

**Introduction:** Under-5 mortality rates are high throughout the developing world. Sub-Saharan Africa and Asia have the highest pneumonia incidence and nearly 90% of under-5 death is largely due to pneumonia and diarrheal diseases. IPI and two corporate collaborators developed pediatric formulations for generic drugs needed for global health needs. Specifically, the technology can address the issues of dosing, storage, portability and other factors essential for safe, accurate and adherent administration of medicines to children in low-resource settings. My role was to assist in determining whether there are diseases and patient populations where such formulations could save children's lives.

**Methods:** To assist in determining specific areas of drug reformulation needs, I devised a questionnaire that circulated to different health experts within the field of pediatric infectious disease. These questions were used during personal interviews through Skype or telephone conversations. 8 interviews were conducted. Additionally, an electronic survey was created and the link distributed as an alternative method to facilitate analyzing results. An excel contact list was constructed and now has more than 40 names. Criteria for contacts were based on their work in pediatrics infectious disease, infectious disease or work in health systems within Sub-Saharan Africa and Asia. Simultaneously, a literature review was done to understand the current state of top pediatric formulation issues for global health.

**Results/Outcomes:** The project is on-going. Preliminary results confirm the need for drug reformation, 1st-line and 2nd-line treatments. The end goal for IPI is to have a Target Product Profile.

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**Name:** Emily Cable  
**Practicum Site:** John Snow, Inc  
**Location:** Boston , MA  
**Title:** Public Health Consulting at JSI

**Introduction:** JSI is a public health management consulting and research organization that provides technical and managerial assistance to public health programs worldwide. To date, JSI has implemented projects in more than 100 countries.

**Methods:** As an intern, I was able to participate in many activities. Some of my responsibilities included: contributed to new business development by working as part of a team to prepare proposals for a variety of donors, analyzed 55 client surveys in CSPro for one of JSI's projects in Nigeria, conducted a literature review on antiretroviral adherence interventions in Central America, contributed to research for a landscape analysis of global health actions in the area of non-communicable diseases, contributed to the development of a company-wide knowledge management tool, and provided ongoing support to backstopping teams for JSI's international projects.

**Results/Outcomes:** I gained a better understanding of the various components needed to support large-scale global health programs. I also gained a clear understanding of how new business development opportunities are approached.

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**Name:** Parker Chastain  
**Practicum Site:** Society for Emergency Medicine India  
**Location:** Trivandrum, India  
**Title:** SEMI Student Graduate Researcher

**Introduction:** Emergency Medical Services (EMS) are a crucial point of care that can greatly reduce preventable casualties from treatable conditions, road traffic accidents, and natural disasters.

**Methods:** The Society of Emergency Medicine of India and Boston University have partnered together to aid in the development of these services in India by conducting a retrospective records analysis of four emergency departments in order to provide a clearer picture of the current state of EMS in India. These study sites were located in the South, Kerala Institute of Medical Sciences in Trivandrum, Kerala, the West, Deenanath Mangeshkar Hospital in Pune, Maharashtra, the East, Fortis Hospital in Kolkata, West Bengal, and the North, Max Healthcare Saket, New Delhi. In order to accomplish this goal a methodology was selected to provide the clearest picture possible. This methodology consisted of the collection of Key Performance Indicators from the Emergency Department Records that fit the selection criteria of arriving via EMS during the months of January, May, and September of 2014. This methodology was then adapted to each of the four study sites, which presented their own particular challenges. These challenges ranged from varying notation practices to differing record instrumentation.

**Results/Outcomes:** These challenges resulted in three different methodologies that provide a snap shot of the particular EMS service coverage in the four different areas, the results of which will be analyzed and discussed in an upcoming publication.

# GLOBAL HEALTH

**Name:** Tanner Crandall

**Practicum Site:** Mothers Without Borders

**Location:** American Fork, UT

**Title:** Village Assessment for Mothers Without Borders

**Introduction:** Mothers Without Borders (MWB) is a non-profit organization that aims to provide holistic care to orphaned and vulnerable children (OVC). They have a residential care facility with 30 orphans, a community school with 120 students, and several outreach programs to assist OVC throughout the area. Malcolm Village sits across the road from the MWB facilities and children in the village attend the community school. The survey was created to describe the situation of the people living in the village, establish a baseline from which MWB can compare future growth, and inform decision making for future projects.

**Methods:** A 42-question survey was created using questions from USAID's household food insecurity access scale, Unicef's core questions on drinking water and sanitation, the CDC's 24-hour dietary recall, and a few other questions identified as relevant by the MWB staff. The village was first mapped and stratified into three proportionate areas. The 25 households with children attending the MWB School were all surveyed first, then conducted the remaining surveys using quota sampling strategy. 101 of the estimated 500 households were surveyed.

**Results/Outcomes:** In Malcolm Village 450 of the 2000 children aged 6-14 years are not attending any school. According to USAID's definition, 68% of the villagers are considered 'severely food insecure'. Respondents listed the following top village needs: Health Clinic (72%); More Schools (37%); More Water Sources (25%); and Employment (15%). Recommendations include increasing the size of the school and considering each of the needs mentioned by respondents for future projects.

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**Name:** Chase Crossno

**Practicum Site:** Boston University Sexual Assault Response & Prevention Center (SARP)

**Location:** Boston, MA

**Title:** Data Collection & Program Development of SUSIBU Intervention for International Undergraduates at Boston University

**Introduction:** As part of its mission, the Sexual Assault Response & Prevention Center (SARP) at Boston University (BU) collaborates with departments and organizations on campus to reduce sexual and interpersonal violence through individual and collective action. SARP conducts a bystander intervention training program—Step-Up, Step-In BU (SUSIBU)—for undergraduate student organization leaders, Greek life, and athletes at BU.

**Methods:** For my practicum I was trained to facilitate SUSIBU sessions; over a period of eight months I facilitated twenty sessions for a range of undergraduate student groups. During this process, I became interested in whether additional measures and prevention methods were warranted for international students. To better inform my opinion, I collected quantitative and qualitative data about international student perspectives on SUSIBU and other sexual violence prevention efforts. Data collection methods included: 1- The addition of five questions targeting international students, and staff that interact regularly with international students, to the routine evaluation form. 2- A focus group with five international MPH graduate students following a SUSIBU session. 3- Three in-depth interviews with staff members from the Center for English Language & Orientation Programs (CELOP), the International Students and Scholars Office (ISSO), and an International Doctor of Public Health (DrPH) candidate.

**Results/Outcomes:** Analysis of data suggests a need to provide additional resources to more adequately address international student experiences. My recommendations are: 1) the provision of written transcripts of audio recordings and spoken accounts; 2) open acknowledgement of cultural differences and practices, particularly related to alcohol consumption; 3) a written list of relevant vocabulary and terminology; 4) materials outlining relevant policies and procedures that may be unique to American institutions; 5) linkage to services that serve international student populations.

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**Name:** Rachel Fong

**Practicum Site:** Pathfinder International

**Location:** Watertown, MA

**Title:** Identifying and Responding to Priority Health Problems in Rural Viet Nam

**Introduction:** PIVN works with government, private sector, and civil society to strengthen Viet Nam's healthcare system, improve knowledge and skills of providers, and empower people and communities through improved sexual and reproductive health. TUMP, an implementing partner, offers students opportunities to practice clinical skills in communes, a program that sustained even after PIVN's Reproductive Health Project had ended. Key efforts included community health assessments and program implementation in underserved communes, where 72.6% of the population lives. One issue was the hypertension rate, which had risen from 8% in 1990 to 30% in 2014. Another was that only 64% of households had sanitary latrines.

**Methods:** I worked with TUMP's medical students on conducting research on knowledge, attitude and practices of hypertension prevention in 200 elderly participants in Cù Vân Commune, and helped with statistical analysis. I performed community diagnosis, a tool consisting of two tables developed by the MOH to identify community priority health problems, and developed a plan on how to implement an appropriate intervention.

**Results/Outcomes:** We used an education program targeted towards commune leaders to educate them on the health importance of having sanitary latrines. We were successful in increasing knowledge of sanitary latrines through educational talks with visual aids on the concept of and diseases related to sanitary latrines. Data from our hypertension research showed participants did not have good knowledge and practices of

**Name:** Aja Griffin

**Practicum Site:** Brookline-Quezalguaque Sister City Project, Inc.

**Location:** Brookline, MA

**Title:** Research Assistant

**Introduction:** The Brookline Sister City Project was established in 1987 after a group of Brookline residents visited rural Quezalguaque, Nicaragua. The organization began its health projects in 2008 in an effort to address the community's health issues. Previous projects have involved health facility construction, public health surveys, and Chronic Kidney Disease (CKD) research. This year's project explored epidemiological research on CKD, adolescent sexual education, and water and sanitation.

**Methods:** From February to May 2015, I assisted the Principle Investigator in designing a follow-up study to evaluate the mortality and progression of CKD. I aided with IRB communication and was responsible for developing questionnaires, consent forms and other study documents in both English and Spanish. From May to July 2015, my research team and I lived in Quezalguaque. I conducted interviews and collected biological samples from study participants. The team and I developed sex education curricula to teach at the community's schools. I also examined preliminary water data to develop ideas for future water and sanitation projects.

**Results/Outcomes:** The research team and I were able to enroll 191 study participants from the original CKD study in 2008, conducting questionnaires and collecting biological samples. We expect to see an increase in CKD mortality and morbidity. We visited four Quezalguaque schools and taught the sex education curricula to approximately 300 students (grades 5-8) with demonstrations and group activities. We also presented the idea that Brookline Sister chemically test water from wells, rivers, and other water sources in the future.

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**Name:** Jeanette Kaiser

**Practicum Site:** Boston University School of Public Health

**Location:** Boston, MA

**Title:** Can Maternity Homes Combat the Problem of Low Facility Delivery Rates in Zambia?

**Introduction:** In the Southern and Eastern Provinces of Zambia, 96% of women attend at least one antenatal care visit, yet only 55% and 65%, respectively, deliver at a health facility with a skilled birth attendant (the WHO-recommended method of delivery to reduce maternal and neonatal mortality). Why? Sparse health facilities in a dispersed population (average 15km to a delivery-capable health facility) and poor transportation infrastructure make getting to a facility difficult in time to deliver. The Maternity Homes Access Project in Zambia, a three-year project by the BU Department of Global Health, seeks to address this problem by renovating 12 maternity homes (residential structures next to a capable health facility), and improving their governance, management, and referral systems. The project aims to improve access to facility deliveries, by allowing women, especially those who live greater than 10km away, to live in a maternity home in the weeks prior to their estimated delivery date.

**Methods:** Through reading the project's grant proposal, I identified each piece of the project that would need to be evaluated. I also identified relevant actors, necessary project activities, and extrapolated how the project would attain its intended results. I developed over 130 SMART indicators to measure the occurrence of these activities and their results.

**Results/Outcomes:** I developed nine comprehensive logic models and presented them to the 12-member project team. The logic models and indicators will be used throughout the life of the project to assess the fidelity of implementation and to assess whether the project has met its intended objectives.

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**Name:** Brittany Klooster

**Practicum Site:** Harvard Medical School

**Location:** Boston, MA

**Title:** Epidemiologic summary of key disease areas in the region of the Harvard Medical School Center for Global Health Delivery – Dubai

**Introduction:** The Harvard Medical School Center for Global Health Delivery-Dubai was created in 2014 to address health challenges in Dubai and its 46-country region through research and training. Five health areas have been selected for focus: Diabetes and obesity, mental health, access to surgical care, tuberculosis, and hepatitis C. This practicum's objective was to provide a current epidemiologic summary of these health areas in the region to help establish the Center's research objectives.

**Methods:** I reviewed scientific literature, data from international health organizations, international ministry of health publications, and news articles to gather epidemiologic indicators including estimates of prevalence and incidence. I assessed trends and identified compelling and unexpected findings among the compiled data.

**Results/Outcomes:** Prevalence of diabetes is higher than the global prevalence in 45% of the countries of the Dubai Center region. In one sixth of the region's countries, over 30% of the adult population is obese. Obesity affects over 15% of children in Kazakhstan, Syria, and Tajikistan. Mental health disorders are prevalent in the region, and mental health system capacity is low. In one out of three countries in the region, less than 10% of the population has access to surgical care. Tuberculosis incidence and prevalence are highest in South Africa and Djibouti. Hepatitis C rates are highest in Oman and Egypt. All of the collected information will be synthesized in a document that the Center will distribute to publicize its scope of research.

# GLOBAL HEALTH

**Name:** Salome Kuchukhidze  
**Practicum Site:** Basic HealthCare Services  
**Location:** Udaipur, Rajasthan, India  
**Title:** Student Intern at Basic Health Care Services

**Introduction:** The AMRIT Clinics initiative is a collaboration between Aajeevika Bureau (AB) and Basic HealthCare Services (BHS). AB is a non-profit, public service organization providing services and security to seasonal migrants. AB is incubating BHS as a not-for-profit organization providing primary health services in three clinics in underserved communities of rural Rajasthan - Bedawal, Manpur and Ghated. These three panchayats are characterized by inaccessibility, impoverished tribal population and high levels of migration

**Methods:** To expand its services to additional underserved communities I worked with BHS and produced Standard Operating Procedures for the existing AMRIT clinics. I created the SOP by observing daily clinic produces in Bedawal, Manpur and Ghated clinics and building trust with the nurses, community health workers and volunteers. I also travelled to observe and participate in community outreach sessions and home visits provided by BHS. I conducted a thorough clinical data analysis to be included in program outcome and implementation reports. The analysis included gender, sex, age and diagnosis specific patient visits for all three AMRIT clinics for 33 months since their establishment.

**Results/Outcomes:** I produced a complete SOP organized according to the Donabedian model for assessing the quality of service delivery. Data analysis showed that TB, diarrhea, malaria and anemia are among the most commonly diagnosed diseases at AMRIT clinics. Furthermore, adult females represent a notable part of the total number of patient visits. The number visits has been steadily increasing and seasonally peaking during the months of July, August and September.

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**Name:** Marisa Lopes  
**Practicum Site:** CDC-Mozambique  
**Location:** Maputo, Mozambique  
**Title:** Monitoring and Evaluation Support Advisor for Health Literacy Programs

**Introduction:** From 2009 to 2015, the Mozambique Ministry of Health (MOH) piloted a community adherence support group program (GAAC) for persons living with HIV/AIDS. Preliminary results from the evaluation of the pilot have shown that participation in GAAC decreases barriers to adherence and increases psychosocial support and overall adherence to medication. The program is currently being scaled nationally; however, health facilities presently lack tools and instructional materials to effectively communicate and implement the program.

**Methods:** During my practicum I collaborated with MOH, CDC, USAID, Médecins Sans Frontières, and Columbia University's International Center for AIDS Care and Treatment Programs (ICAP) in the clinical and the communications working groups, and led the development of program communication tools. Additionally, I coordinated collaborative meetings between CDC and the behavior change communications specialist at ICAP, incorporating initial findings from my work on a qualitative analysis of the GAAC pilot to further elaborate on key themes most relevant to patients and providers.

**Results/Outcomes:** This work contributed to the development of a draft of 1) a flipbook for providers to explain the program to patients, and 2) a handbook for providers to better understand the program and their role in supporting it. With MOH approval, ICAP will pilot the materials in Zambézia Province and CDC/USAID will provide support to MOH on how to nationally distribute the tools. Ultimately, these materials will support the scale-up of GAAC, provide necessary streamlined messaging on how the program functions, and communicate how both patients and providers can benefit from supporting and participating in the program.

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**Name:** Lauren McKean  
**Practicum Site:** Novavax, Inc.  
**Location:** Gaithersburg, MD  
**Title:** Maternal Immunization: Determinants of Vaccine Uptake in Pregnant Women

**Introduction:** Novavax, Inc. is a clinical-stage biopharmaceutical company based in Gaithersburg, Maryland. They currently have multiple vaccine candidates in development for diseases such as Respiratory Syncytial Virus (RSV), Influenza, and Ebola. Within the multiple active clinical trials on RSV, I worked with the Clinical Development Team in the RSV Maternal Immunization Program.

**Methods:** Along with learning about the disease RSV, the vaccine being developed, and the future for the maternal immunization clinical trial, I also reviewed published literature and academic websites for information on the determinants of vaccine uptake in pregnant women. Additionally, I analyzed information on the Influenza vaccine and maternal immunization to create potential 'lessons learned' that could be applied to the RSV Maternal Immunization Program at Novavax, Inc.

**Results/Outcomes:** Understanding why vaccine coverage in pregnant women remains around 50% in the U.S. is important for creating future interventions to increase uptake. This literature review will provide 1) an overview on RSV and the vaccine in development, 2) a list of current barriers to vaccine uptake from the patient-side and the provider-side, and 3) a list of strategies to improve uptake in the future.



**Name:** Sara Mian-Mccarthy  
**Practicum Site:** FHADIMAC  
**Location:** Haiti  
**Title:** Student Intern

**Introduction:** Haiti is a country that has seen a lot of struggle over the past few decades and recently the rates of hypertension and diabetes have skyrocketed. FHADIMAC is currently the only medical clinic organization in Haiti dedicated specifically to those living with diabetes and hypertension through providing medication and educational resources.

**Methods:** I worked on a number of projects at FHADIMAC that will hopefully have a lasting impact. For the organizations new foot clinic, the only one in Haiti, I was responsible for developing key educational materials for patients and clinicians. I was also put in charge of running statistical analysis on the organizations database (consisting of 4,000 + records) to find interesting outcomes which may be of value to the medical team.

**Results/Outcomes:** I created a manual for the foot clinic which consisted of a protocol for both clinicians and patients on the different aspects of foot-care, a “workflow” for the clinic, a risk assessment tool for the physicians, and a patient satisfaction survey for the newly hired social worker. All of these documents were translated to French and were disseminated to staff and patients. I also created multiple new datasets and ran various statistical analysis’ in SAS based on past FHADIMAC’s patient records. These findings not only informed medical team of how they can best utilize their resources but will also be influential in early 2016 when FHADIMAC, alongside the Ministry of Health, will embark on a diabetes and hypertension needs assessment of the country.

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**Name:** Christopher Noble  
**Practicum Site:** University of Western Cape  
**Location:** Bellville, Cape Town, South Africa  
**Title:** University of Western Cape and Chronic Disease Dispensing Unit Facilitator

**Introduction:** I interned at the University of Western Cape School of Public Health (UWC SOPH).

**Methods:** I engaged with faculty and researchers to facilitate the relationship between the BUSPH pharmaceutical concentration and the UWC SOPH pharmaceutical area of specialization. I facilitated their Rational Medicine Use and Medicine Supply Management course which included: the preparation of teaching materials, management of daily tasks and logistics, and subsequent gathering of interviews and evaluations for a thorough report for publication and dispersal to increase publicity and engagement with future students and health professionals. I developed a research proposal to be continued upon my return investigating the price and utilization of diabetes medicines through private health insurance schemes to identify areas for improved rational use of diabetes medicines in the Western Cape. I worked with another MPH student to complete their dissertation and will co-author their final publication on facility utilization of diabetes diagnostic information for informed therapeutic adjustments. I visited hospitals and diabetes health clubs to see what health resources are available for people living with NCDs in the Western Cape.

**Results/Outcomes:** These trips helped me develop a greater understanding of innovative NCD management models like the Chronic Disease Dispensing Unit, innovative medical-delivery models, Chronic Disease Support Clubs and the benefits of a National Health Insurance with Single Exit Price controls on medicines to reduce informal mark-ups. I intend to present these innovative models and systems of pharmaceutical access to continue researching their implications for patients living with chronic diseases in South Africa.

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**Name:** Elle Pope  
**Practicum Site:** Haiti Ministry of Public Health  
**Location:** Haiti  
**Title:** Barriers of Evaluating the Prevalence of Hypertension in Haiti

**Introduction:** As part of a collaboration between Dr. Roger Jean-Charles and Dr. Yolene Surena, I collected data on blood pressure measurements from medical records in order to understand the challenges and barriers to assessing the prevalence of hypertension in Haiti.

**Methods:** 1) An extensive literature review was done to reveal that hypertension is the leading cause of morbidity and mortality. 2) After approval from hospital administrators was given, 463 medical records were reviewed for blood pressure measurements from three hospitals within Port-au-Prince. 3) A review of the data revealed that health care workers were recording blood pressure measurements in centimeters of Hg instead of the universal standard of millimeters of Hg, thus creating a high probability of misdiagnosing hypertensive patients due to imprecise measurements. Without reliable blood pressure measurements, this practice obscures the true prevalence of hypertension and hinders support and funding. 4) Once this was determined, a powerpoint presentation tool was created in english, french, and creole to provide information on the best possible practice for recording blood pressure.

**Results/Outcomes:** The initial data collection of blood pressure recordings and the development of an educational tool will be used by healthcare workers in future research projects for the proper diagnosis, treatment and surveillance of hypertension.

# GLOBAL HEALTH

**Name:** Amanda Reed

**Practicum Site:** Society for Emergency Medicine India

**Location:** Trivandrum, India

**Title:** Epidemiology of Pre-Hospital Emergency Care in India

**Introduction:** Currently in India there is very limited pre-hospital emergency care available and limited public knowledge on how to utilize the services. I worked on a BU team in collaboration with SEMI to determine the use of pre-hospital emergency care in India. This project was a retrospective chart review of patients presenting to the ER during the months of January, May, and September 2014.

**Methods:** I 1) participated in a pre-departure literature review on the current state of pre-hospital care; 2) extracted pre-determined key performance indicators from paper and electronic medical records for patients who met the criteria; 3) de-identified and coded raw data for statistical analysis; 4) generated resources for next year's researchers; and 5) assisted in writing a paper of our findings to continue generating interest in the topic of EM in India.

**Results/Outcomes:** A total of 17,541 patient records were analyzed and information was extracted from 1,831 records at the four study sites. The preliminary findings and suggestions for the future of Indian pre-hospital care were presented to doctors from the four study hospitals, several interested Indian doctors, members of the US embassy, and local reporters. The presentation was to inform key stakeholders and the general public about the current state of pre-hospital care in India while generating support for the expansion, standardization, and utilization of pre-hospital care in India.

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**Name:** Shamoore Simpson

**Practicum Site:** Brigham and Women's Hospital

**Location:** Boston, MA

**Title:** Summer Science Academy Public Health Coordinator

**Introduction:** Brigham and Women's Hospital's Center for Community Health and Health Equity (CCHHE) provides youth development programs for local Boston youth. One of their programs is the Summer Science Academy (SSA), a 6-week summer program for rising 9th graders to explore both health and science through field trips, classes, and various activities around the hospital. SSA recently reorganized its programmatic components to increase the amount of public health that its students are exposed to over the summer. This reorganization required developing a new curriculum and schedule for the summer program.

**Methods:** As coordinator of SSA, I developed a new public health curriculum and schedule for the summer. I hired students, helped develop a new schedule of activities, and supervised 20 students throughout the summer. When the program began, I taught the public health portion of the program that was based on nutrition in Boston, and created research packets for student groups. Each student group represented a different advocacy group in a mock debate for a mock grant committee. In order to evaluate the success of the public health component, a student survey was conducted after the debate.

**Results/Outcomes:** The implementation of a new public health curriculum provided an excellent opportunity to integrate science and public health. Students' conducted a debate in front of CCHHE staff, and produced a book of mock proposals for their summer project. An evaluation of the public health curriculum was conducted and will be analyzed by youth program managers in the fall of 2015.

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**Name:** Rinnah Song

**Practicum Site:** Dana Farber Cancer Institute

**Location:** Boston, MA

**Title:** Research Assistant

**Introduction:** Black and Latino populations suffer from many health disparities. The University of Massachusetts, Boston-Dana Farber/Harvard Cancer Center (UMB-DF/HCC) U54 Outreach Core aims to bridge this gap through their Faith-based Outreach Program (FBOT) that works through Boston area churches that serve communities of color. FBOT strives to build and support the capacity of church-based Health Ministries (HM) to increase knowledge of health and to improve access to resources for prevention and early detection of cancer. The Survey and Data Management Core (SDMC) has been contracted by the U54 Outreach Core to evaluate the FBOT program.

**Methods:** I collaborated with the SDMC to evaluate the program by building a logic model to demonstrate how the program should work. I identified specific indicator and assessed the answers to questions on the skills that HM's in the churches acquired and the impact of their programs and events. SDMC developed a standardized survey to measure how well the churches were getting their own funding, writing their own grants, and successfully receiving funds. I assisted in designing the survey and incorporating evidence-based standards. The survey was administered in both English and Spanish.

**Results/Outcomes:** A summary analysis of the surveys will be developed for each church. The hypothesized outcomes are an increase in building capacity and independence for the HM by focusing on demographic variables, number of grants written, number of events, and size of the church. Results will also discuss program satisfaction by assessing the church's feedback.

**Name:** April Trebnick  
**Practicum Site:** Massachusetts General Hospital, Division of Global Mental Health  
**Location:** Boston, MA  
**Title:** Graduate Research Assistant

**Introduction:** I worked at the Massachusetts General Hospital (MGH) Global Psychiatry Division (GPD) to assist in initiating a Systematic Review of the incidence and prevalence of Schizophrenia globally, with a particular focus on gender and economic index disparities. Schizophrenia is a debilitating group of brain disorders that contributes to the global burden of disease. Considering the extent that methods for measuring mental health vary significantly across borders and cultures, it is pertinent to systematically review literature up to this point to determine summary findings and identify disparities in Schizophrenia worldwide. Determining the prevalence and incidence of Schizophrenia across geographic location, gender, race, age range, and other risk factors illustrates the burden of Schizophrenia across various characteristics and ultimately impacts health service planning.

**Methods:** I conducted a situational analysis and literature review focusing on gender, economic, and geographic disparities in Schizophrenia incidence and prevalence. I shadowed a psychiatrist in the division, observed patient interviews for psychiatric pharmaceutical clinical trials, and attended grand rounds and seminars in the GPD and around MGH to obtain basic knowledge of Schizophrenia and the field of Global Mental Health. I met with experts in the BUSPH library and studied resources around systematic review practices and protocols.

**Results/Outcomes:** I designed sections of a new protocol for a systematic review that emulated two previously published papers, as designated in the NIH grant under which we were working. Included in the protocol I developed were the refined search terms, research question, databases to be utilized, selection criteria and procedures, and data extraction forms.

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**Name:** Brittany Tusing  
**Practicum Site:** Midwives For Haiti  
**Location:** Hinche, MA  
**Title:** Revamping Mobile Clinic Data Collection

**Introduction:** The mission of Midwives For Haiti (MFH) is to decrease maternal and infant mortality by increasing access to skilled maternity care for women in rural Haiti. The organization's interventions include educating Haitian nurses in midwifery skills, training traditional birth attendants (TBA), managing a rural birth center, supporting the maternity ward of the local hospital, and staffing a mobile prenatal clinic.

**Methods:** At MFH, I helped set the foundation for future monitoring and evaluation of programs, with a particular focus on the mobile prenatal clinic. I worked with the staff midwives to design a more effective diagnostic sheet and to implement a data collection system in partnership with the Haitian Ministry of Health (MSPP). I also developed and implemented a monitoring plan to ensure high quality of care. Lastly, I aided in restructuring the organization's current strategic plan and developed guidelines for future planning.

**Results/Outcomes:** MFH can continue to build their relationship with MSPP through the sharing of data. For the first time, the organization will generate periodic reports to determine quality of care, to evaluate their progress towards meeting strategic goals, and to disseminate to stakeholders.

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**Name:** Marianna Vavitsas  
**Practicum Site:** American University of Beirut  
**Location:** Beirut, Lebanon  
**Title:** The Effect of Education on Refugee Fathers Attitudes towards Child Marriage in Beirut

**Introduction:** An interventional study was conducted in Beirut to assess the effect of parental education on attitudes towards child marriage. Ten fathers who were either Palestinian or Syrian refugees living in Beirut participated. The purpose of this pilot study was to assess the effect of educating refugee fathers about the mental and physical health consequences of child marriage.

**Methods:** I was the co-investigator for the study. My responsibilities included composing a proposal and an oral consent form, and filling out the application to conduct this study under the approval of the Institutional Review Board. I was also responsible for writing the qualitative pre and post assessment questionnaires that would be used in the study. A few of the pre and post assessment questionnaires included "What happens when a son or daughter between the ages of 13-17 gets married, and what are the consequences?", and "Do you think there will be problems after she gives birth? Why or why not?" While in Beirut, I also created two case studies to be used for the intervention.

**Results/Outcomes:** Although we are still waiting to have the follow-up second post assessment, it appears that the subjects became more aware about the consequences of child marriage during the intervention. This study is still going on so there is not a statistical analysis yet.

# GLOBAL HEALTH

**Name:** Joanna Williams

**Practicum Site:** Mildmay Uganda

**Location:** Lweza, Uganda

**Title:** Strengthening PEPFAR supported HIV/AIDS health systems in Uganda

**Introduction:** Mildmay Uganda is a non-governmental organization that deals in “modeling quality and sustainable prevention, care and treatment of HIV/AIDS and other health priorities, using a family centered approach; together with training, education and research”. One HIV/AIDS health systems strengthening program, supported mainly by PEPFAR, has many dimensions including outreaches to hard-to-reach areas and contacting various vulnerable and most-at-risk populations (MARPS).

**Methods:** I visited three hard-to-reach MARPS islands and three remote districts, and gave health education on prevention of HIV/AIDS, opportunistic infections and antiretroviral drug adherence. I worked with different MARPS including commercial sex workers, fisher folks and their families. During the outreach, I made visits home by home and also met with people in their communities. With commercial sex workers on the islands, we discussed challenges to devise acceptable solutions in a bid to curb further spread of HIV. I also worked on monitoring and evaluating the quality and performance of HIV/AIDS health services rendered at Mildmay Uganda associated health centers. I used the standardized PEPFAR Site Improvement through Monitoring System (SIMS) tool to find gaps and devise possible solutions to improve service delivery and/or access.

**Results/Outcomes:** Findings indicated that many people on the islands did not have access to care due to constraints such as transport to facilities. Sex workers felt stigmatized and were reluctant to receive care. Finally, data entry on HIV/AIDS treatment and follow-up was lacking at some facilities. A report of findings was presented to the Mildmay Quality Improvement and Training departments, which will be used to improve service delivery.

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**Name:** Stephanie Wiseman

**Practicum Site:** Boston University School of Public Health

**Location:** Boston, MA

**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 the 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.

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**Name:** Cassandra Zieminski

**Practicum Site:** Global Health Fellows Program II

**Location:** Washington, DC

**Title:** Making the Case for Quality Improvement in Low and Middle Income Countries

**Introduction:** Every health service involves inputs, processes, and outcomes. Quality Improvement (QI) methods go beyond resource provision and focus on improving care delivery processes. Frontline healthcare providers use QI methods to implement rapid cycles of small tests of change. USAID has supported projects to apply QI approaches to health and social service delivery in low and middle income countries since 1990. As the field grows, narratives that include specific details and thoughtful reflections on “how” improvement activities were carried out will be essential channels for harvesting, disseminating, and leveraging knowledge acquired through practice.

**Methods:** I supported the development of a book of QI case studies that will be submitted for publication. I coordinated the logistics of the case study review team by designing review and feedback processes and establishing a Google Drive organizational system for case materials. I streamlined the review process by creating a standard rubric for evaluating cases and templates for providing consistent feedback. I participated in the review process by writing detailed comments on case drafts, joining in technical discussions with the review team, and presenting during a webinar to guide authors as they interpret the team’s feedback and develop second drafts.

**Results/Outcomes:** The team continues to receive and review drafts. Once published, the case book will be a unique tool for teaching, implementing, and spreading the application of modern QI methods to health services in low-resourced settings.

# HEALTH LAW, BIOETHICS & HUMAN RIGHTS

**Name:** Catherine Cuddy  
**Practicum Site:** Health Resources in Action  
**Location:** Boston, MA  
**Title:** Health Communications Assistant

**Introduction:** Health Resources in Action is a public health and medical research non-profit organization. As a Health Communications Assistant, I assisted the Health Communications Director with two projects. The first project was a report for the CDC on the outcomes and success of the National Public Health Improvement Initiative (NPHII). The second project is working with the Iowa Department of Public Health in generating communication materials that promote water fluoridation efforts in Iowa.

**Methods:** For the first project, I researched accreditation readiness activities, quality improvement and performance management measures for grantees of the NPHII funding. This research including analyzing results of the program evaluation, attending meetings with the National Network of Public Health Institutes (NNPHI), and collaborating with HRiA staff to put together the compendium. I also wrote six of the seventy stories detailing the specific successes of grantees who received NPHII funding. For the second project, I drafted a research plan and interview guide to gather and assess attitudes of health care professionals in Iowa concerning community water fluoridation (CWF), and conducted phone interviews with key informants in Iowa.

**Results/Outcomes:** For the first project I completed six grantee stories for the NPHII compendium. For the second project I provided qualitative research data on health care professionals' opinions on community water fluoridation, drafted a summary of the themes discovered in the interviews, and performed a materials assessment used to highlight gaps in community water fluoridation materials in the state.

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**Name:** Nicholas Falcone  
**Practicum Site:** Feldesman Tucker Leifer Fidell LLP  
**Location:** Washington, DC  
**Title:** Summer Associate

**Introduction:** As a summer associate, I contributed research to multiple articles written for the National Council for Behavioral Health's industry newsletter, Compliance Watch. One article was also the subject of a culminating presentation before the firm's attorneys. The goal was to summarize a new policy from the Office of the Inspector General (OIG) of the Department of Health and Human Services regarding patient assistance programs (PAPs). Charitable PAPs provide financial assistance to patients having trouble affording their prescription drugs. The OIG's policy indicates that certain PAP arrangements may violate federal fraud and abuse laws.

**Methods:** I worked with the lead author of the article, an attorney at the firm. I read current and former OIG Advisory Bulletins, and consulted additional resources on the structure and function of charitable PAPs and their role in the care delivery system.

**Results/Outcomes:** Based on the OIG's guidance, charitable PAPs that effectively subsidize a certain pharmaceutical manufacturer's products, particularly PAPs with narrowly defined "disease funds," likely raise fraud and abuse problems. Some practices regarding patient eligibility criteria and sharing of data with manufacturer-donors may also violate federal law. Ultimately, the OIG's policy could cause changes to the availability of financial aid for low-income patients. Behavioral health care providers should understand the policy so they can avoid partnering with improperly organized PAPs and ensure that any financial assistance serves their patients' best interests.

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**Name:** Faiz Kidwai  
**Practicum Site:** Boston Children's Hospital, Office of Ethics  
**Location:** Boston, MA  
**Title:** Intern

**Introduction:** Boston Children's Hospital is a 395-bed tertiary care academic medical center for pediatric health care. As one of the leading pediatric medical centers in the United States, Boston Children's offers a wide range of health care services for children from birth through 21 years of age. Working with the hospital's Ethics Advisory Committee (EAC), the Office of Ethics staff stays up-to-date on bioethical issues, through clinical ethics literature and legal developments; provides advisory consultations at the request of hospital patients, family and staff who are dealing with ethically -difficult decisions; discusses advances in medical technology that present novel ethical problems; plans educational programs for hospital staff; and works with clinical leaders to develop ethics-related policies for patient care. The Office of Ethics Intern provides ethics-related resources to support this work. In this capacity, I worked on projects involving clinical ethics consultations, education, and policy development, as well as emergency triage and other aspects of pandemic preparedness, which entailed considerations of both clinical and public health ethics. My yearlong project was to investigate the ethical dimensions of an altered standard of care for patients with Ebola Virus Disease (considering the extraordinary virulence of the disease).

**Methods:** Conducted extensive literature reviews using Medline Databases and LexisNexis among others. I also investigated opinions and guidelines from professional societies such as The American Medical Association and The American Thoracic Society.

**Results/Outcomes:** The EAC tries to bring an objective perspective to a difficult situation. The ethical dimensions of various alternatives are examined, with the aim to inform or validate difficult decisions in morally distressing situations.

# HEALTH LAW, BIOETHICS & HUMAN RIGHTS

**Name:** Monica Turner

**Practicum Site:** Boston University School of Public Health

**Location:** Boston, MA

**Title:** Research Assistant

**Introduction:** The Juvenile Mental Health Advocacy Project (JMHP) is a pilot program that has been developed by Health Law Advocates (HLA) to improve access to mental health services for court-involved youth in the greater Boston area. The evaluation team at BUSPH seeks to answer four key questions: 1) What is JMHP's impact on access to and engagement in mental health services; youth functioning at home and in school; and involvement in the judicial and emergency mental health systems? 2) How was JMHP implemented? 3) How was JMHP perceived by key stakeholders? And 4) What are the potential cost-benefits of JMHP?

**Methods:** I worked to create a situation analysis examining the field of juvenile justice and mental health programs on national, state, and local levels. I researched various laws, federal funding opportunities, local organizations, and pertinent research studies to examine how the JMHP program fit into the existing options around the country. I organized the significant information I found into a document and chart that can be used by BUSPH and HLA in determining the success of the JMHP program.

**Results/Outcomes:** Since the BUSPH evaluation is still in its early stages, it may be several years before the ultimate success of the JMHP program can be determined. However, my practicum experience demonstrated how flexibility and creativity are essential in developing a study to measure the success of an intervention. The situation analysis will provide a framework that will assist in the ultimate determination of the success of the JMHP program.

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# HEALTH POLICY & MANAGEMENT

**Name:** Melissa Afable  
**Practicum Site:** Massachusetts Resiliency Center  
**Location:** Boston, MA  
**Title:** Massachusetts Resiliency Center Strategic Planning

**Introduction:** The Massachusetts Resiliency Center (RC) was created to provide a holistic strength-based approach to recovery and resilience for Boston Marathon bombing survivors. The RC utilizes expertise in resilience-oriented, behavioral health disaster response services to help survivors adapt to their “new normal.” The aim of this project was to conduct a current-state analysis of the RC and to produce recommendations for strategic planning.

**Methods:** A current state analysis will be conducted to identify the RC’s major strengths, weaknesses, challenges, and issues. This will be achieved through analysis of a survivor survey and utilization database. Additionally, stakeholder interviews will be conducted with RC staff, clients, and Advisory Panel members to guide the construction of a long-term vision.

**Results/Outcomes:** Most survivors were injured at the marathon (n=275, 62.8%) or in close proximity to the blasts (n=142, 32.4%). The most common service needs identified were victim compensation (52.7%), behavioral health/trauma (23.5%), assistance at the trial (18.0%), hearing loss (15.5%), and amputee/serious physical injury (9.1%). One major theme that emerged from the stakeholder interviews was the possibility of expanding RC services from survivors of the Boston Marathon bombings to all victims of crime. This project will serve as a foundation for the Resiliency Center’s strategic planning efforts. The aim will be to guide the Executive Leaders as they formulate a long-term vision for the organization and ensure its sustainability. Furthermore, the analysis can be used to disseminate the RC’s resiliency-oriented, behavioral health disaster response model so that best practices can be adopted broadly.

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**Name:** Callie Bacon  
**Practicum Site:** Boston Public Health Commission  
**Location:** Boston, MA  
**Title:** Policy Intern

**Introduction:** The Boston Healthy Start Initiative (BHSI) is a federally funded program aimed at eliminating disparities in Boston birth outcomes. BHSI provides support, case management, and health education to women through a network of 10 clinical sites that receive Healthy Start funding. BHSI also convenes a Community Action Network (CAN) of diverse stakeholders who work together to create an environment conducive to change within the community. One aspect of maternal health that is finally gaining some recognition is preconception care; a woman’s health before she conceives is extremely important. The Director of the Child, Adolescent, and Family Health Bureau is now working to create a comprehensive women’s health bill on preconception care.

**Methods:** The project required working directly under the Director, and most of the responsibilities pertained to the creation of a framework for the bill. Numerous literature reviews and internet searches were conducted to find out what other states and countries are doing and to narrow down topics to be included in the framework. These activities all laid the groundwork for the bill to be sent to the CAN, and to ultimately be finalized and officially proposed.

**Results/Outcomes:** The elements that have been chosen to be included in the bill are: post-partum depression, breastfeeding, supportive care, unbundling certain health insurance payments, and the implementation of a free preconception visit for every woman. The process of finalizing the framework is still ongoing, but getting any of these elements incorporated into legislation would improve maternal and child health in the city.

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**Name:** Sarah Brooks  
**Practicum Site:** Massachusetts General Hospital, Patient Care Services for Quality Improvement  
**Location:** Boston, MA  
**Title:** Intern in the Patient Care Service Office for Quality and Safety

**Introduction:** The Patient Care Services (PCS) Office of Quality and Safety at Massachusetts General Hospital works with staff to understand regulatory compliance issues, implement safety programs, and create high quality and safe care environment for patients and staff. Due to the recent increase in patient falls at MGH, this project was created to survey four inpatient floors to evaluate whether or not they had been in compliance with utilizing the Falls Prevention Communication Tool.

**Methods:** After visiting the floors and reviewing a total of forty patient rooms at random, it was established that not one floor was in compliance due to a lack of knowledge surrounding the use of the tool. A PowerPoint presentation was then created to educate staff on the importance of using icons to prevent inpatient falls. Two weeks after each floor received the in-service, they were then re-surveyed to establish whether or not the education had affected their implementation of the tool.

**Results/Outcomes:** Due to only a slight improvement in usage rates, it has been determined that the educational PowerPoint presentation will be given at the Combined Leadership Meeting, alerting nursing management to the low rates of compliance with the tool. In addition, nursing management on each of the original floors has been contacted in regards to their continued poor usage rates. Each of these floors will again be in-services. By continued education, we hope usage of the tool will increase providing better communication between staff and decreasing the fall rates within the hospital.

# HEALTH POLICY & MANAGEMENT

**Name:** Andrea Clark

**Practicum Site:** Veterans Affairs Boston Healthcare Systems

**Location:** Boston, MA

**Title:** Intern

**Introduction:** Veterans Affairs Boston Healthcare System (VABHS) is a highly complex level 1A healthcare organization. In 2015, a year after national VHA-wide access initiatives began, VABHS began an investigation into the phone system usage and how veterans were accessing their providers and VABHS. From this investigation the central function of the call center was removed and led to its main use of scheduling for primary care. The disintegration of the call center has led to a multitude of phone numbers and misinformation being sent to veterans. In order to gain better access for patients to schedule and cancel appointments a large phone project to correct /verify numbers and create a sustainable process in an antiquated phone system was launched.

**Methods:** (1) Locate the different phone systems within VABHS that staff and clinics are using, and aggregate the numbers onto one master spreadsheet. (2) Work with each specific clinics across all campuses to accurately obtain the phone numbers. (3) Work with Systems Redesign and the Clinic Management Committee to create a system for the sustainability of phone numbers.

**Results/Outcomes:** Correctly identify all clinic phone numbers; update 6+ phone number systems, as well as other online and paper mailing resources throughout VABHS, and creation of sustainable phone number capturing system. From this update we aim to create consistency and accuracy for veterans to contact VABHS as well as leading to more opportunities for veterans to schedule or cancel their appointments.

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**Name:** Jordan Ellis

**Practicum Site:** Veterans Affairs Boston Healthcare Systems

**Location:** West Roxbury, MA

**Title:** Health Systems Administrative Trainee

**Introduction:** Veterans Affairs Boston Healthcare System (VABHS) is the primary tertiary referral site for veterans in New England, receiving patients from eight VA medical centers. Due to an increasing amount of patients needing services that are not available at their local VA medical center as well as increased scrutiny on VA to provide more patient-centered care, reduction in long wait times and improved access to care are a priority for the organization. VABHS leadership identified the Endoscopy clinic at the Jamaica Plain campus as a priority to improve patient flow and identify strategies to reduce wait times.

**Methods:** Application of LEAN-Six Sigma principles, including Gemba walks, fishbone diagrams, process mapping, impact-effort matrix (PICK chart), and Plan-Do-Study-Act (PDSA) cycles; application of clinical microsystems principles, including analysis of the 5 P's (purpose, patients, professionals, processes, patterns); analysis of demographic and clinical data.

**Results/Outcomes:** After successful identification of the main detriments to patient flow as inefficient scheduling process for procedures, slow procedure times of newly trained fellows, and last-minute procedures added on for research purposes, solutions will now be tested and implemented using PDSA cycles. Transparent data collection methods will drive quality improvement work among clinical staff.

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**Name:** Albert Feldman

**Practicum Site:** Veterans Affairs Boston Healthcare Systems

**Location:** Boston, MA

**Title:** Health Systems Administrative Trainee

**Introduction:** While working in the Director's Office at Veterans Affairs (VA) Boston Healthcare System, one of the main projects was to promote patient centered care by establishing and implementing a hospital innovation that aimed to reduce the incidents of disruptive behavior by patients towards staff. The patient population focused on are those Veterans who have been designated by the VA as a Disruptive Behavior Risk. Conversations with Veterans about potential behavioral triggers that may result in an incident help protect the hospital's staff and promote a safe environment for both patients and employees.

**Methods:** The first method implemented was (1) writing a project charter to present to leadership and stakeholders. The project charter served as an outline of the Green Flags PDSA cycle. Prior to the first cycle of the innovation's PDSA, it was important to (2) conduct stakeholder interviews to gain buy in from all affected clinical and non-clinical staff and to amend hospital policy in the Disruptive Behavior and Prevention Program Committee. When educating hospital staff on the new procedure, (3) process mapping was important for looking at the ideal state. As part of the PDSA, quantitative and qualitative data were collected through (4) conducting Gemba walks.

**Results/Outcomes:** Through stakeholder meetings, the project had been amended during the planning phase to emphasize the patient's privacy. Following those changes, feedback in the first PDSA excluded those patient privacy concerns. The overall projected outcome will be compliance with the new policy, fewer Code Greens called in the medical center, and more patient centered care for those patients who pose behavioral risks.



# HEALTH POLICY & MANAGEMENT

**Name:** Alison Gusick  
**Practicum Site:** Massachusetts General Hospital  
**Location:** Boston, MA  
**Title:** Administrative Intern

**Introduction:** Two projects were conducted at the Massachusetts General Hospital (MGH) Center for Diversity and Inclusion (CDI) and the Center for Faculty Development (CFD) as a part of research workforce development efforts. The project with the CDI involved implementing marketing efforts to encourage Principal Investigators (PIs) to utilize a funding opportunity that was an initiative by the NIH to enhance the diversity within the research workforce. The project with the CFD involved the creation of an internship program for MGH postdoctoral fellows to help them make more informed career decisions.

**Methods:** Through the CDI, MGH PIs who were eligible for NIH Diversity Supplements were identified. Marketing materials to inform eligible PIs about the application process and distributed informational surveys were distributed. Potential candidates who are underrepresented in medicine were matched to do research with eligible PIs. Through the CFD, interviews with collaborating preceptors were conducted. The internship application process and parameters were developed.

**Results/Outcomes:** Both projects are still ongoing. The work of the CDI and the CFD results in the improvement of the careers and opportunities for students, research fellows and faculty at MGH. The CDI will continue to track the results of the marketing campaign. The CFD will begin to accept internship applications in the fall.

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**Name:** Emily Katz  
**Practicum Site:** Veterans Affairs Medical Center  
**Location:** Boston, MA  
**Title:** Promoting Patient-centered Care at the Lowell VA

**Introduction:** Patient-centered care is a pillar of the Veterans Health Administration (VA); it includes patients receiving care when needed and ensuring this care addresses patients' goals. The Lowell VA team's two initiatives focused on providing patient-centered care include instituting a nurse triage clinic to give medical care to patients who arrive without an appointment and providing patients with a form upon check-in to the clinic to write down their priorities for their primary care provider visit. The purpose of this practicum was to determine if these two projects were truly helping to provide patient-centered care by giving care when needed and focusing on patients' goals. Data from the nurse triage clinic was collected on the reasons for patient visits and the necessary medical follow-up. Both staff and patients completed evaluations of the priority forms.

**Methods:** Worked with Nurse Manager in Primary Care to analyze the nurse triage clinic data and priority form evaluation data to showcase the outcomes of these projects in relation to promoting patient-centered care. A proposal was developed to implement specific recommendations based on evaluation using process maps, stakeholder needs analysis, and additional Lean/Six Sigma tools.

**Results/Outcomes:** Both initiatives were successful in promoting patient-centered care by addressing patients' medical needs and goals. The next step is to continue to develop projects that foster patient-centered care at the Lowell VA.

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**Name:** Farrah Khan  
**Practicum Site:** Blue Cross Blue Shield Association  
**Location:** Chicago, IL  
**Title:** Operations Management: Supporting 36 Blue Insurance Plans

**Introduction:** The Blue Cross Blue Shield Association (BCBSA) provides operational and strategic support for the largest insured population in America. As a result, the Association has a major hand in implementing health policy, and consumer programs that advocate for the Blue Brand, the Blue Insurance Plans and their consumers. The Blue Distinction Center for Specialty Care (BDSC) is a national designation program under BCBSA that recognizes healthcare facilities demonstrating expertise in delivering quality specialty care effectively, and cost efficiently. The goal of the program is to help consumers find both quality and value in their care while providing a foundation for employers to design benefits that meet their quality and cost objectives.

**Methods:** Designated healthcare facilities have the opportunity to disclose whether or not all of their hospital based physicians participate in a local Blue Plan's PPO network via The Consumer Transparency Feature. For patients, the feature indicates that they will not be charged out of pocket when receiving specialty care services. Implementation of new operational strategies was necessary to increase consumer transparency participation from healthcare facilities. Consistent collaboration and project management within a cross-functional team were required.

**Results/Outcomes:** Participation in consumer transparency increased as a result of a newly designed operational strategy. BDSC is essential to impress the importance of value based care, all of which hinges on quality and cost transparency. These insights both improve American healthcare, and empower patients with knowledge about the care they receive.

# HEALTH POLICY & MANAGEMENT

**Name:** Kern Kumar

**Practicum Site:** Veterans Affairs Boston Healthcare Systems

**Location:** Jamaica Plain, MA

**Title:** Hospital Administration/Management Trainee: Current medical residency tracking system update

**Introduction:** The VA Boston Healthcare System is comprised of three medical campuses including Jamaica Plain and Brockton, the primary foci during this project. Three thousand medical residents rotate through VA Boston and train using the budget allocated to the Associate Chief of Staff for Education's Office from VA Central Office in Washington DC. An area of concern is that there is no system to track the actual number of residency positions filled or the number of days worked by residents in specific medical specialties. This lack could result in a potential halt of medical residency funded positions if VA Boston's data cannot be reconciled with those of VA Central Office in a revised tracking database.

**Methods:** In collaboration with the Associate Chief of Staff for Education and his staff, I was able to understand the need for a systems implementation to track residency positions. Important stakeholders included: medical specialty residency coordinators at the affiliate institutions, specialty department coordinators at the VA site, and VA administrative officers. A process flow map was created to better understand the process of sponsoring and billing for residency positions based on the number of days worked.

**Results/Outcomes:** The creation and implementation of a tracking system and process flow map for residency positions will provide an accurate count of the current residency positions at VA Boston and the number of days worked by residents. In addition, VA clinical services and their academic affiliates will better understand how residency slots are sponsored and tracked within the VA.

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**Name:** Hsisuai Lee

**Practicum Site:** Shire HGT

**Location:** Lexington, MA

**Title:** Global Regulatory Affairs (GRA) Chemistry Manufacturing Controls (CMC) Intern

**Introduction:** The objective of the guidance created is to address challenges identified at Shire during implementation and planning of specification changes to globally approved products. The current process is not sufficient to allow global implementation of a specification change, requiring Quality Control (QC) to perform redundant testing for an undefined period of time. This results in greater compliance risk, inefficient use of resources, and complication of inventory management. Overall it is not considered sustainable for multiple products as Shire expands into new markets and continues to improve method performance and data quality.

**Methods:** The supporting data requirements for each type of specification change were defined using the Post-Approval Variation Guidance documents from Canada and the European Union. Next, Shire international experts were contacted to provide country specific information regarding submission types, expected time for approval, supporting data packages, and other unique tendencies for each type of change. The individual country data was compiled and a global filing timeline was created.

**Results/Outcomes:** The global filing timelines allow for post-approval specification change submissions to be made efficiently which can achieve global approval sooner therefore reducing redundant QC testing. Individual country timelines allow for better tracking of global submission progress. Lastly, the guide will allow Global Regulatory Affairs (GRA) to provide Chemistry Manufacturing Control (CMC) teams with realistic dates for expected global approval of specification changes and required supporting data packages to facilitate implementation planning. Ultimately this guidance facilitates implementation of quality enhancing processes.

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**Name:** Nuryim Madenov

**Practicum Site:** The Ministry of Health and Social Development of the Republic of Kazakhstan, Republican Center for Health Development

**Location:** Astana, Kazakhstan

**Title:** Intern at the Republican Center for Healthcare Development (Department for e-health standardization)

**Introduction:** The RCHD is an organization responsible for all public health related activities in the Republic of Kazakhstan. The Center serves the entire Republic and explores a wide range of public health issues including scope of clinical practice, public health infrastructure, and so on. Our department was responsible for the development of e-health standards.

**Methods:** The project team included international consultants and World Bank coordinators. Responsibilities included conducting SWOT analysis of the current situation of e-health in Kazakhstan, conducting strategic analysis of the e-health of the different countries, developing new standards for e-health based on international experience and in compliance with governmental policies, registration of the new standards, and their implementation.

**Results/Outcomes:** The core set of Standards has been designed and approved as a result of the corresponding eHealth standards development project activity. The set includes Standards for the Electronic Health Record, Electronic Medical Records, the identification and authentication of healthcare agents, and the normalization of health and healthcare data. The vision is that by 2020 eHealth implementation in Kazakhstan shall deliver the option of available and ubiquitous electronic information on health, information which is of high-quality and reliability and available to all authorized parties to support their decisions in a timely manner, designed to effectively facilitate a safe, equitable, high-quality, accessible and sustainable patient-oriented health system.

# HEALTH POLICY & MANAGEMENT

**Name:** Sabrina Mason  
**Practicum Site:** Boston Medical Center, Department of Pediatrics  
**Location:** Boston, MA  
**Title:** Quality Improvement Intern

**Introduction:** Patient satisfaction surveys at Boston Medical Center (BMC) indicate that wait times and communication about delays are poorly rated. A hospital wide initiative was created to improve the patient experience by communicating wait time delays. As part of the pediatric wait time quality improvement team, trends were analyzed and strategies implemented to improve communication about wait times in clinic. The goals of the project included increasing the overall patient experience, improving communication between staff and patients, and creating a cohesive clinical atmosphere.

**Methods:** The project required planning, testing, and measurement of wait time communication strategies using the model for improvement framework. Wait time communication survey responses were collected and analyzed using run charts to demonstrate improvement in wait time communication over time. PDSA cycles were implemented to improve wait time communication between staff and patients such as the implementation of a reward system that rewarded staff for informing patients about wait time. Standard operating procedures were created to standardize the process of communicating wait time.

**Results/Outcomes:** The strategies implemented in clinic demonstrated a significant shift in the system for informing patients about wait times. In April, 58% of patients were informed of their wait time compared to 80% in July. Through informing patients about their wait time, patient satisfaction increased, as seen through positive feedback from patients. Future PDSAs will be aimed at decreasing wait times in addition to continually working to improve communication between staff and patients.

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**Name:** Allison McHenry  
**Practicum Site:** Partners Multiple Sclerosis Center  
**Location:** Brookline, MA  
**Title:** Clinical Research Intern

**Introduction:** The Partners Multiple Sclerosis Center is a leading institution in the area of multiple sclerosis (MS), providing comprehensive patient care, innovative technologies, and ongoing clinical and laboratory research. The project required working closely with clinicians and researchers to develop guidelines for MS providers on male-specific clinical, psychosocial and therapeutic healthcare delivery.

**Methods:** A systematic review of the literature was conducted to evaluate sex differences in MS. Male-specific MS risk factors, disease course, and experiences were collected to inform our recommendations. A collaboration to enrich the insights behind our suggestions was established with MS-CERCH, an international research consortium dedicated to providing evidence-based information around gender in MS.

**Results/Outcomes:** A manuscript was produced summarizing our finding that biological and cultural sex differences exist in the MS disease course. Additionally, we found that getting men to diagnosis and treatment is challenging and men are less likely than women to report MS symptoms. To improve male-specific MS care quality and outcomes, we recommend providers emphasize the risks of non-treatment, encourage frequent screening for mood changes and social isolation, and use innovative methods to approach communication about MS symptoms and progression.

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**Name:** Mariam Michael  
**Practicum Site:** Massachusetts Department of Public Health, Bureau of Healthcare Safety and Quality  
**Location:** Boston, MA  
**Title:** Fire risk and burn injuries during hospital & ASC procedures. Burn injuries sustained in long term care facilities. Graduate Student Intern

**Introduction:** The DPH requires reporting on 29 Serious Reportable Events (SRE), which are measurable, evidence-based outcomes operationalized by the NQF. There are also a set of adverse events, injuries sustained during medical care, for which reporting is required. The project focused on burn injuries SREs and fires for adverse events as reported by MA facilities. The goal is to utilize cause-mapping and RCA to learn the different system failures contributing to the occurrence of both events and draw recommendations geared towards facilities to enhance patient safety in the Commonwealth.

**Methods:** Tools and information for the project and its analysis were acquired through attending live educational seminars on RCA, participating in discussions with the Betsy Lehman Center, attending PHC meetings, and professional guidance. Incident reports were obtained from HCFRS. A comprehensive report including background information, description of data, analysis (cause-mapping), and recommendations was completed through extensive literature search utilizing both CINAHL and BU library resources and study of each incident report and 30-day follow up report. There were no literature on burns and fires in LTC facilities so the study focused on fires and burns in ORs.

**Results/Outcomes:** OR fires and burns are underreported events. Study of the 8 OR fire reports submitted indicated a gap in education and training. Infrequent training and drills result in failure to employ safety protocols and deviation from policies for fire response. The 24 burns in ORs mostly resulted from poor communication between personnel and inadequate multidisciplinary training for perioperative staff.

# HEALTH POLICY & MANAGEMENT

**Name:** Kelly Mitchell  
**Practicum Site:** Dana Farber Cancer Institute  
**Location:** Boston, MA  
**Title:** Project Manager

**Introduction:** As part of the Quality & Patient Safety department at Dana-Farber Cancer Institute, a world leader in adult and pediatric cancer treatment and research, the Project Manager role entailed collecting and analyzing data surrounding the electronic health record (Epic) implementation at the Institute in addition to managing the hospital-wide online safety reporting system (rL solutions). The purpose of this practicum was to help DFCI collect data and trends from both Epic and rL solutions surrounding any changes that may have occurred as a result of the transition from paper records to the new electronic health system.

**Methods:** Partnering with the VP of the department to: 1.) run reports in Epic every morning to determine barcode scanning compliance with regard to medication and patients; 2.) use the data from the Epic reports to create Excel tables and graphs as well as prepare PowerPoint presentations to display the data to DFCI leadership; 3.) utilize the rL solutions system to track errors and near misses with regards to Epic.

**Results/Outcomes:** Excel tables, graphs, and PowerPoint presentations were produced to portray the data retrieved from the Epic system as well as rL solutions. In particular, barcode scanning trends were recorded at the end of each week as well as trends of the number of Epic-related reports entered in rL solutions. These presentations were utilized by DFCI leadership in assistance with monitoring how the Epic roll-out and implementation affected staff and patient safety throughout the hospital.

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**Name:** Jenna Mizner  
**Practicum Site:** Pediatric Physicians' Organization (PPOC)  
**Location:** Brookline, MA  
**Title:** Quality Improvement Intern

**Introduction:** The PPOC is member-driven organization devoted exclusively to pediatric primary care and distinguished by a close relationship with Boston Children's Hospital. Membership includes 270 physicians in 85 practices in 93 locations across Eastern Massachusetts. The PPOC engages members in quality improvement, peer-to-peer learning and EHR/IT optimization.

**Methods:** This practicum had on several components that supported the organization's mission to enhance member pediatricians' ability to deliver the highest quality care: 1) collaborating with a member practice to improve their asthma education visit process through baseline data collection and analysis, leading team meetings and conducting PDSA cycles; 2) developing a three-part Patient Experience Optimization webinar series centered around the annual MHQP survey; 3) developing and electronically disseminating a new standardized medical home care coordinator curriculum.

**Results/Outcomes:** The projected outcomes are: 1) the practice will develop a process to identify patients in need of an asthma education visit and see an increase in the number of asthma education visits scheduled and attended by patients; 2) practice's increased awareness of changing alternative quality contract thresholds, its impact on the practice, and continuous quality improvement efforts to improve patient experience within the practice; 3) standard, equitable and measurable medical home care coordinator competencies.

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**Name:** Alexander Moreta  
**Practicum Site:** Massachusetts Department of Public Health  
**Location:** Boston, MA  
**Title:** Topsfield Board of Health Emergency Preparedness Intern

**Introduction:** The Center for Disease Control and Prevention's Strategic National Stockpile (SNS) program is a repository of potentially life-saving pharmaceuticals and medical supplies, dedicated for public health emergency responses to any manmade or biological incident that requires mass prophylaxis (e.g., aerosolized anthrax). Local government is tasked with receiving and dispensing SNS assets through their Emergency Dispensing Site (EDS) plans. The goal of this project was to enhance and expand the public health emergency communication infrastructure, with a focus on at-risk populations in Topsfield, MA.

**Methods:** A Community Outreach Information Network (COIN) database was created, and an emergency message was sent to Region 3A public health officials through the Massachusetts Health & Homeland Alert Network (HHAN). The HHAN sent messages to 482 contacts. An educational presentation on emergency preparedness was created, with a specific focus on the elderly with access and functional needs.

**Results/Outcomes:** Approximately 320 test messages were delivered through the HHAN, yielding a successful delivery of 68%. The COA Director identified additional community organizations that could yield trusted leaders in an emergency response. While there is an overall understanding of emergency preparedness in the community, the educational presentation provided valuable information for access and functional needs populations. Building strong relationships within community in order to adequately serve at-risk populations during public health emergencies will be essential if EDS plans are to succeed.

# HEALTH POLICY & MANAGEMENT

**Name:** Annelies O'Dea  
**Practicum Site:** Harvard Pilgrim Healthcare  
**Location:** Wellesley, MA  
**Title:** Product Development Intern

**Introduction:** Working in the department of Product Development at Harvard Pilgrim Health Care (HPHC) two projects were conducted: 1) market feasibility studies for two insurance products and 2) a metric dashboard of Value-Added and Ancillary products. The dashboard is to inform the executive committee of the success, profitability, and commercialization potential of the various products.

**Methods:** The first project involved conducting a literature review, creating a product prototype and pricing model, conducting an operational assessment and a competitive market analysis, and writing a comprehensive report with a strong recommendation for or against each project to be delivered to the executive leadership team to inform business strategy. The second project involved data aggregation, manipulation, and analysis, as well as researching of best practices, developing metrics and potential goals for revenue and utilization, and producing these results in a user friendly and simplistic interface.

**Results/Outcomes:** The market feasibility assessments recommend development of one of the two products. One product had insufficient employer interest and evidence of success, and involved extensive developmental and implementation lifts. This project should be revisited if compelling efficacy evidence is produced or client interest increases. The executive committee will consider the product recommended for development for funding from the 2016 business planning budget for a more extensive assessment. The dashboard prototype produced included metrics for utilization, growth, engagement, profitability, and operational/vendor concerns. Next steps include developing product budgets and measuring budget variance for dashboard inclusion. Other products, such as telehealth will be added to the dashboard once developed.

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**Name:** Chrysanthe Peteros  
**Practicum Site:** Fenway Institute, Community Health  
**Location:** Boston, MA  
**Title:** Health Policy Research Fellow

**Introduction:** The Health Policy group at The Fenway Institute conducts research on health issues pertinent to the LGBT community, HIV policy, and STDs. Research is shared with policy makers, health care providers, and advocacy groups to guide decision-making. The practicum involved working with the Director of Health Policy on projects regarding: • LGBT individuals in corrections • Hepatitis C transmission • Interoperability standards • Illicit drug use among LGBT youth • Transgender discrimination • LGBT elder caregiving

**Methods:** Literature reviews were the primary method of research. Initial reviews involved articles about the use of condoms in prisons and scientific data regarding Hepatitis C transmission. National surveys were used to capture data on hard drug use among LGBT youth, stratified by race and geography. News articles and proposed legislation were utilized to research transgender discrimination. Finally, a journal article regarding caregiving for LGBT elders was drafted based on a study conducted by the Director.

**Results/Outcomes:** There are significant opportunities to improve LGBT health care. Including sexual orientation data in EHRs would help inform clinical decisions as the LGBT population may have specific needs. This finding was shared with the Office of the National Coordinator for Health IT as comment on their draft of the National Interoperability Standards. As for LGBT elders, the main concerns are experiencing discrimination from caregivers and feeling isolated. Some suggested solutions are mandatory cultural competence training for aides and developing more group, community-based programs for LGBT elders. The journal article remains in the draft stage with the intent to seek publication.

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**Name:** Nathaniel Posner  
**Practicum Site:** Pfizer, Inc.  
**Location:** New York, NY  
**Title:** EHS Summer Worker

**Introduction:** Pfizer Inc. is an American biopharmaceutical company with five distinct business units: Global Innovative Products, Global Established Products, Pfizer Oncology, Pfizer Vaccines and Pfizer Consumer Health. In addition, the company has various supporting functions including an Environmental Health & Safety Department (EHS). This practicum supported EHS in developing a product sustainability scorecard used to guide both new and existing products towards more sustainable characteristics such as recyclable packaging and sharps disposal plans.

**Methods:** Background research was conducted and roughly one hundred EHS colleagues at a North and South America regional conference were surveyed to compile a list of sustainable characteristics that were most likely to impact a product's environmental footprint if addressed. The resulting list of thirty one attributes was then circulated to Pfizer marketing colleagues as an internal market research survey to determine the importance of each to both brand reputation and to customers' purchasing decisions. Their responses were used to narrow the list to ten sustainable product characteristics that would have a significant environmental impact if improved, reflect well on brand reputations and influence customers' purchasing decisions.

**Results/Outcomes:** The ten remaining product characteristics will be implemented via a scorecard as annual goals towards which brand teams can work to meaningfully improve the sustainability of their products while remaining true to the commercial goals of Pfizer's business. The improvements resulting from this process will be messaged externally through a number of channels including Pfizer's website and company promotional materials.

# HEALTH POLICY & MANAGEMENT

**Name:** Susana Ribeiro Arthur Gomes Almeida

**Practicum Site:** Melrose Health Department

**Location:** Melrose, MA

**Title:** Local Public Health Intern

**Introduction:** Opiate use is major concern for public health professionals in the state of Massachusetts. Local boards of health are joining efforts to address this problem in their communities and are developing substance abuse prevention programs with focus on opiate use. That is the case of the Mystic Valley Public Health Coalition (MVPHC), which comprises the cities and towns of Malden, Medford, Melrose, Reading, Stoneham, and Wakefield.

**Methods:** An infographic showcasing the work of the MVPHC is being produced. At one of the MVPHC meetings all the members present listed the accomplishments in their communities. A review and summary of the MVPHC action plan was created. Additionally, the death records and data from the Bureau of Substance Abuse Services are being analyzed. Between 2010 and 2015, the number of confirmed overdoses related to opiate registered in Melrose and Wakefield was 58 (fifty-eight) and 27 (twenty-seven), respectively. The data collection for the other cities and towns is still under way and should be finalized in the upcoming couple of weeks.

**Results/Outcomes:** The goal is to inform the general public and certain categories of professionals (i.e., health professionals, legislature, educators, etc.) of the work that is being done in regards to opiate abuse prevention. By spreading information on MVPHC accomplishments and the plan for the future two outcomes are expected: 1- increase participation by the general public in future activities organized by the MVPHC and partners; and, 2- generate support from other organizations, resulting in a higher number of partners.

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**Name:** Kathryn Schimanski

**Practicum Site:** Boston Medical Center

**Location:** Boston, MA

**Title:** Increasing Parent Presence at Bedside for Infants with Neonatal Abstinence Syndrome Quality Improvement Project/Quality Improvement Intern

**Introduction:** Boston Medical Center's Project RESPECT clinic provides obstetric care to women with substance abuse disorders. Many infants born to these women are prenatally exposed to prescribed or illicit opioids. Some of these newborns experience Neonatal Abstinence Syndrome (NAS), an infant opioid withdrawal syndrome. Non-pharmacologic care should be the first line of therapy for NAS, which includes active maternal participation, breastfeeding, and swaddling. This project aims to increase the amount of time that parents spend at the bedside while their infants are hospitalized for NAS and to educate families on the role of non-pharmacological care with the ultimate goal of reducing infant length of stay and need for pharmacologic care.

**Methods:** One of the interventions to accomplish this goal was to revise an existing pre-natal teaching handout for the RESPECT clinic to include more information on non-pharmacologic care and to operationalize its use and distribution in the clinic. In addition, a pre-natal worksheet was developed to be used to counsel moms and to help talk through specific barriers that keep them from the bedside, with the goal of achieving solutions before they give birth.

**Results/Outcomes:** During our pilot for the worksheet we found that mom's found it helpful, and the data is currently being collected to see if it actually helped increase parental presence at the bedside. We are hopeful that both of these interventions will not only help mothers get to the bedside and bond with their baby, but also that the babies will spend less time in the hospital and experience better health outcomes.

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**Name:** Sunil Shah

**Practicum Site:** Veterans Affairs Boston Healthcare Systems

**Location:** Boston, MA

**Title:** Health Administration Pathways Intern - Fiscal Department

**Introduction:** The VA Boston Healthcare System budget for general purpose funds is \$562 million. The budget for employee travel is only \$300,000 (0.05%). While such a miniscule component of the budget, it remains a highly visible and contested issue. Employees use their own personal funds to embark in trips for conferences and training sessions before receiving reimbursements, creating anxiety for the travelers. Additionally, inappropriate travel reimbursement comes with the fear of making local headlines. The purpose of this project is to create a travel portal to, not only make it easier for the travelers, but to improve the efficiency of the travel process.

**Methods:** The project involved working closely with the travel and budget team to learn the travel policies, system, and processes of the VA before assisting travelers with their cost reimbursements. It also included evaluating the process by keeping track of frequently asked questions from travelers, along with monitoring consistent errors in performance. PowerPoint slides were developed depicting the process and sent to travelers for feedback as well.

**Results/Outcomes:** The information from the current process, the frequently asked questions, and negative feedback showed that the travel process was too complicated. One noticeable finding was travelers were often missing forms required for their specific travel needs. A travel portal will be created for beta testing that will be a simplified step by step process, which will include all required forms, VA policies, and directions on how to use the VA travel system for travelers.

# HEALTH POLICY & MANAGEMENT

**Name:** Chinar Singh  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA  
**Title:** Clinical Study Recruiter

**Introduction:** Gilead's studies at the Boston Medical Center seek to evaluate the non-inferiority of switching to FTC/ RPV/ TAF FDC as compared to continuing Atripla OR Complera in virologically-suppressed HIV-1 infected patient. The HIV & Aging cohort study looks to further and better understand the interaction between HIV infection and the aging process. It aims to more thoroughly investigate the changes in the immune system which may be responsible for causing non-AIDS clinical diseases. The purpose of this practicum was to learn how clinical trials are organized, managed and how patients are recruited and retained.

**Methods:** I was in charge of the pre-screening and subject recruitment, operational and program level support for Phase III Gilead's clinical trials. I conducted follow-up communications with patients while practicing discretion and adhering to hospital confidentiality guidelines (HIPAA). I conducted study visits, collected data (RedCap), maintained IRB regulatory documents and completed case report forms. I also processed, shipped and handled blood specimens.

**Results/Outcomes:** Pre-screening of the subjects according to the eligibility criteria, to be enrolled in the respective studies/cohort. Reaching estimated sample size to attain funding. Developing better recruitment strategies. Scheduling of appointments and following up with patients while adhering to HIPAA guidelines. Maintenance of IRB regulatory documents. Processing and Shipping of blood specimens.

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**Name:** Ryan Smith  
**Practicum Site:** Veterans Affairs Boston Healthcare Systems  
**Location:** Boston, MA  
**Title:** Health Systems Administrative Intern (Pathways)

**Introduction:** Lacking the funds and infrastructure to expand existing dental facilities, the Veterans Affairs Boston Healthcare System (VABHS) procured a Mobile Dental Unit with the intention of decreasing wait times for appointments while increasing patient access to dental care. However, efficient and coordinated project management efforts are needed to operationalize this asset. The practicum focuses on engaging an interdisciplinary team to implement a safe and effective mobile dental service that can better serve the Veteran population in Massachusetts.

**Methods:** (1) Work collaboratively with cross-functional teams and facilitate weekly meetings (2) Populate and maintain project documents, record action items and track completion status (3) Develop meeting materials and work plans, coordinating with other departments and identifying potential issues (4) Application of Lean Six-Sigma tools; future state process mapping, Failure Mode & Effect Analysis (FMEA), development of Kanban cards, and use of PDSA cycles upon commencement of operations.

**Results/Outcomes:** A future state process map and FMEA are complete; emergency plans, fail-safes, and preventative measures have been developed to ensure that patient care aboard the unit is safe and service is uninterrupted. Phase I of the project will be completed by December 1st, 2015. This phase is marked by the operationalization of the Mobile Dental Unit in a static location at the Brockton VA Campus. During Phase II, the service will expand to treat veterans at Community Based Outpatient Clinics throughout Massachusetts. Phase III will further expand the service to non-VA entities with high populations of veterans such as the Chelsea Soldier's Home.

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**Name:** Deepti Ananya Sridhar  
**Practicum Site:** Biogen Idec  
**Location:** Cambridge, MA  
**Title:** Patient Safety and Benefit Risk

**Introduction:** Biogen is one of the world's leading biotechnology companies, with a focus on developing therapeutic products for patients with unmet medical needs suffering with neurodegenerative, hematologic and autoimmune disorders. The goals of the SABR department at Biogen are i) Maximize the benefits of Biogen products while minimizing their risks. ii) Safeguard and improve the lives of patients.

**Methods:** The activities undertaken by the SABR Team to evaluate the benefit-risk profiles of company drugs and enhance their safety profile include: i) Databasing Individual Case Safety Reports (ICSR) and executing User Acceptance Test scripts in a new Global Safety Database (GSD) in accordance with regulatory guidelines ii) Accurately documenting training records, requests for clinical follow-up information, and case files received from Biogen's Affiliates and Distributors for Progressive Multifocal Leukoencephalopathy (PML) cases iii) Submitting Periodic Safety Reports to regulatory agencies to provide information regarding the safety profile and performance of company drugs iv) Conducting Safety Surveillance, Signaling and Ad-Hoc analysis to identify new risks of company products and update safety labels accordingly.

**Results/Outcomes:** The activities performed in this project facilitated the execution of Corrective and Preventive Action plans initiated by the SABR team as a response to a regulatory inspection finding. Testing Data Migration Scripts in the new Pharmacovigilance database helped the team's migration from one GSD to another without compromising the uniformity, quality and integrity of ICSR's. The document repository helped the SABR team to monitor the compliance of Biogen's Affiliates and Distributors regarding the documentation of critical case information of PML cases as mandated by regulatory agencies.

# HEALTH POLICY & MANAGEMENT

**Name:** Yaqing Tang  
**Practicum Site:** Breegi Scientific, Inc  
**Location:** Woburn, MA  
**Title:** Business Development Officer

**Introduction:** Breegi Scientific, Inc. is a company specializing in developing low-cost infant incubators and distributing them to developing countries. The product aims at helping preterm babies increase their chances of survival by providing needed warmth, oxygen, phototherapy and hygiene. The objective of this project is to help the company form a strategy to develop the business.

**Methods:** Several tasks were performed to build a solid business plan for the company. First, market research on India, Honduras, and Saharan Africa to understand how the infant incubator markets like in these countries were conducted. We also strived in building relationships with potential partners including incubators, medical device contract manufacturers, distributors and hospitals. In order to understand the needs of end users, several user experience tests and writing Human Factor Review about design of our prototype were initiated as well. Finally, a business plan was developed that included but was not limited to executive summary, product description, market analysis, competitor analysis, financial projection, implementation strategy, and team formation etc.

**Results/Outcomes:** After analyzing the needs of these developing countries, we decided to target our market on mid-level hospitals who are in need of high-end infant incubator but are reluctant to pay more. We also reached out to seek cooperation with international distributors in these countries such as India and Honduras. In order to polish our product design, we are going to start working with Honduras hospitals, where we have established strong relationships with the local experts. A detailed penetration strategy and financial plan will also be established shortly.

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**Name:** Elizabeth Taylor  
**Practicum Site:** Massachusetts State House  
**Location:** Boston, MA  
**Title:** Health Care Finance Bill Summary Intern

**Introduction:** The Joint Committee on Health Care Financing oversees health care programs in the Commonwealth and engages with various organizations on issues such as MassHealth reform or the opioid abuse crisis. The committee also holds hearings on bills pertaining to health care finance. Reviewing and summarizing bills for these hearings were the main tasks in this practicum.

**Methods:** Bills sent to the Health Care Finance Committee are divided into subject matter. The committee holds hearings about once a month, always focused on a particular set of issues. Throughout the summer, the committee held three hearings on a variety of topics: behavioral health and substance abuse, nursing home services and long term care, and Medicaid reform. Before completing a bill summary, the bill needs to be assessed. This means understanding the General Laws and/or regulations being cited. The bill summary briefly describes what is in the bill, but with less legalese and only including the main points.

**Results/Outcomes:** After completing the bill summaries, members of the legislature are able to quickly assess the content of the bills. Therefore they are better able to appreciate testimony, because they understand what the bill changes and how it affects current law. Reading every bill would be extremely time consuming for the members, which is why bill summaries are so helpful.

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**Name:** Allison Tonge  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA  
**Title:** Research Assistant, Breast Density Notification Pilot Study

**Introduction:** This summer, the Women's Health unit conducted two qualitative pilot studies. The goal of this research was to assess patient and provider responses to the implementation of Bill S. 1006, An Act Relative to Breast Density Notification. This legislation requires that radiologists provide written notification of breast density status to women with dense breasts following their mammogram.

**Methods:** Patient Study: Patient participants were randomly selected from 700 Boston Medical Center (BMC) radiology patients who received letters between January and June 2015 indicating they had heterogeneously dense, or extremely dense, breast tissue. Study notification letters were mailed to 150+ patients and initial screening performed via phone. I was responsible for conducting 30 interviews and preliminary data analysis. Provider Study: Physicians at BMC were invited to complete a brief online survey. My contributions to this project included survey collection and preliminary data analysis.

**Results/Outcomes:** Patient Study: Of the 30 women interviewed, the majority recalled the letter's content accurately, but were uncertain what breast density was, or what actions to take. Many reported surprise regarding density status and increased anxiety. Provider Study: Only four out of 25 providers felt that notifying patients of their breast density would promote informed decision making by patients. When asked what they would do for patients who had questions about additional screening, only five reported they would recommend additional tests. Outcomes: This legislation has increased women's awareness of breast density status, though not their health literacy, and has had little effect on the type, or frequency, of testing performed.



# HEALTH POLICY & MANAGEMENT

**Name:** Jeremy Tourish  
**Practicum Site:** Massachusetts Health Quality Partners  
**Location:** Watertown, MA  
**Title:** Intern

**Introduction:** As part of my internship at Massachusetts Health Quality Partners (MHQP), a Watertown-based organization dedicated to ensuring quality healthcare for all Massachusetts citizens, I assisted in updating MHQP's preventive care guidelines, which are distributed and used by various healthcare organizations around the state. The goal of these guidelines is to provide a single set of recommendations or tools to support clinicians' work to provide high quality, evidence-based care as well as to eliminate inconsistent guidelines in the state of Massachusetts and beyond. The purpose of my practicum was to ensure that the guidelines published by MHQP were updated with all the latest information and recommendations of organizations such as the United States Preventive Services Task Force (USPSTF), American Academy of Family Physicians, American Cancer Society, and the Massachusetts Department of Health.

**Methods:** I worked with the project manager on the guidelines project to digest newly published information and incorporate it in the updated set of materials to be distributed in 2016.

**Results/Outcomes:** Fully updating the perinatal, pediatric, and adult preventive care guidelines with the newest recommendations from accredited organizations will ensure that the guidelines are available to healthcare providers that need them.

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**Name:** Sara Weber  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA  
**Title:** Quality Improvement Intern

**Introduction:** Both Project RESPECT and Baby Steps Follow-Up are part of quality improvement projects at Boston Medical Center in the pediatrics department. Project RESPECT provides comprehensive care to pregnant and post-partum women with or recovering from substance abuse disorders. Most of the infants born to women in Project RESPECT are prenatally exposed to prescribed illicit opioids. Many of these babies experience Neonatal Abstinence Syndrome (NAS), an infant opioid withdrawal syndrome. Baby Steps provides comprehensive follow-up for these at risk infants.

**Methods:** We performed quantitative work using Epic to abstract patient information for data collection and analysis. Data we collected included the booking date of appointments, what appointments were and were not attended, and lab results. We then used that information to generate bi-weekly data reports for the care team as well as run charts showing average time to scheduled appointment and percentage of appointments attended. For Project RESPECT we created pink appointments cards for patients and for Baby Steps we created business cards with the providers' picture on it as well as updated informational brochures to be handed to and discussed with parents prior to their baby's discharge.

**Results/Outcomes:** The work we have done has helped the care team to stay up-to-date with their patients, given patients a physical reminder of their appointments, and helped to facilitate the efforts to bridge the communication gap between providers and patients.

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**Name:** Iliana Ycute-Castro  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA  
**Title:** Health Related Outcomes Among Hispanic Older Adults in teh United States using the National Health and Aging Trends Study Data Set

**Introduction:** The Hispanic older adults in the United States tend to report their health much lower than the non-Hispanic Whites. Poor self-reported health has been shown to be associated with increased mortality and morbidity. The objective of this project was to further investigate the extent to which sociodemographic, health, and lifestyle factors are associated with poor self-rated health among a national sample of Hispanic older adults in the US.

**Methods:** A comprehensive literature review was conducted to understand the determinants contributing to self-rated health among Hispanic older adults. Synthesis of the literature yielded three key factors to examine: sociodemographic, objective health, and lifestyle determinants of self-rated health. We used data from the 2011 National Health and Aging Trends Study (NHATS) and SAS software to conduct the analysis.

**Results/Outcomes:** We hypothesized that sociodemographic, objective health, and lifestyle factors will significantly contribute to poor self-rated health among Hispanic older adults. Initial results indicate that the strongest predictors are objective health factors, followed by lifestyle factors, with sociodemographics being the least useful in explaining poor self-reported health. Additional findings from this project highlighted a limited body of research that specifically targets investigation of unique factors related to self-reported health among Hispanic older adults. Future work should focus on identifying the underlying mechanisms of variation in health and lifestyle factors related to poor self-reported health among Hispanic older adults in the US. Such future work is important to identify potential disparities related to poor self-rated health among this potentially vulnerable population.



# MATERNAL & CHILD HEALTH

**Name:** Emily Brennan  
**Practicum Site:** Boston University School of Medicine  
**Location:** Boston, MA  
**Title:** Boston PPE Initiative

**Introduction:** The goal of the PPE program is to recruit and train college students to disseminate information regarding preconception health and health care. These students will then work with their own campuses and communities in order to raise awareness of the problem of infant mortality, the importance of family planning, and the ways individuals can improve their health to increase positive birth outcomes. The practicum work included important networking with individuals and organizations in the maternal and child health field in Boston as well as meetings like the National CoIIN conference on infant mortality. Additionally, I collected and organized materials from previous PPE trainings to complete a comprehensive training manual to be used during a large training session this Fall.

**Methods:** The major activities completed in order to prepare for the Fall PPE training were: 1.) Creating a training manual to be used during training. 2.) Developing a plan to expand the PPE program to several colleges and junior colleges in the Boston area. 3.) Building a list of maternal and child health services in Boston that may offer service hours so that PPE trainees can complete certification

**Results/Outcomes:** The completed activities will be utilized to expand the Preconception Peer Education program in Boston and create a sustainable program for the future.

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**Name:** Michelle Eglovitch  
**Practicum Site:** University of Rochester, Public Health Department  
**Location:** Rochester, NY  
**Title:** Public Health Practitioner giving service to a local NGO- Ladakh Nun's Association

**Introduction:** His Holiness the Dalai Lama recently called upon Buddhist nuns and monks to engage in more community service. Subsequently, the Ladakh Nuns' Association (LNA) in Leh, Ladakh, India recently enlisted the help of Dr. Nancy Chin from the University of Rochester in training their Tibetan Buddhist nuns in community engagement and health promotion. In addition, the UR team was tasked to do a community health assessment in Matho village. My specific focus of this assessment was under 5 child growth, and assessing whether or not son preference exists in this particular village.

**Methods:** The team developed and presented public health modules to the nuns over the course of several days. In reciprocation, the nuns assisted the team with culturally adapting and translating the village health survey, adapted from India's National Family Health Survey. The team and the nuns went to Matho village and went household to household to collect data, using a skip pattern to randomize households. The survey included many measures, but I specifically collected data on sex, height, weight, and dates of birth for children under 5. The team performed basic analysis of the data and presented preliminary findings to the village headman and council.

**Results/Outcomes:** The team collected data on 76 households, which amounted to 399 villagers. I collected data on 30 children under the age of 5. Preliminary results suggests that there is no evidence of son preference, and the majority of children under 5 that were measured were of a healthy weight.

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**Name:** Taylor Frazier  
**Practicum Site:** Community Catalyst  
**Location:** Boston, MA  
**Title:** Intern, Children's Health Team

**Introduction:** Community Catalyst is a national, nonprofit, consumer advocacy organization working to transform the American healthcare system to better serve all people, especially those of vulnerable populations. The Children's Health Team works to coordinate the efforts of Community Catalyst's state and local partners to support an agenda that safeguards existing public coverage programs for families, supports public health initiatives that secure a healthier environment for children, and ensures affordable, high quality coverage options available through the ACA to support families. The purpose of this practicum was to conduct research to initiate the Children's Health Team's entrance into maternal-child health care delivery; the team was previously pretty exclusively focused on parent and child health coverage.

**Methods:** I conducted research on maternal depression and how both Medicaid expansion and two-generation care models can help best serve affected women and their families.

**Results/Outcomes:** My research culminated in an issue brief on maternal depression and policy approaches and a blog that will be published in late August. The paper will enable the Children's Team to participate in the broader health system transformation agenda that Community Catalyst is launching. It will also serve as the basis for part of a workshop at the November New England Alliance for Children's Health Summit to build interest in this topic among their partners. The blog will publicize the research to Community Catalyst's larger constituencies so that it can support their children's health and consumer health advocacy mission.

# MATERNAL & CHILD HEALTH

**Name:** Jane Hynson  
**Practicum Site:** Corner Stalk Farm  
**Location:** Boston, MA  
**Title:** Urban Farming Practicum

**Introduction:** Corner Stalk Farm runs four hydroponic Freight Farms inside recycled shipping containers in East Boston. Each farm holds about one acre of produce and technology is used to monitor water, light, and air temperature creating a controllable growing environment to produce consistent and high quality produce. The purpose of this practicum was to examine whether this innovative urban agriculture approach could effectively increase access to healthy food for low-income, urban populations year-round and help to address overweight/obesity by increasing fruit and vegetable intake.

**Methods:** This practicum involved 1) learning about and assisting with the produce growing process (planting and germinating seeds, transferring crops to vertical growing towers, and harvesting crops), 2) helping the farm prepare for the opening of the year-round, all local Boston Public Market, 3) promoting the business, 4) participating in local food policy council meetings related to increasing healthy food access, and 5) mapping the local food environment.

**Results/Outcomes:** In comparison to other farm-to-community models, indoor urban farms such as Freight Farms allow for year-round healthy food production on a larger scale, while maximizing land and resources. The farms can be installed nearly anywhere, in rural or urban environments. During the practicum, Corner Stalk Farm began successfully selling their produce at the Boston Public Market, with potential to reach all Boston residents. Based on their success, this model could provide a viable mechanism to address urban “food deserts” as well as engage low-income community members in growing their own fresh produce.

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**Name:** Sheridan Larsell  
**Practicum Site:** Ibis Reproductive Health  
**Location:** Boston, MA  
**Title:** Research Intern

**Introduction:** Ibis Reproductive Health is a non-profit research organization dedicated to enhancing the reproductive autonomy, choices, and health of women in the US and abroad. As a research intern, I assisted in the data collection, organization, and analysis phases of multiple projects with the focus of increasing access to safe abortion care.

**Methods:** To support a body of research assessing the reproductive health needs of servicewomen, I created online ad postings and maintained clinic outreach efforts to recruit active duty US military women for study participation and conducted quality assurance checks on transcribed interviews. I contacted international military health policy experts for survey participation, documented survey responses, and drafted sections of an issue brief. For a study examining women’s experiences accessing abortion, other types of health care, and public assistance and a project on telemedicine provision of medication abortion, I wrote code summaries from transcribed and coded interviews using AtlasTi qualitative data analysis software.

**Results/Outcomes:** Participant recruitment for the military project will result in a collection of in-depth interviews with active duty US servicewomen to be transcribed, coded, and used in further analysis. Findings from the international military survey will be used to release an issue brief describing other countries’ policies on abortion coverage and contraception for servicewomen. The code summaries will be used to inform content in state-level policy briefs and a peer-reviewed journal article. Results from all projects are intended as tools for advocacy and policy reform related to Ibis’s priority of increasing abortion access.

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**Name:** Debra McNeil  
**Practicum Site:** Town of Winthrop  
**Location:** Winthrop, MA  
**Title:** Local Public Health Intern

**Introduction:** The Winthrop Health Department has placed a specific interest on improving child and adolescent health. High asthma prevalence and opioid abuse are major local stressors, and community initiatives are being constructed in response. One initiative will convert public schools and daycares in town from traditional to green cleaning products to reduce asthmagen exposure in children. A second initiative will educate residents on opioid abuse, prevention, and treatment.

**Methods:** Winthrop is applying for a grant through the Toxics Use Reduction Institute (TURI) at UMASS Lowell to gain funding for the green cleaning products conversion. The drafting of the application required researching products, helping develop the program, implementation and evaluation, and budgeting the project. The substance abuse education project started with the health department, police department, and a local community group jointly planning the opioid awareness night. Preparation meetings were held, and the group strategized for future initiatives as well.

**Results/Outcomes:** The grant application for the green cleaning product conversion was submitted on June 30, 2015, and a decision will be announced in late August 2015. Updating the standard operating procedure for cleaning in schools and daycares will reduce asthmagen exposure, and aid in decreasing asthma related absences and asthmatic episodes in children. This in turn will improve educational attainment and quality of life. The first Opioid Awareness Night was hosted in June, and more are being planned for the future. These forums create a safe space to talk about strategies to treat addiction, and provide resources to addicts, families, and friends alike.

# MATERNAL & CHILD HEALTH

**Name:** Katherine Piculell  
**Practicum Site:** Tufts University  
**Location:** Medford, MA  
**Title:** Health Promotion Intern

**Introduction:** Tufts University's Department of Health Promotion and Prevention (DHPP) offers health education and outreach programs to promote a healthy campus community and environment. Resources are available to students in need of early intervention and access to health services related to alcohol and drug use, stress management, sexual and reproductive health, and nutrition, among others. As a health promotion intern this summer I conducted a needs assessment on the health and well being of Tufts' undergraduates as a preliminary step to development of health programs and resources.

**Methods:** The American College Health Association directs the National College Health Assessment (NCHA), a health survey that the DHPP administers to Tufts undergraduates. I performed data analysis of NCHA results using statistical software (SPSS) to report on a variety of health topics relevant to Tufts undergraduate students with attention to social and demographic characteristics like participation in Greek life, race and ethnicity, and sexual orientation, among others. The needs assessment I conducted included data analysis and interpretation of NCHA survey results, collaboration with key stakeholders and student groups on campus, and a comprehensive literature review.

**Results/Outcomes:** I have identified health topics and populations to be targeted in development of data-driven health education and outreach programs for Tufts University's undergraduates. My reports have also informed the tobacco-free campus coalition, as well as a work group focused on campus diversity.

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**Name:** Christina Ratleff  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA  
**Title:** HSiH Evaluation Associate

**Introduction:** Healthy Start in Housing (HSiH) is program designed to address major social determinants of health by focusing on housing instability as a contributing factor to adverse health outcomes. The program is collaboration between the Boston Public Health Commission (BPHC) and the Boston Housing Authority (BHA), and provides priority access to housing and intensive case management to women who are experiencing homelessness and a medically high-risk pregnancy. In 2012, the Boston Public Health Commission contracted with Boston University School of Public Health to design and conduct an evaluation of the program. For my practicum, I am serving as program evaluation associate, and contributing to the evaluation of the program. This evaluation provides rigorous analysis of the program's impact on health outcomes and program processes contributing to its success.

**Methods:** 1.) Coordinated study participant screening, enrollment, and follow--up. 2.) Conducted baseline and follow-up interviews with study participants. 3.) Interpreted study data 4) Conducted literature reviews on the impact of housing instability on maternal and child health outcomes 5) Contributed to grant proposal. 6) Contributed to the development of a comprehensive program evaluation report.

**Results/Outcomes:** Practicum work resulted in the draft of 'Healthy Start in Housing Program Evaluation 2012-2015'. The evaluation has three primary objectives: 1) Monitor and document process measures related to program implementation. 2) Document the effects of a tailored supportive housing model on maternal and child health. 3) Identify best practices to help inform policy and facilitate dissemination.

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**Name:** Emily Rheume  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA  
**Title:** Research Assistant

**Introduction:** As part of a community-based participatory research project, I assisted the Section of General Internal Medicine at Boston Medical Center and Boston University School of Medicine in promoting weight management among a diverse population of obese residents of Boston Public Housing. The purpose of this practicum was to develop an effective computer-based motivational interviewing counseling support system (CuesWeight) for resident health advocates (RHAs) to facilitate behavioral risk reduction counseling for chronic disease prevention.

**Methods:** Photovoice methodology was used in a series of focus groups to identify social contextual factors that influence unhealthful eating, physical inactivity, and obesity from the perspective of public housing residents. We reviewed the transcripts from the focus groups, identified themes, and organized them into codes based upon individual, interpersonal, community, and policy level factors that reflect facilitators and barriers of healthy nutrition, physical activity, and weight management. These codes, as well as cycles of usability testing with resident health advocates informed the development and cultural appropriateness of CuesWeight.

**Results/Outcomes:** The qualitative methods used to develop CuesWeight will serve as formative research for a two-group randomized feasibility and efficacy trial testing counseling with CuesWeight versus a comparison group. The results of the trial will inform the future development of computer-assisted interventions that use peer support for behavioral risk reduction for chronic disease prevention among populations facing health disparities.

# MATERNAL & CHILD HEALTH

**Name:** Aisha Townes

**Practicum Site:** Brookline-Quezalguaque Sister City Project, Inc.

**Location:** Brookline, MA

**Title:** Research Assistant

**Introduction:** Boston University Epidemiology Department in partnership with Brookline Sister City Health Committee sought to follow-up on participants in a chronic kidney disease of unknown origin study in Quezalguaque, Nicaragua. The initial study aims were to measure the prevalence of chronic kidney disease of unknown origin, identify contributing risk factors, and follow up on a subset of previous participants. The local municipality leaders also requested help with sexual education in schools. The goals of this practicum were to identify and follow-up on a subset of past study participants with local community health workers, educate students on sexual health to meet the needs of the population, and map the location of potable water in the community. [?][?][?]

**Methods:** With a team of six BU and Tufts students who travelled to Quezalguaque, Nicaragua, I collaborated with local community health centers and municipality officials, to identify study participants. We collected survey information on their health history, demographic maps, recent death registries, blood, urine, finger stick creatinine level, and blood pressure. We also visited each primary and secondary school (5th-8th graders) for 1-hour discussions on sexual education. [?][?][?]

**Results/Outcomes:** By the end of the practicum, we interviewed and collected samples on approximately 200 participants. We provided sexual education and free condoms to almost all 5th-6th grade students. We identified a map of potable water sources from municipality leaders and gave it to the Brookline Sister City Health Committee for future projects in Quezalguaque.

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**Name:** Madeline Wachman

**Practicum Site:** Boston Children's Hospital, Office of Government Relations

**Location:** Boston, MA

**Title:** Intern

**Introduction:** As part of the Boston Children's Hospital (BCH) Office of Government Relations, I worked with the Director of Mental Health Advocacy & Policy and the rest of the leadership of the Children's Mental Health Campaign (CMHC) on a project focused on pediatric psychiatric boarding. The CMHC is a broad coalition of 140 agencies and organizations in Massachusetts that are working to improve mental health care for children, adolescents, and their families in the Commonwealth. The campaign recently received a grant to develop a better understanding of pediatric psychiatric boarding and ultimately, to advocate for state-wide policy solutions. This project seeks to take the lead on this important issue, and to propose a comprehensive approach to ensure that children who are in psychiatric crisis receive timely and appropriate care.

**Methods:** I have worked directly with the Director of Mental Health Advocacy of BCH and the working group of the CMHC, on the following: 1.) creation of a robust literature review on pediatric psychiatric boarding 2.) development of a survey to be used by hospitals across the state to measure the factors impacting pediatric psychiatric boarding and 3.) work on legislative advocacy projects regarding pediatric mental health to promote the CMHC priorities.

**Results/Outcomes:** The completion of the literature review informed the development of a web-based data collection tool, which will be used over the course of the next year during the data collection phase. The data collected through this survey will ultimately be used to better understand pediatric psychiatric boarding within in Massachusetts and advocate for system solutions.

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**Name:** Julie Whyte

**Practicum Site:** University of Massachusetts Medical School

**Location:** Charlestown, MA

**Title:** MA Act Early Program Intern

**Introduction:** Massachusetts Act Early is an organization at UMASS Medical School's Eunice Kennedy Shriver Center that works to educate parents and professionals about healthy childhood development, early warning signs of developmental disorders such as Autism Spectrum Disorder (ASD), and the importance of routine developmental screening. The Eunice Kennedy Shriver Center supports research, education, and service aimed at improving the quality of life for persons with intellectual and developmental disabilities (IDD) and their families. As a program intern, I supported the Massachusetts Act Early program as well as the HRSA Healthy People 2020 Roadmap for Massachusetts Children and Youth with ASD/DD, a needs assessment for children with Autism Spectrum Disorder in the state that aligns with the Maternal and Child Health Bureau's six core outcomes.

**Methods:** I completed a variety of tasks for the Massachusetts Act Early Project such as assisting in the organization and preparation for the 2015 Spring Summit on Considering Culture in Autism Screening, updating the Massachusetts Act Early Website, and reaching out to physician offices across the state to inform them of our free materials and trainings. For the HRSA project, I observed and took notes for their focus groups as well as analyzed the focus group notes for common themes.

**Results/Outcomes:** I wrote a Final Report on the 2015 Spring Summit that summarized the discussions that occurred during the Summit. I mailed information packets to 37 physician offices and community health centers across the state. I gained experience updating websites and using programs such as REDcap.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Margaret Barresi  
**Practicum Site:** Boston Public Health Commission  
**Location:** Boston, MA  
**Title:** Health Educator

**Introduction:** The Boston Area Health Education Center is a program of the Boston Public Health Commission that aims to diversify the pool of Boston health care providers by introducing racial/ethnic youth to careers in public health and medicine. Through its Summer Academic Enrichment program, BAHEC provides high school students with instruction in math, science, and SAT prep, as well as behavioral support and professional internship experience. These academic and hands-on learning opportunities encourage students to pursue health careers, ultimately working to increase the cultural competency of Boston's health care system. The purpose of this practicum was to co-develop, implement, and evaluate an Introduction to Public Health Course and a Health Communications Internship for rising sophomores.

**Methods:** Activities included 1) Design, implement, and evaluate a curriculum that embraced the core principals of public health and gave practical instruction in community needs assessment, intervention design, and evaluation; 2) Guide student development of five media deliverables including a flyer, infographic, editorial, mobile health application mock up, and a PSA related to HPV infection and vaccination; and 3) Assess student knowledge, interest, and engagement through a midpoint check-in and a course-end process evaluation.

**Results/Outcomes:** A Pre-Test/Post-Test evaluation and student performance during classroom "assessment of learning" activities will measure BAHEC student achievement of course learning objectives. The anticipated impact is that by recurrent offering of this course, students will continue to become interested in public health careers.

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**Name:** Anna Bresnick  
**Practicum Site:** Dana Farber Cancer Institute  
**Location:** Boston, MA  
**Title:** Clinical Growth Planning and Strategy Administrative Lead for Network and Market Engagements

**Introduction:** Dana-Farber Cancer Institute is a teaching hospital affiliated with Harvard Medical School, striving to provide cutting edge care to all children and adults burdened with cancer. Through expert research, clinical trials, education and advocacy, Dana-Farber offers compassionate and comprehensive care, while also leading in cancer research and innovation. The Clinical Planning and Network Operations (CPNO) group is leading the Clinical Growth Planning and Strategy initiative to ultimately foster continued clinical growth in the Institute. To reach this objective the initiative seeks to increase patient volume and retention by identifying specific areas of improvement at the disease center level. Targeted strategies will then be presented to the steering committee for approval to inform other clinical growth initiatives institute-wide.

**Methods:** Worked directly with the CPNO as the administrative lead in the Center for Neuro-Oncology (NOC). Responsibilities include patient data collection and analysis, organizing meetings with Neuro-Oncology leadership, working with the project manager to disseminate possible areas of focus and timeline of progress, and create communication pieces to support the program's clinical goals.

**Results/Outcomes:** Fundamental components to be presented to the steering committee include: 1) plan to pilot a brain metastasis program; 2) expand the frequency of multi-disciplinary clinic; 3) establish patient accommodations to decrease geographic limitations; 4) increase cohesion between Dana-Farber/Brigham and Women's Cancer Center; 5) create a network strategy with DFCI satellites; 6) advertise NOC as the global leaders in brain tumor research with unique genotyping technology. Presentation to the steering committee is anticipated for August 2015.

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**Name:** Leah Briggs  
**Practicum Site:** Norfolk Advocates for Children (NAC)  
**Location:** Foxboro, MA  
**Title:** Graduate Student Intern

**Introduction:** The Norfolk Advocates for Children (NAC) assists victims and their families who have experienced childhood physical and sexual abuse, neglect and have witnessed violence. The NAC conducts forensic interviews and medical exams, provides an advocate to guide clients through the court process and coordinates access to comprehensive services within the county. The purpose of this practicum was to assist in the identification of available trauma informed services and to assist with the NAC's national re-accreditation effort.

**Methods:** Practicum activities included: 1) Locate and document a comprehensive list of services and related resources; 2) Compile a mental health resource packet with age appropriate information to help guide families in understanding the impact of trauma, how to cope after trauma and access trauma-informed care; 3) Develop a Cultural Competency and Diversity Plan, complete with agency policy, values, and needs statement, training outline, implementation plan of activities and process/outcomes evaluation plans for each agency activity in preparation for re-accreditation.

**Results/Outcomes:** The resources developed will assure that families are referred to available and appropriate services and receive resources that match the developmental age and certain relevant trauma exposures. In addition, distribution of the resource packet will help families' better respond to their trauma related needs. The cultural competency and diversity plan, developed locally, will be utilized by the NAC, which has been guided by the National Children's Advocacy Center (NCAC) standard requirements for reaccreditation.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Madeline Eagan  
**Practicum Site:** Harvard University  
**Location:** Cambridge, MA  
**Title:** Health and Wellness Research Intern

**Introduction:** The Harvard University Office for Sustainability and Office of Work/Life plan to administer a survey in the fall to measure the wellbeing of employees, faculty and students. The survey will provide a better perspective of the University community's mental, physical and emotional wellbeing and also inform future sustainability and wellness program development. This purpose of this practicum was to assist in the development of the survey.

**Methods:** An extensive literature review was conducted to identify best practices of measuring wellbeing. The review included articles related to measuring both workplace and community wellbeing, potential return on investment, and environmental sustainability. Articles were summarized, current survey tools were identified and possible questions to include about wellbeing and sustainability were recommended. This included mapping potential questions to the Organization for Economic Co-operation and Development (OECD) Better Life Index and Gallup-Healthways Well-being Index to confirm that all dimensions of wellbeing (environment, work-life balance, health, housing, job, life satisfaction, etc.) were accounted for on the survey.

**Results/Outcomes:** The finalized survey will be administered in fall 2015 to all Harvard University employees. The survey development, data collection and analysis will serve as the formative research that describes current perspectives of sustainability and wellness efforts and will inform future community wellbeing and sustainability efforts.

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**Name:** Nathan Fuller  
**Practicum Site:** Dana Farber Cancer Institute  
**Location:** Boston, MA  
**Title:** Finance and Operations Intern - Medical Oncology, Hematologic Malignancies

**Introduction:** Dana-Farber Cancer Institute, an affiliate of Harvard Medical School, is dedicated to eliminating cancer, AIDS, and other illnesses by delivering the highest quality treatments available today, while also developing future treatments through cutting-edge research. The purpose of the practicum was to serve as the Finance and Operations Intern in the Hematologic Malignancies division of the Medical Oncology Department, provide administrative support for daily departmental financial and operational tasks, and manage responsibilities within many financial parameters from administrative, clinical, operational, and research-related perspectives.

**Methods:** Practicum goals were achieved via the following activities: 1) worked closely with the Hematologic Malignancies disease center managers; 2) engaged in the detailed processes of managing hospital financial accounts; 3) completed many specific fiscal tasks including creating purchase orders, preparing expense reports, reconciling clinical and operational charges, processing reimbursements, tracking large scale invoices, and paying vendors; 4) produced financial summary statements, analyzed and adjusted departmental budgets, and standardized certain aspects of the supply ordering processes.

**Results/Outcomes:** The practicum provided valuable experience to advance my career as an administrative professional within the health care field. As the Finance and Operations Intern, I gained in-depth working knowledge of financial operations within a hospital department. I was also able to serve as an additional resource for revising departmental budgets and financial processes.

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**Name:** Alyssa Harlow  
**Practicum Site:** Boston Public Health Commission  
**Location:** Boston, MA  
**Title:** Inclusion Partners Intern

**Introduction:** The Inclusion Partners Program (IPP) is a community based peer leadership program developed and implemented by the Boston Public Health Commission (BPHC). The program was developed in order to offer young people an opportunity to learn about, and gain hands on experience working with, children with special health care needs (CSHCN). IPP consists of an 8-week course component, during which students learn strategies for working with children with various types of physical and mental special health care needs, followed by a 7-week fieldwork experience. For my practicum, I conducted an evaluation of Inclusion Partners, with the goal of determining how well the Spring 2015 session was implemented according to plan, and whether the intended outcomes were achieved.

**Methods:** The evaluation was conducted using a mixed-methods approach, with both quantitative and qualitative evidence informing the results. Data collection methods included two focus groups with current Inclusion Partners students, six key information interviews with past and present IPP staff and site supervisors, and the development and dissemination of two surveys. A final evaluation report was created outlining the results.

**Results/Outcomes:** Process evaluation of IPP revealed the major issues in implementation of the program revolved around logistical barriers, such as poor communication between IPP staff and site supervisors, unclear responsibilities for the students at their sites, and scheduling and transportation conflicts. Despite the barriers encountered during implementation, there is preliminary evidence that the program is reaching its intended goals of increasing awareness and knowledge around disability.



# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Robin Hicks  
**Practicum Site:** Brigham and Women's Hospital  
**Location:** Boston, MA  
**Title:** BHSI Clinical QI Initiative Intern

**Introduction:** The Boston Healthy Start Initiative (BHSI) is a federally funded program of the Boston Public Health Commission. BHSI provides services with a goal of reducing disparities in birth outcomes to pregnant and parenting women who self-identify as Black or Hispanic and live in targeted Boston neighborhoods. The goal of the BHSI Clinical QI Initiative is to support clinical sites in improving clinical practice and maintaining a high standard of current medical knowledge in best practices to achieve optimal birth outcomes and health and well-being of women served.

**Methods:** Review of the literature, quality improvement methods training (based on the IHI Breakthrough Series) and interviews/meetings with select BHSI sites were conducted to establish and support site participation in the BHSI QI program. QI activities include: identify workflow priorities, develop measures, identify data sources to collect and report performance, identify gaps in performance and develop a concrete plan for improvement. A logic model, driver diagram and workflow process maps were created to demonstrate necessary strategies to improve birth outcomes through best practices in clinical care including facilitators and barriers to those activities.

**Results/Outcomes:** Nine BHSI sites were educated on the QI goals and process, and all nine sites participate in the QI process. Thus 100% site engagement. Priority areas identified for clinical QI are: 1. Reducing risk for preterm birth, 2. Centering Pregnancy and 3. Pregnancy planning and birth spacing. The steps identified for each site to continue in the QI process include: standardize a system for data collection and data reporting.

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**Name:** Janet Hung  
**Practicum Site:** Boston Public Health Commission  
**Location:** Boston, MA  
**Title:** Health Educator

**Introduction:** The Boston Area Health Education Center (BAHEC) of Boston Public Health Commission aims to diversify the pool of health professionals in Boston by encouraging urban youth to pursue careers in health and public health. The purpose of this practicum was to expose high school students to the field of public health through an Intro to Public Health course and a public health communications internship. Additionally, the public health communications course involved creating social media surrounding the HPV vaccine and virus to ultimately influence peers to get vaccinated against HPV.

**Methods:** Practicum activities included: 1) Develop an engaging, five-week course titled Introduction to Public Health; 2) Plan, instruct, and evaluate course; and 3) Guide students in creating infographics, PSA, editorial, mobile app mock up, and flyer to disseminate information on HPV.

**Results/Outcomes:** Youth can now view media on HPV on an online blog. Eventually, a mobile health app will be developed for the youth to obtain information and ask questions about HPV. Finally, students have been encouraged to enter the Public Health Field via exposure to core principals and program activities via the Intro to Public Health Course.

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**Name:** Hannah Lipper  
**Practicum Site:** Cambridge Health Alliance  
**Location:** Cambridge, MA  
**Title:** Research Assistant

**Introduction:** The Center for Multicultural Mental Health Research (CMMHR) at Cambridge Health Alliance is an organization that generates research focusing on ethnic and racial disparities within mental health. The purpose of this practicum was to assist with several studies.

**Methods:** The following practicum activities occurred: 1) coded qualitative data for the ongoing Boricua Youth Study that examines the effects of social context, culture, and minority status on depression and anxiety among minority status in Puerto Rican individuals in the Bronx compared to individuals living in Puerto Rico; 2) contributed revisions to a paper that reports comparisons on two types of qualitative feedback (telephone and face to face meetings) from low-income Latino patients after receiving Cognitive Behavioral Therapy (CBT); 3) reorganized and created visuals for reporting the qualitative results of the study; and 4) completed a literature review on alcohol misuse among Latino migrants that will be used in a supplemental grant submission.

**Results/Outcomes:** The Boricua Youth Study is ongoing and analysis of the data will occur at a later time. The qualitative paper, entitled "Latino Patient Satisfaction with Cognitive Behavioral Therapy for Depression," will soon be submitted to a journal for review. The literature review was completed and the supplement will be submitted upon completion.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** ~~Jill Wadsworth~~

**Practicum Site:** Massachusetts Department of Public Health

**Location:** Boston, MA

**Title:** Informing Chicken Regulations in Tewksbury

**Introduction:** Raising animals for the consumption of meat or eggs can have serious public health implications if ownership is not regulated properly. The Tewksbury Board of Health has noticed an increase in citizens who want to raise chickens in their backyard. Being proactive, the Tewksbury Board of Health sought to update their regulations regarding raising backyard chickens. To minimize the public health impact Tewksbury planned to develop a regulation setting minimum conditions to be met to keep chickens.

**Methods:** To identify common practices for raising chickens, an analysis and review of chicken regulations in towns similar to Tewksbury and across the United States was completed. Public forums were analyzed to develop a well-informed regulation.

**Results/Outcomes:** The analysis determined trends and best practices in regulations. These findings helped identify space requirements for chicken and maximum number permitted. Outbreaks of avian influenza and creating a nuisance are public health concerns with raising backyard chickens. Having a plan in place in the event of a bird influenza outbreak, sudden death of a flock, or injury is important to minimize public health impact. Standards regarding cleanliness, distance from abutters, disposal of waste and storing food have been implemented. A detailed permit application process was developed in line with the best practices. The regulation will be presented to The Board for approval in September. It is expected that it will be approved and that the permit application will be used for citizens who wish to raise chickens. With the application citizens will be provided educational materials demonstrating work required to care for chickens.

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**Name:** ~~Rachel Wassar~~

**Practicum Site:** Massachusetts Department of Public Health, Local Internship Program

**Location:** Needham, MA

**Title:** Local Public Health Intern

**Introduction:** In accordance with 105 CMR 590.000 - Chapter X, all non-farm food vendors at the Needham Farmer's Market are licensed and inspected by the Needham Health Department. Hand-washing facilities and refrigeration are not available at the market; therefore food samples must be prepackaged and potentially hazardous food must be kept cool to prevent contamination. The goal of this project is to identify best practices for food safety at the market and suggest improvements for the future.

**Methods:** Thirteen food vendors were licensed for the 2015 season. A food safety handout was developed and distributed to educate vendors about requirements including permit display, food sampling, temperature control, and general cleanliness. Weekly inspections ensure that vendors are complying with these requirements.

**Results/Outcomes:** Vendors were largely compliant with food safety requirements. The most common reminders given were to display food permits, keep a temperature log for potentially hazardous foods, and line trash cans. Food vendors were quick to correct these items when they occurred. A few vendors expressed the difficulty and inconvenience in preparing packaged food samples, however, without access to a hand-washing station, open air sampling is not allowed. Clear communication between the Health Department is essential, and in the future, with enough impetus from vendors, the Market Manager may consider acquiring a hand-washing station for vendors to use since pre-packaging food samples is time consuming and costly.

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**Name:** ~~Worgan Winogue~~

**Practicum Site:** Boston Medical Center

**Location:** Boston, MA

**Title:** Improving Wait Time Communication in the Pediatric Primary Care Clinic

**Introduction:** Boston Medical Center (BMC) patient satisfaction surveys indicate that clinic wait times and communication about delays are poorly rated. BMC has embarked on a hospital-wide initiative to improve communication with patients about wait times and delays, piloting the project in the Pediatric Primary Care Clinic. The wait time communication project began in March 2015 with the goals of increasing the overall patient experience, creating a cohesive clinical atmosphere, and eventually decreasing actual wait times through improved wait time communication among staff and between staff and patients.

**Methods:** My role as an intern was to assist with the planning, testing, and measurement of wait time communication strategies. Throughout the project I directly observed clinic flow and reported observations back to project team. In addition, I created a patient satisfaction survey to measure improvements in PPCC wait time communication over time. I worked with the Project Manager, Clinical Operations, PPCC providers and staff to optimize the process for wait time communication through iterative cycles of testing.

**Results/Outcomes:** Data indicates the importance of staff buy in regarding quality improvement initiatives in the clinic. The front desk staff is the main drivers of wait time communication, and that their participation in handing out Wait Time Information cards at check-in directly correlates with the percent of patients who report being informed regarding wait time. The findings and lessons learned from this project will be highly useful as BMC rolls out Wait Time Communication boards and initiatives across all ambulatory clinics.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** ~~Lindsay Wotton~~ ~~Lindsay~~

**Practicum Site:** Massachusetts Department of Public Health

**Location:** Boston, MA

**Title:** Sexual Assault Prevention and Survivor Services Project Coordinator

**Introduction:** The mission of Sexual Assault Prevention and Survivor Services (SAPSS) is to change social norms that foster sexual violence through the promotion and enhancement of effective and accessible services for all survivors of sexual assault. To achieve this goal, SAPSS advocates for the development of sexual assault policies and programming, administers technical assistance to organizations working to end sexual violence, and evaluates sexual assault survivor services and community education programs. In order to establish best practices for evaluation in rape prevention education (RPE) programming, the department is assessing evaluation techniques used by all statewide rape crisis centers. The purpose of this practicum was to assist with this effort.

**Methods:** I contacted all rape crisis center (RCC) contacts in the state of Massachusetts, gathering information on the evaluation measurements used by each institution. Once collected, I assessed these tools for various characteristics, recording and analyzing this data. Based on the compiled results, I generated a report to be sent to the state coalition and all RPE programs.

**Results/Outcomes:** Six (6) RCCs submitted a total of eight (8) eligible tools to SAPSS (37.5% response rate). The submitted tools assessed measures related to various content areas such as: sexual violence (50%), dating or intimate partner violence (37.5%), and bystander intervention (25%). Notably, 75% of the tools sought to assess norms, perceptions, knowledge, attitudes, and behaviors. This information will be used to develop a standardized RPE evaluation tool and also to inform future evaluation procedures in RPE settings.

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**Name:** ~~Sarah Willis~~

**Practicum Site:** Codman Square Health Center

**Location:** Boston, MA

**Title:** Boston Healthy Start Initiative Fellowship

**Introduction:** Boston Healthy Start Initiative (BHSI) is a federally-funded program aiming to eliminate disparities in perinatal health. Codman Square Health Center is one of 11 BHSI sites in the Boston community providing case management and health education to pregnant Black and Hispanic women to address these disparities. The purpose of this practicum was to conduct medical chart reviews and data extraction to further the facility's ability to analyze care and standard practices while improving my understanding of barriers faced in perinatal health at a community health center.

**Methods:** This practicum focused on three main projects: (1) tracking the health center's pregnant women and recruiting them to participate in Centering Pregnancy group care, (2) participating in the BHSI Quality Improvement Collaborative to discuss ways to improve perinatal care across Boston, and (3) collecting data to inform implementation of "One Key Question", the initiative encouraging all primary care providers to ask women "Would you like to become pregnant in the next year."

**Results/Outcomes:** Two computer-based data tools were created to assist in tracking women going through prenatal registration and Centering Pregnancy groups. The BHSI Quality Improvement Collaborative was created and each site formed QI teams; bi-monthly meetings were held to discuss how to improve perinatal care delivery. Data was collected on planned vs. unplanned pregnancies, prescription of folic acid and/or prenatal vitamin intake prior to pregnancy, and previous contraception use. The report completed will assist in the implementation of One Key Question into clinical care to improve clinical discussions about planned parenting.

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**Name:** ~~Wendy Prosper~~

**Practicum Site:** Boston Children's Hospital

**Location:** Boston, MA

**Title:** Summer Evaluation Associate

**Introduction:** The Educare Learning Network and Brazelton Touchpoints Center<sup>®</sup> are committed to improving the quality of early childhood services. Together, they recognize that healthy relationships among everyone in the system—families and their children, children and professionals, families and professionals, and professionals themselves—are critical to supporting healthy parenting and optimal child development. The Brazelton Touchpoints Center provides training about the principles of Touchpoints and Reflective Practice that are designed to assist professionals' engagement with families around the critical points in the development of young children. The purpose of this practicum was to assist in the evaluation within nine Educare schools.

**Methods:** Assessment and evaluation activities include: a) Observing Educare educator and mentor interviews, b) Documenting conversation that occurred during interviews, c) Coding of qualitative interview transcriptions in ATLAS workbench, d) Assuring that inter-rater reliability existed among coding partners, and e) Reviewing existing data, assessing site needs, and identifying areas for improvement.

**Results/Outcomes:** The Educare Learning Network project is currently in its fifth year of data collection. Upon the collection of all necessary data and transcriptions, a final report will be written highlighting the effectiveness of the implementation of Touchpoints principles on child health and development, provider developmental and relational knowledge, and parent-provider self-efficacy.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Elizabeth Recupero  
**Practicum Site:** Veterans Health Administration  
**Location:** Manchester, NH  
**Title:** Clinical Champion for the VA's OPCC&CT

**Introduction:** The VA's Office of Patient Centered Care and Cultural Transformation (OPCC&CT) was established to create a cultural transformation within the VA, from the traditional disease based model to that of Whole Health and wellness care. The purpose of my practicum was to contribute to these efforts through the development of clinical tools, like the 'Whole Health Review of Systems', a tool that incorporates patients' goals and values into the Primary Care visit, as well as, virtually educate providers throughout the entire VA system on the process of utilizing this personalized approach to Primary Care within their own clinics.

**Methods:** Practicum activities include: 1) developing a process that incorporates the concepts of Whole Health, and Personal Health Planning in the VA's primary care setting; 2) developing clinical tools to assist providers in the practice of developing a Personal Health Inventory (PHI), and a Personal Health Plan (PHP); 3) virtually educating providers throughout the VHA system on this process; and 4) developing a manual to help spread the practice of Whole Health throughout the VA.

**Results/Outcomes:** This project will eventually change the practice of Primary Care within the VHA from the traditional medical model of care to a model that is patient-centered, pro-active, and wellness focused. It engages patients in their own healthcare, and studies have demonstrated that engaged patients have a decrease in utilization of healthcare resources. Our preliminary feedback has shown an increase in patient satisfaction in

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**Name:** Katherine Rosa  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA  
**Title:** Investigating the timing and extent of texting while driving laws and their impact on youth driving behavior and accident occurrence

**Introduction:** Texting While Driving (TWD) is a prevalent and risky motor vehicle behavior, particularly among teenage drivers. TWD and other cellphone usage bans have been implemented in many states nationwide. This practicum research investigates the timing and extent of TWD laws and their impact on youth driving behavior and accident occurrence.

**Methods:** Secondary data collection from sources including the National Conference of State Legislatures and Governors Highway Safety Association on the characteristics of cell phone usage laws in all U.S. states where data is available. Review of questions in the 2011 and 2013 Youth Risk Behavior Surveys (YRBS) pertaining to variables including: texting while driving, talking while driving, drinking and driving, and wearing a seatbelt while driving. We are investigating changes in these driving behavior variables between 2011 and 2013 YRBS data to see if there is any correlation with TWD laws. We are also analyzing the data to look for possible differential effects of TWD and accidents among youth who drink and drive (or ride in a vehicle driven by someone who drinks) and habitual non-seatbelt wearers.

**Results/Outcomes:** Ongoing. We anticipate that our results may have significant implications for future strategies to reduce TWD occurrence and for determining whether TWD laws have the desired effects on road safety.

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**Name:** Laura Ruggiero  
**Practicum Site:** Hockomock Area YMCA  
**Location:** Foxboro, MA  
**Title:** Prescription for a Healthy Lifestyle Intern

**Introduction:** The Hockomock Area YMCA Prescription for Healthy Lifestyle (PHL) sponsors a range of innovative prevention and intervention programs that aim to reduce the prevalence of chronic diseases like cancer, diabetes, heart diseases, and multiple sclerosis, and also to improve the health and wellbeing of individuals living with these diseases. The purpose of this practicum was to create a Microsoft Access database that streamlines the PHL LIVESTRONG program's monitoring and evaluation data entry, reporting, and maintenance system.

**Methods:** Practicum activities included: 1) Review LIVESTRONG program data. This included assessing questionnaires and interviewing PHL staff to identify LIVESTRONG key data collection points, workflow patterns, and reporting needs; 2) Design reporting forms, tables, and queries in Microsoft Access to meet these needs; 3) Transfer historical data from existing Microsoft Excel files into the newly developed Microsoft Access database; and 4) Develop a database user manual and staff training on how to use the database.

**Results/Outcomes:** The Access database has introduced efficiencies, standardized formats, reduced redundancies and improved PHL program data entry, maintenance, and reporting. The new Access database though designed for one PHL program, LIVESTRONG, is now used for all PHL programs' participant intake data. Data entered in one location and format enables easy generation of reports. Staff now understand how to expand and use the database to meet evolving programs' data collection and reporting needs.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Elizabeth Showalter  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA  
**Title:** Data Collection/Analysis

**Introduction:** Via Christi Health is a hospital network based in Wichita, Kansas. It is one of few networks that has developed and uses a protocol for identifying patients who are victims of human trafficking. A research study has been designed to document how this network developed this protocol, trained healthcare providers, and finally, implemented the protocol. The purpose of this practicum was to assist with the study and to contribute to efforts to disseminate lessons learned to other hospital networks to help them develop their own protocol.

**Methods:** Activities included: 1) Collaborate with the study Principle Investigators and team to complete an IRB exemption application; 2) Develop research interview questions; 3) Conduct data collection interviews with administrators and healthcare providers at Via Christi; 4) Analyze the data and describe and interpret results; and 5) Draft a report based on our findings.

**Results/Outcomes:** The final result will be a peer-review article published in a journal. The paper will describe our findings about the protocol adoption and implementation and make recommendations to other hospital networks and policy makers. This will lead others to better identify and support victims of human trafficking.

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**Name:** Kathryn Stocking  
**Practicum Site:** Massachusetts Department of Public Health  
**Location:** Boston, MA  
**Title:** Youth Engagement Coordinator

**Introduction:** Revere on the Move (ROTM) is a community led initiative aimed at supporting healthy and active living in the city of Revere. It is a Mass in Motion program co-led through the City of Revere and MGH Revere CARES Coalition. Compared to Massachusetts, Revere has a higher percentage of students from low-income families, a higher percentage of non-native English speakers, and has a lower high school graduation rate (U.S. Census, 2015). I was tasked with engaging six youth through the Healthy Community Initiatives (HCI) department in health based projects and educational workshops.

**Methods:** Practicum activities included: 1) Coordinate and meet with HCI managers and key stakeholders in the community to determine how our strategies and goals align and how we could utilize youth as our best resources; 2) Develop a day to day curriculum for the youth; 3) Supervise and delegate tasks to youth, and approve their weekly time sheets; and 4) Research and produce report on recommendations to continue Youth Health Leadership Council into school year.

**Results/Outcomes:** A youth engagement curriculum was developed to involve six Revere youth in a variety of Revere on the Move community initiatives including: 1) community outreach, 2) Alcohol, Tobacco, and Other Drug audits, 3) walkability audits, and 4) assistance with the operation of Revere's farmers' market. Six educational workshops were organized around the topics of e-cigarettes, community gardens, community

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**Name:** Catherine Torri  
**Practicum Site:** Health Connector Authority, Massachusetts Health Insurance Exchange  
**Location:** Boston, MA  
**Title:** Release Management Intern

**Introduction:** The Marketplace insurance program for Massachusetts is called the Massachusetts Health Connector. In 2014 nearly half a million Massachusetts residents used the state's Health Connector website to find health insurance. The state's Marketplace for health insurance provides populations that were once without access to coverage the ability to shop and subscribe to medical and dental plans. New code is regularly introduced onto the website to improve user experience and adhere to updated state and federal regulations. Code must be tested before going live and user accessibility testing is utilized to place the Health Connector into consumer's seats, to find and fix defects, and to improve the overall user experience. The purpose to this practicum was to assist with these efforts.

**Methods:** Activities included: 1) Collaborate with subject matter experts to write test scenarios and test cases for parallel website releases focused on renewal; 2) Serve as the liaison between the Health Connector and the user accessibility testing team to acquaint them to the system's functionality; and 3) lead the team through a testing process to ensure that defects were tracked and corrected.

**Results/Outcomes:** Testing for the releases uncovered issues with the system that were resolved with additional code that will result in a more user-friendly application and shopping experience during 2015 open enrollment.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Julia Venanzi

**Practicum Site:** Partners In Health

**Location:** Boston, MA

**Title:** Curriculum Writer

**Introduction:** Partners In Health (PIH) is a Boston-based nonprofit that operates globally to provide high quality care to those most in need. Compañeros en Salud (CES), PIH's Mexico program, works together with government-run clinics to deliver primary care to residents of Chiapas, one of Mexico's poorest regions. CES recruits graduating Mexican medical students entering their required year of social service to staff these clinics. During their year in the clinic, physicians receive monthly training and mentoring from PIH/CES staff and Brigham & Women's residents as they provide care for the community. The goal of this practicum was to develop and write three three-hour modules for CES's global health curriculum.

**Methods:** After bimonthly meetings to discuss core concepts and themes with CES Chief Strategist Dr. Dan Palazuelos, I performed extensive literature reviews before writing modules on maternal & child health, wealth inequality and its effects on health outcomes, and cultural competency in the clinic.

**Results/Outcomes:** The modules I wrote will be taught during the July, August and November monthly training sessions in Chiapas. After receiving feedback from the CES staff members who delivered the trainings, I will refine and edit the modules to best match CES's goal of creating the next generation of social justice physicians in Mexico.

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