

Boston University School of Public Health

# Student Practicum Abstracts

Summer 2014



# BUSPH STUDENT PRACTICA SUMMER 2014

The BUSPH Office of Public Health Practice is pleased to present the Summer 2014 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 summer practicum students?*

**45 Cities and Towns**

**15 States across the U.S.**

**8 Countries**

Colombia

Ethiopia

Ghana

India

Mexico

Nicaragua

South Africa

Tanzania



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**Name:** Bhavna Ahuja  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA United States  
**Title:** Research Assistant

**Introduction:** The Data Coordinating Center (DCC) at BUSPH is a data management resource center that assists investigators with questionnaire and case report form design, implementation of study protocols, data management and statistical analysis. As a summer intern at DCC, I had the opportunity to gain experience in data management and analysis.

**Methods:** I worked on several projects that were at different stages. I attended study meetings. I learned about the RED Cap (Research Electronic Data Capture) Software and used it to test electronic data entry forms ('edit checks' to see if certain checks and skip patterns are automatically carried out in the data entry form) and to enter data for a project. I also learned about the TELE Form Verifier software (a software that reads scanned case report forms and automatically enters data into a database) and used it to check electronic forms (manual review of questionable characters in a scanned case report form) for the NARCAN project. I performed statistical analysis using SAS software for a consulting project for BUMC. Logistic regression and macros were used. I reviewed manuscripts to understand propensity score adjustment when comparing two non randomized groups and then calculated propensity scores for the BUMC project.

**Results/Outcomes:** I became familiarized with the Quality Control process and validation of data. I gained experience in performing statistical analysis using large datasets. I became aware of various softwares' used in managing data. The internship gave me a broad view in all activities related to data management and analysis.

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**Name:** Elizabeth Cavnaro  
**Practicum Site:** Harvard Pilgrim Health Care Institute  
**Location:** Boston, MA United States  
**Title:** Analyst

**Introduction:** Mini-Sentinel, an FDA pilot project tasked with creating an active post-market drug safety surveillance system, uses a distributed data approach in which multiple Data Partners maintain administrative data in a standardized Common Data Model. This distributed database can be rapidly queried using modular programs, template SAS programs designed to examine common epidemiologic questions and can be customized by adjusting parameter settings. As flexibility and complexity are built into these programs, there is increased potential to introduce bias into a study. Immortal time bias is a particular concern, and an investigation is required to understand how immortal time bias is introduced into a study, its effect on study results, and how it can be avoided.

**Methods:** We performed a systematic literature review to assess how immortal time bias is produced in pharmacoepidemiology studies and to identify examples of bias in observational studies. We replicated one of these example studies using a modular program and then adjusted program parameters to correct for immortal time bias. We executed these programs on the Mini-Sentinel test database and analyzed results using Microsoft Excel and SAS 9.3. We calculated incidence rates and used crude rate ratios to make comparisons between the biased and unbiased scenarios.

**Results/Outcomes:** The incidence rates obtained show that failing to account for immortal time bias will underestimate the effect of an exposure on an outcome. We are currently adding a section to the modular program user's manual to provide FDA and other Mini-Sentinel investigators with advice for avoiding immortal time bias with modular programs.

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

**Introduction:** We performed a retrospective cohort study in 1,263 gestational diabetes mellitus women at 1-5 years after delivery. Data were obtained from the Tianjin Gestational Diabetes Mellitus Prevention program. Our goal is to evaluate the association of TCF7L2 genotype and weight change from pre-pregnancy to postpartum 1-5 years and association of TCF7L2 and gestational weight gain.

**Methods:** We eliminated 67 women who did not have TCF7L2 genotype information from the 1,263 eligible participants; therefore, a total of 1,196 participants were analyzed in our study. We performed multiple linear regression analyses of the association between gestational weight change from pre-pregnancy to 1-5 years postpartum and TCF7L2 genotype, and between gestational weight change and TCF7L2. The analyses were adjusted for: age, pregnant age, pre-pregnant BMI, family diabetes history, sitting time, activity time, total energy intake, fiber intake, energy percent of mono unsaturated fat, energy percent of polyunsaturated fat, and energy percent of saturated fat. A two-sided P value less than 0.05 was considered statistically significant. All statistical analyses were performed by using SAS version 9.4 for Windows.

**Results/Outcomes:** We found that TCF7L2 RS7901695 is associated with higher gestational weight gain after adjusting for other traditional risk factors (P-value=0.016). RS7901695 is also associated with higher weight gain from pre-pregnancy to postpartum 1-5 years in the fully adjusted model. Our results suggest that women carrying two T alleles may have a greater gestational weight gain and tend to gain more postpartum weight, independent of traditional risk factors.

# BIOSTATISTICS

**Name:** Jonathan Greenbaum  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA United States  
**Title:** Student Research Assistant

**Introduction:** Kick it For Good is an NIH/NCI funded group randomized smoking cessation study that was conducted within Boston's public housing developments. The main objective of this clinical trial is to determine if regular meetings with trained Tobacco Treatment Advocates (TTAs) can raise smoker quit rates and increase the usage of existing cessation programs amongst a population of predominantly lower socioeconomic status. Study participants were administered a comprehensive survey at baseline, three months, seven months, and twelve months follow-up.

**Methods:** The primary aim for the analysis of the baseline dataset, collected prior to site randomization, was to look at the recent usage of Nicotine Replacement Therapy (NRT) in participants who reported that they made at least one quit attempt within the last year (n=222). The dataset was prepared for analysis through the creation of many new variables in SAS. Statistical analyses included the computation of log binomial risk ratios with logistic regression, as well as GEE procedures for correlated data to account for clustering that arises from the study design.

**Results/Outcomes:** Subjects who recently used NRT (n=68) were compared to those who have not (n=154) with regard to demographics, smoking habits, as well as attitudes towards quitting. The data show that there are important associations between the use of NRT and factors such as race and duration of time spent in public housing. In addition, there were significant findings regarding participant interaction with the regular primary care provider and likelihood to make a quit attempt using NRT.

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**Name:** Lindsay Kohorn  
**Practicum Site:** University of Hawaii John A. Burns School of Medicine  
**Location:** Honolulu, HI United States  
**Title:** Biostatistics Intern

**Introduction:** The Hawaii Center for AIDS is a clinical and translational research center at the University of Hawaii John A. Burns School of Medicine. The center specializes in attempting to find new and better ways to treat patients with HIV/AIDS as well as hopefully cure HIV/AIDS in the future.

**Methods:** This practicum provided an in-depth overview of the biostatistician's role in an academic program. I was able to assist on a new clinical trial awaiting approval by the IRB, which included writing the statistical analysis plan as well as designing the electronic case report forms on a site called REDCap. I also performed some data analyses on two separate cohort studies using SPSS.

**Results/Outcomes:** The center will begin recruiting patients for the aforementioned clinical trial in the coming weeks. The two data analyses that I performed have been completed. The first analysis explored the effect of various immunologic parameters on oxidative stress and chronic inflammation. I found that several of these parameters are associated with a decrease in complex I activity, which could contribute to oxidative stress, whereas the Transitional Monocytes are most notably associated with an increase in complex I activity. The second analysis explored soluble CD163 and their effect on neurocognitive function. I found that higher levels of soluble CD163 are associated with a slight decrease in neurocognitive function. Both the clinical trial and the data analyses are expected to contribute to the treatment of patients with HIV.

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**Name:** Kan Liu  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA United States  
**Title:** Improving Sickle Cell Disease Pain Management in the Adult Emergency Department / Quality Improvement Intern

**Introduction:** Sickle cell disease (SCD) is one of the most common genetic disorders in the United States. As one of the quality improvement projects at Boston Medical Center (BMC), the project of pain management for SCD patients in Adult Emergency Department (ED) is dedicated to ensuring a timely, efficient and patient-centered treatment for patients seeking care for pain in ED. The goal of the project is to develop and implement effective changes to increase use of patient controlled analgesia pumps (PCA) in Adult ED and to reduce the delay in medication administration. The purpose of this practicum is to analyze the performance of changes implemented for treatment of SCD patients in Adult ED.

**Methods:** I worked with the project team to 1) review the electronic health records for SCD patients without individualized pain plans who came to BMC's Adult ED from April – May 2014 and enter data on key metrics of interest; 2) organize the existing data for SCD patients seen in the Adult ED since November 2012; 3) explore the potential factors that may affect use of PCA in the Adult ED for those patients with pain plans; 4) determine whether having a pain plan influences timing of pain medication doses.

**Results/Outcomes:** Up-to-date data for SCD patients in BMC's Adult ED, data analyses exploring factors that may affect use of PCA in the Adult ED and differences in timing of medication for SCD patients with and without pain plans and run charts on key metrics of interest.



# BIOSTATISTICS

**Name:** Jane Pleskunas  
**Practicum Site:** Harvard Clinical Research Institute  
**Location:** Boston, MA United States  
**Title:** Trial Design & Biostatistics Intern

**Introduction:** Harvard Clinical Research Institute (HCRI) is a joint venture of Harvard Medical School and industry sponsors. HCRI designs and runs clinical trials with top tier professionals from both the academic research and industry. The trial design division at HCRI has proven expertise in study design across all development components for trials of novel drugs, devices, biologics, diagnostics or interventions in the areas of cardiology, central nervous system and pulmonology research. Composed of clinicians, as well as statistical experts, the HCRI trial design group has experience in designing diverse trial types such as prospective randomized, Bayesian adaptive, registry and sequential parallel comparison designs.

**Methods:** I assisted in the development of statistical plans for HCRI research projects. Additionally, I assisted in the execution of statistical analyses for research projects and aided in the development of manuscripts. Specifically, I performed secondary post hoc analyses on the COGENT clinical trial dataset. COGENT addressed a clinically important question, prospectively, of the efficacy and safety of concomitant administration of clopidogrel and omeprazole in patients with coronary artery disease who received clopidogrel plus aspirin. Bleeding events and cardiovascular outcomes in patients receiving dual antiplatelet therapy with or without omeprazole were counted.

**Results/Projected Outcomes:** I practiced data management skills including sorting data, creating new variables and merging datasets. I generated summary statistics for variables of interests, as well as the corresponding statistical tests to create a baseline Table 1. Lastly, I started analysis of outcome measures such as survival curves of CVD outcomes (efficacy) and bleeding events (safety).

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**Name:** Kieran Shah  
**Practicum Site:** Brigham and Women's Hospital  
**Location:** Boston, MA United States  
**Title:** Research Assistant

**Introduction:** As part of a research team at the Brigham Women's Hospital, we worked to improve our understanding of what factors influence patients who stay in the emergency department (ED) for a long period of time (close to 24 hours), while not charging the hospital much money. As a research assistant, I cleaned and analyzed data and wrote the methods section of the report. The goal of the research is provide a method for hospital administrators to quickly identify their most extreme clientele.

**Methods:** To determine which patients were the least costly but stayed the longest in EDs, we accessed the Nationwide Emergency Department Sample (NEDS) dataset for the year 2011. We next used a k-nearest neighbor algorithm to determine the group of patients that best fit our criteria. We then attempted to use different machine learning techniques to find the best associations between ICD codes and the subgroup. We eventually settle on the lasso regression. After selecting the subgroup populations, we used a logistic lasso regression to determine which ICD codes best predict this group. We also calculated descriptive statistics for the different subgroups of patients based on cost and length of stay in the ED.

**Results/Outcomes:** In collaboration with another medical student and my supervisor, we wrote a manual that entails how hospital administrators can use their vast data collection to identify subpopulations of interest. We found that patients with short, but expensive stays were most likely to be pregnant or have a trauma related to perineum.

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**Name:** Tracie Shing  
**Practicum Site:** Massachusetts Department of Public Health  
**Location:** Boston, MA United States  
**Title:** Increasing Knowledge of Drug Abuse and Hepatitis C in Halifax

**Introduction:** In 2013, the Halifax Board of Health conducted its first health assessment and found a high community health concern regarding drug abuse. 21% of the 70 new cases of hepatitis C in Halifax between 2004-2014 admitted using injection drugs. Due to the local drug concern, the number of hepatitis C cases, and the connection between injection drugs and hepatitis C, I developed and evaluated an educational intervention to increase knowledge of drug abuse and hepatitis C.

**Methods:** The Halifax Board of Health, Halifax Police Department, a nurse, and myself discussed drug abuse and hepatitis C in Halifax at an educational public forum on July 23rd. We advertised using newspaper, radio, flyers, and community emails. 7 participants attended the forum. I also developed a series of questionnaires that participants completed throughout the forum and used SAS software to determine whether drug abuse and hepatitis C knowledge changed throughout the forum.

**Results/Outcomes:** Due to the small sample size (N=7), I used a nonparametric signed rank test and found that the median difference in knowledge score after the forum compared to baseline was a 23.81 point increase and significant ( $p=0.0156$ ,  $S=14$ ) at the 0.05 level. Narrowing the scope of the forum to Halifax may have limited the audience. Despite low turnout, there was a significant increase in knowledge after the forum. A second forum in Halifax or in other towns and future collaborative approaches among local health departments might be able to educate more communities.

# BIostatISTICS

**Name:** Yan Wang

**Practicum Site:** Eliza Corporation

**Location:** Danvers, MA United States

**Title:** Health engagement outreach data analysis, visualization & metric refinement

**Introduction:** Eliza's core business goal is to improve the compliance rate of members on behalf of health insurance clients through health outreach programs. My practicum focused on two projects: 1) visualization of health outreach data and, 2) evaluating the impact of health outreaches on clinical outcomes.

**Methods:** In the first project to assess member satisfaction with call centers, I worked with Tableau to create metrics and visualizations depicting the variation of health outreach engagement rates, call reasons, and member satisfaction. In the second project I explored the impact of demographics and being 'reached' (receiving the outreach message) on four clinical outcomes. After merging and cleaning data, I generated descriptive statistics for all clinical outcomes and conducted both simple and multiple logistic regression analyses assessing the effect of reach status, gender and life stage, as well as their interaction on each clinical outcome. Stratification was used when a significant interaction existed between engagement metric and other covariates.

**Results/Outcomes:** For the first project, I created a deliverable to present data visualization on call center surveillance project using Tableau. For the second project, I demonstrated that female members who were 'reached' by the health outreach program have 71.5% increased odds of achieving mammography outcome and 45.7% increased odds of achieving Pap Smear outcome compared to those not reached after adjusting life stage. Among members with diabetes over 65 years old, those who were 'reached' have 90.7% increased odds of achieving retinal test outcome compared to those not reached.

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**Name:** Zachary Wyner

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

**Location:** Boston, MA United States

**Title:** Research Assistant

**Introduction:** This practicum, under the supervision of Dr. Wendy Heiger-Bernays, studied urban children's gardening behaviors in the greater Boston Area. These data will be used to maximize the benefits of urban and community gardening as well as to guide public policy on the use of urban soil

**Methods:** A 2-page survey was developed to measure children's gardening behaviors and their frequency of contact with urban gardens. The survey was addressed to parents and guardians in order to maximize the sample size without surveying each child individually. Data were cleaned and analyzed using Microsoft Excel and SAS Version 9.3. 1507 children were surveyed and analyzed across 20 neighborhoods in the greater Boston area.

**Results/Outcomes:** Preliminary results reveal that the median days per week and hours per day spent in the garden among children who garden is 1.3. and 1.04, respectively. The median age of children in our study was 9 years. We found that 71.13% of the children in our study garden in school gardens, and 65.70% never wear gloves while gardening. Data are still being analyzed and the full extent of the analysis is ongoing.

# ENVIRONMENTAL HEALTH

**Name:** Andrea DiPerna  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA United States  
**Title:** Research Assistant

**Introduction:** Children's participation in gardening activities yields health benefits such as access to locally grown produce; however, increasing time spent in gardens may result in increased contact with naturally occurring and anthropogenic soil contaminants. The purpose of this practicum is to identify children's gardening behaviors and to characterize their exposure to garden soil in Boston Area neighborhoods. The data collected can be used for the development of public policy addressing the public health benefits of urban and community gardening.

**Methods:** Components of the project included an extensive literature review focusing on contaminants in soil and their sources, remediation of urban soil, and the health effects of incidental ingestion of common soil contaminants. The practicum required NIH human subjects training and administration of a survey. Finding survey participants required extensive networking and use of multi-media. The recruitment process consisted of acquiring contact information from initial participants and establishing ongoing communication via phone and e-mail with potential interviewees. Most participants were recommended by peers who also worked with children in the garden. Local organizations and camps were contacted based on their incorporation of gardening into their programs.

**Results/Outcomes:** The survey was administered 14 times (n=1507 children). 30% of participants were parents, while the majority worked on farms or were community gardeners. Participants from Boston and Cambridge represented the greatest number of children, and parents were more likely to garden outside the city. The results serve as a foundation for further analysis of children's gardening behavior and exposure to garden soil.

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**Name:** Victoria Fruh  
**Practicum Site:** Tufts School of Public Health  
**Location:** Boston, MA United States  
**Title:** Community Assessment of Freeway Exposure and Health Study (CAFEH) Researcher

**Introduction:** Previous studies have reported that high exposure to particulate matter may be a risk factor for the development of adiposity. Ultrafine particulate air pollution (UFP, <100nm; measured as Particle number concentration, PNC) is elevated next to highways. The primary objective of this analysis was to test the association of BMI with micro-environment time-activity adjusted annual average PNC levels (TAA PNC)

**Methods:** We collected air pollution data as part of a mobile monitoring campaign and built a regression model that estimated TAA PNC for participants in the Community Assessment of Freeway Exposure and Health study (CAFEH) study in the Boston area (N=242, two of the CAFEH neighborhoods). We calculated Euclidian residential distance to highway and developed parsimonious regression models to assess the association of both proximity to highway and TAA PNC exposure with BMI.

**Results/Conclusions:** TAA PNC ranged from 7,000 to 38,000 particles/cm<sup>3</sup> in Somerville and from 11,000 to 23,000 particles/cm<sup>3</sup> in Dorchester. In the combined analysis a 10,000 particles/cm<sup>3</sup> increase in PNC resulted in a 0.99 decrease in BMI that was not statistically significant (p= 0.38). When stratified by study area, a 10,000 particles/cm<sup>3</sup> increase in PNC resulted in a 2.57 (0.40) unit decrease and a 2.19 unit increase (p= 0.28) in BMI for Dorchester and Somerville, both of which were also not statistically significant. No association was observed between proximity to highway and BMI (reported previously). We did not find statistically significant associations between PNC and BMI. Nor did we find statistically significant associations for proximity to highway and BMI. More research is needed in larger sample sizes to further test this hypothesis.

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**Name:** Cynthia Gudino  
**Practicum Site:** Massachusetts Department of Public Health  
**Location:** Jamaica Plain, MA United States  
**Title:** Student Intern/Epidemiologist

**Introduction:** In 2013, MDPH reported 6,414 newly diagnosed confirmed or probable cases of tick-borne diseases. The objective of this practicum is to identify risk areas of exposure, assess use of preventative measures, and identify locations for public health education messaging in elderly cases (>65) of human granulocytic anaplasmosis (HGA) and babesiosis (BAB), as well as adult cases of lyme disease.

**Methods:** Demographic and clinical information were extracted from the Massachusetts Virtual Epidemiology Network (MAVEN) and assessed using SAS 9.3. A 10-question telephone interview of HGA and BAB cases was conducted (54 confirmed cases). A 15-question online survey of lyme disease was sent to 520 confirmed cases. Responses were collected and analyzed on surveymonkey.com.

**Results/Outcomes:** Forty-three elderly respondents completed the telephone survey. Fifty-one percent of cases reported no prior knowledge of disease, 67% use some form of personal protection, 70% use the Internet, and 58% did not participate in group activities. One hundred and twenty-two participants completed the lyme surveys. The majority of cases reported living in suburban (59.0%) areas, with most outdoor time spent around their home (73.1%). Most cases reported never or sometimes using tick-repellant (96.6%) or protective clothing (73.8%) in their home area. These investigations suggest that home areas of suburban residents are the primary location of exposure to ticks. In addition, effective elderly resident interventions should be by newspaper or online. Communication with residents and local boards of health is necessary to rapidly identify tick-borne disease cases, implement prevention messaging and reduce disease burden in Massachusetts.

# ENVIRONMENTAL HEALTH

**Name:** Lauren Pratt  
**Practicum Site:** Vermont Department of Public Health  
**Location:** Burlington, VT United States  
**Title:** Project Coordinator

**Introduction:** As part of the Vermont Department of Public Health, under Vermont Blueprint for Health, I worked at White River Family Practice in White River Junction (WRJ), Vermont on a grant from Southern Vermont Area Health Education Centers (AHEC). I managed a mental health access project to help better connect patients at the family practice to much-needed mental health services. The scope of the project was to create a database for primary care providers and other health workers to be able to easily, centrally access the information of different organizations and practitioners that provide mental health services.

**Methods:** I created a database of as many practitioners and organizations that I could find in Vermont and surrounding areas. I focused on the WRJ area to suite the needs of the patients at the family practice, but created a foundation for a statewide access point as well. Mid-way through the practicum, a social worker was hired by the state to work on a statewide version of exactly this. I then coordinated with this social worker to help her spread this access point through the state.

**Results/Outcomes:** I created a form for the practitioners and organizations I contacted to fill out to best fortify my database. I then compiled the database and will present it to the WRJ Community Health Team. I created an ongoing connection between the state project and the family practice. I also aided in the patient resources section of the family practice website for all health related services in the WRJ area.

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**Name:** Rachel Wilson  
**Practicum Site:** Mystic River Watershed Association  
**Location:** Arlington, MA United States  
**Title:** Lower Mystic River Sediment Quality and Fish Advisory Student Assistant

**Introduction:** The Mystic River Watershed has a long history of industrialization resulting in numerous environmental impacts, including sediment contamination by polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and metals. People catch and consume fish from the Lower Mystic River (LMR). The 1988 Massachusetts DPH fish advisory applies to Boston Harbor, but not LMR. The purpose of this practicum is to access and analyze existing sediment quality data for the LMR, assist in collection of endemic fish (*Fundulus heteroclitus*), and develop risk-based PCB and PAH tissue concentration limits for fish consumption to inform a LMR fish advisory.

**Methods:** LMR sediment data were gathered from Massachusetts DEP hazardous waste site files and the scientific literature. *Fundulus* collection dates were determined by the fish spawning period and lunar cycle. Relevant USEPA documents were referenced to develop fish consumption concentration limits for PAHs and PCBs.

**Results/Outcomes:** Available LMR sediment data for PAHs and PCBs are minimal and may not be representative of the current conditions due to remediation of sediment post collection of the existing sediment data. *Fundulus* collections were more successful on the first two collection efforts and the animals are being used to study the impacts of PCBs and PAHs. Measured concentrations of PAHs and PCBs from future fish tissue analyses will be compared with the risk-based concentrations that are developed. If the tissue exceeds the risk-based concentrations, then a revised fish advisory may be warranted. This warning will need to be balanced with the benefits of consuming the fish.

**Name:** Abena Amoabeng  
**Practicum Site:** Cardiothoracic Center of Korle Bu Teaching Hospital  
**Location:** Accra, Ghana  
**Title:** Intern

**Introduction:** The Korle Bu Teaching Hospital located in Ghana is one of the largest training hospitals in west Africa. As the only tertiary hospital in the southern part of Ghana, the hospital serves a grand proportion of the population. With hopes in increasing compliance for heart disease medication to improve outcome, this practicum's goal was to assess any potential effects in providing a 10 minute information session for the patients undergoing treatment for their heart disease. Willing patients with a limited number of comorbidity were then enrolled.

**Methods:** Under the guidance of the physician and the public health nurse my role consisted of (1) help the public health nurses in putting the standardized questions together (2) communicate with the patients to obtain all pertinent data for the analysis; (3) compile the obtained medical record and background data into a clean, analyzable form; (4) perform the intervention session by communicating with the patients the importance of the medication, the expected side effects and the importance of compliance

**Result/Outcomes:** The project is still on-going. Data collection for the follow-up phase still continues and other willing patients are still being enrolled. The collected data was formatted into a workable, editable format in Excel with patient contact information. This increased access to other members on the team and allows for easy data transfer for analysis.

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**Name:** Hilary Aroke  
**Practicum Site:** Boston Collaborative Drug Surveillance Program  
**Location:** Lexington, MA United States  
**Title:** MPH internship in Epidemiology & Biostatistics (Pharmacoepidemiology)

**Introduction:** There are no universally accepted criteria for phenotypic diagnosis of familial hypercholesterolemia (FH) which affects about 10% of people in the United Kingdom (UK). My objective is to assess the accuracy of the diagnosis of FH in the UK-based Clinical Practice Research Database (CPRD).

**Methods:** All patients with one or more FH read codes were identified in the CPRD. Codes for physical signs and genetic testing of FH were not available. We used other codes - maximum recorded LDL value; use of any lipid lowering therapy (LLT); personal history of premature MI or stroke; family history of premature CVD; first degree relative with FH, and visit to a lipid clinic - to classify all patients with an FH code by the likelihood of having a true FH diagnosis. We used a scoring system that assigned points to various clinical features.

**Results/Outcome:** Among 5,209 patients with an FH code, 73.6% had a valid LDL value, 76.3% had received a LLT, 20.2% had a family history of premature CVD, 10.4% had a first degree relative with FH, 10.3% had a visit to a lipid clinic, and fewer than 3% had a history of premature MI or stroke. Based on our scoring system, 8.7% of FH diagnoses were classified as likely, 31.89% as probable, 41.54% as possible, and 17.87% as unlikely. We conclude that the FH codes alone are insufficient for identifying true cases of FH in the CPRD. Other supporting clinical characteristics should be used to provide confidence in the recorded FH diagnosis.

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**Name:** Lindsay Belanger  
**Practicum Site:** Institute for Community Health  
**Location:** Cambridge, MA United States  
**Title:** Data Analyst Internship- Trauma Informed Mental Health Project

**Introduction:** The Institute for Community Health is a nationally recognized catalyst for sustainable community health improvement, uniting academic research with real world practice to deliver expert professional services and build the capacity of community-serving organizations. As part of the epidemiology team for the trauma informed mental health project, I developed and executed a plan of analysis of cross-sectional baseline data for the project which aims to strengthen, expand, and enhance access to and availability of effective and culturally trauma-informed services and treatment for children.

**Methods:** I worked closely with the data analysis team and principal investigator of the trauma informed mental health project to 1) write a statistical analysis plan, 2) perform a background literature review of the 2 evidence-based treatment options and measurements used to collect in-the-field data by clinicians 3) utilized Access and SAS software to analyze the available data 4) create a written and oral report of findings for project stakeholders.

**Results/Outcomes:** A review of the cross-sectional baseline data is performed to provide information about the population and may also generate additional hypotheses. Furthermore, this data is being analyzed to inform the community about the risk of trauma and PTSD in the youth population, the effects of trauma on caregiver strain, and will eventually enhance clinical understanding of treatment options.

# EPIDEMIOLOGY

**Name:** Vijeta Bhambhani  
**Practicum Site:** Boston University Slone Epidemiology Center  
**Location:** Boston, MA United States  
**Title:** Epidemiology Data Analysis Practicum Student

**Introduction:** The annual incidence of acute appendicitis in the United States is about 1 in 400. In order to research whether appendicitis and appendectomies are significantly associated with future female fertility, several studies have been conducted. It is commonly thought that a ruptured appendix can cause tubal dysfunction, which may cause an extra uterine pregnancy and female infertility. Moreover, if appendicitis occurs during pregnancy, it could be threatening to the mother and fetus.

**Methods:** A detailed literature review aimed to focus on the association found between appendicitis, appendectomies, and female fertility by using multiple studies conducted in different countries in order to assess whether there is a consensus among different populations. Meta-analyses, case-control studies, and retrospective cohort studies were synthesized.

**Results/Outcomes:** After conducting a detailed literature search, although there is no conclusive evidence that appendicitis and appendectomies directly lead to infertility, these conclusions are based mainly on retrospective studies and better-designed studies are needed to rule out an association. Prospective studies should be conducted in order to minimize bias and control for any potential confounders that may exist.

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**Name:** Alyson Cobb  
**Practicum Site:** New Hampshire Department of Health and Human Services  
**Location:** Concord, NH United States  
**Title:** Lyme Disease Provider Report Cards

**Introduction:** In 2012, New Hampshire had the highest incidence rate of Lyme disease in the country (<http://www.cdc.gov/lyme/stats/chartstables/incidencebystate.html>). The NH Department of Health & Human Services (DHHS), Bureau of Infectious Disease Control conducts Lyme disease surveillance to determine the burden of Lyme disease, understand populations at risk, and track disease trends over time. State law requires all healthcare providers to report diagnosed or suspected cases of Lyme disease to DHHS within 72 hours (<http://www.gencourt.state.nh.us/rsa/html/X/141-C/141-C-mrg.htm>, [http://www.gencourt.state.nh.us/rules/state\\_agencies/he-p300.html](http://www.gencourt.state.nh.us/rules/state_agencies/he-p300.html)). However, DHHS receives case reports for only 83% of positive Lyme test results, with the majority of case reports coming in well after the required timeframe. Received case reports are often missing critical information for case classification and reporting. Therefore, DHHS employees dedicate a significant number of hours following up with providers to obtain the necessary information.

**Methods:** To address this issue, data on the timeliness and completeness of 2013 case reports, as well as provider responsiveness to DHHS' requests for information, were analyzed. Provider report cards were developed to inform providers of their reporting behaviors, including comparisons to state averages.

**Results/Outcomes:** While the effectiveness of this initiative cannot be evaluated until summer 2016, the goals of the provider report cards are to increase awareness among providers regarding the importance of complete and timely case reports, increase the number of complete case reports DHHS receives within a timely manner, decrease the follow-up.

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**Name:** Andrew Cohen  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA United States  
**Title:** TB-CDRC Data Management Intern

**Introduction:** The Tuberculosis Clinical Diagnostics Research Consortium (TB CDRC) is an international consortium consisting of clinical staff, scientists and physicians who collect and analyze data to determine the field effectiveness of TB diagnostic tools. My primary study analyzes the feasibility of a TB Lateral Flow Urine LAM Test. The goals of the LAM study in Uganda and South Africa are to determine whether the LAM test maintains the specificity and sensitivity of the current gold standard while decreasing diagnosis time, and to determine whether or not those with compromised immune systems are more likely to succumb to TB once testing positive. As data manager, I coordinate data collection from the study sites, create and input data collection forms, and resolve queries.

**Methods:** Staff in South Africa and Uganda collected participant information and performed both diagnostic and confirmatory TB tests (including direct AFB smear tests). I organized and entered all of the resulting data from those assessments into Access and then performed preliminary analyses on over 1000 cases. Using SAS 9.3 and Excel, I created summary tables and ran comparisons to determine if there were significant differences in TB outcome based upon CD4 count and LAM result.

**Results/Outcomes:** The analyses revealed there are no significant differences in TB outcome based on CD4 count when stratified by LAM result. The results of this preliminary analysis will be used to determine what LAM values should require treatment based on patient CD4 counts.

# EPIDEMIOLOGY

**Name:** Diana Covalschi

**Practicum Site:** International Health, Racquet & Sportsclub Association (IHRSA)

**Location:** Boston, MA United States

**Title:** Surveying IHRSA Members for Descriptive Information and Analysis for the IHRSA Foundation

**Introduction:** IHRSA works with sportclubs to help promote physical activity to the public. They recently launched the IHRSA Foundation, a non-profit foundation focused on supporting health promotion programs. The purpose of this research project was to learn more about IHRSA members' health promotion programs and to assess the clubs readiness to collaborate with the IHRSA Foundation.

**Methods:** I called 250 clubs from the most IHRSA-active states, and clubs who previously filled out an IHRSA survey. I created a list of qualitative survey questions and a spreadsheet for their responses. The questions included specifics about the stand-alone health promotion programs offered at the clubs, main areas of focus, target age groups, promotion methods, community outreach, program effectiveness, and willingness to collaborate. Conclusions and suggestions for further proceedings were developed from the data collected.

**Results/Outcomes:** 51 clubs were interviewed. Out of those, fourteen were not interested in collaborating with the IHRSA Foundation or no longer existed and four didn't have time to talk. Five said that they might be interested. Finally, 28 clubs were interested in collaborating with the IHRSA Foundation. The main trend observed was that all of the clubs needed more information about the foundation. Another trend observed is that many of the clubs offered similar health promotion programs and the focus is on weight loss/management and physical activity to promote healthy lifestyles. IHRSA will continue to contact and interview additional members. This information will be used to determine the next steps they will take with the IHRSA Foundation.

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**Name:** Catherine Emmons

**Practicum Site:** AmerisourceBergen

**Location:** Burlington, MA United States

**Title:** Data Analytics Intern

**Introduction:** IntrinsiQ, an AmerisourceBergen Specialty Group, provides oncology information systems, as well as oncology data and analysis to pharmaceutical companies, medical practices, and hospitals within the U.S. The analytics team is responsible for performing research and analyzing data to provide clients with an understanding of particular cancer diagnoses, treatments, and trends. They also offer insight into the oncology marketplace and provide an overview of events shaping trends in drug consumption within the U.S.

**Methods:** The main objective of this practicum was to conduct a series of epidemiological reviews of major cancer diagnoses. Through utilization of the Surveillance, Epidemiology, and End Results (SEER) Program, I constructed a guide to provide a review of the database, its uses and limitations, and instructions on addressing common queries. I identified and summarized clinical, regulatory, and governance news events shaping oncology drug consumption trends. I also conducted extensive research on dosing limits for oncology drugs.

**Results/Outcomes:** The epidemiological reviews of cancer diagnoses will contribute to annual analytic reports provided to pharmaceutical clients. Becoming familiar with the SEER Program Database and SEER\*Stat statistical software allowed for successful development of a detailed instructional guide for data analysts. The review of news events pertaining to particular oncology drugs will contribute to an analysis tool that quantifies the impact of these key events in shaping drug consumption trends in the U.S. The research on dosing limits for oncology drugs will contribute to database operations in constructing data scrubbing algorithms for oncology information systems.

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**Name:** Maura Fitzgerald

**Practicum Site:** Boston Medical Center

**Location:** Boston, MA United States

**Title:** Clinical Research Intern

**Introduction:** As a clinical research intern in the NWMC, I assisted the research team with the Reducing Obesity in Underserved Postpartum African American Women (RENEW) Study. The goal of RENEW is to test whether a modified and culturally-tailored Diabetes Prevention Program (DPP) curriculum implemented during the postpartum period for overweight and obese African American women will result in greater weight loss after 19 weeks than the usual care. The purpose of this practicum was to teach me the logistics of conducting a clinical trial and also to introduce me to the field of obesity research.

**Methods:** My role on the study was to prepare the data for analysis. My responsibilities included inputting data from case report forms, recoding variables, reviewing data discrepancy reports, and cleaning the data set. Additionally, I performed a literature search for the manuscript and for future grant applications.

**Results/Outcomes:** The statistician will use the cleaned data to conduct the final analyses for the study and members of the research team will use the results of the literature search to help them write the background for the RENEW manuscript. If the results of the study are significant, it will provide underserved overweight and obese postpartum African American women with an effective resource for weight loss.

# EPIDEMIOLOGY

**Name:** Jaclyn Franklin

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

**Location:** Boston, MA United States

**Title:** Research Assistant for URBAN ARCH, Ft. Devens ODS project, Med Heart, and Narcan overdose reversal project

**Introduction:** The DCC provides data management and analytical support to studies and clinical trials worldwide. In this practicum I assisted with projects including URBAN ARCH (Uganda, Russia, Boston Alcohol Network for Alcohol Research Collaboration on HIV/ AIDS) a consortium that has the goal of understanding how alcohol consumption impacts individuals with HIV; FT. Devens ODS which involves Gulf War Veterans and the effects of various wartime exposures; Med Heart which aims to link HIV-positive homeless individuals with needed services and resources; and the Narcan overdose reversal project, a public health initiative that is aimed at preventing opioid overdose.

**Methods:** I assisted with maintaining project documentation, verifying collected data, writing SAS programs to call in and check data quality as well as coding to assess correctly completed questionnaires, verifying and correcting individuals' forms in the Narcan program, questionnaire annotation, and problem solving/ trouble shooting for study systems. I also attended regular study meetings in which members of the project met to discuss the progress of the trials.

**Results/Outcomes:** All of the trials are ongoing and their current state is confidential. There are many unexpected obstacles that can arise with the collection and management of clinical research. It is important to pay close attention to detail and try to anticipate subjects' responses (or lack thereof) when designing data collection tools as well as implementing a change in an individuals' lifestyle.

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**Name:** Daniel Galanto

**Practicum Site:** Boston Medical Center

**Location:** Boston, MA United States

**Title:** Program Evaluator

**Introduction:** The objective for this practicum was to assess the effectiveness of a pilot community social support system (The PLAN Program) implemented by BMC Autism program. The outcome of interest was confidence levels among individuals of the community with Autistic children that participated in this program pre and post this intervention. The program consisted of selected members of the community (PLAN parents) mentoring other members (matched parents) on key problem identified by the matched parents. The PLAN and the matched parents were matched together based on problem areas, preferences and areas of expertise as assessed by the practicum supervisors.

**Methods:** We first researched different protocols on developing a qualitative measure. We prepared and conducted a focus group with the PLAN parents to identify common problems experienced in this population with raising a child with autism. Further research was done on how to measure these common problems and an original quantitative questionnaire was produced. However, the goals of this practicum were changed with realization that the most effective use of this pilot program's results were in fact qualitative data that the program implementers could use toward improvement of the program in the upcoming years. Accordingly, interviewing procedures and a qualitative questionnaire was created.

**Results/Outcomes:** The products of the assignment were the quantitative and qualitative questionnaires in addition to practice organizing focus groups and knowledge of conducting research interviews. Questionnaires were not distributed for matched or PLAN parents and will be used in subsequent years.

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**Name:** Philip Hewes

**Practicum Site:** Boston Medical Center

**Location:** Boston, MA United States

**Title:** "A patient-time based approach to venous thromboembolism risk assessment model validation in a thoracic surgery population."

**Introduction:** The purpose of this practicum was to evaluate for potential selection bias associated with strict inclusion criteria for a prior retrospective cohort study attempting to validate a risk assessment model (RAM) for postoperative risk of venous thromboembolism (VTEs) such as pulmonary emboli, among a single-center consecutive study of thoracic surgery patients over a 8 year time frame, reported here among those who underwent esophagectomy for malignancy. This RAM is being evaluated for validity among this population for stratification, and subsequent cost-effective administration, of enhanced thromboprophylaxis regimens following hospital discharge. A patient-time-based approach was utilized.

**Methods:** A secondary analysis of a data set was completed, with particular focus on those patients with prior grounds for exclusion. Patient-time was calculated, assessing for immortal patient time. Incidence rates and ratios were calculated. Parallel analyses, excluding potential immortal patient time, and including, were performed. As appropriate, multivariate logistic regression models controlling for potential confounders to the relationship between the RAM score and probability of post-operative VTE were considered.

**Results/Outcomes:** Over a total of 4512 patient-days, there were 10 VTE events. There was no significant differences in relative distributions, or regression results versus pre-existing primary analysis, nor were there an significant changes in the VTE RAM risk factor proportions. Thus, selection bias may not have played a role in the primary analysis, for this patient population, under the time periods of observation. Further larger studies would be necessary to further elucidate the role of selection bias in a larger thoracic surgery population.



**Name:** Casie Horgan  
**Practicum Site:** Boston University Slone Epidemiology Center  
**Location:** Boston, MA United States  
**Title:** Research Assistant on PRESTO study at Slone Epidemiology Center

**Introduction:** The Boston University Pregnancy Study Online (PRESTO) is an Internet-based prospective cohort study that evaluates the impact of lifestyle, dietary, and medical factors on fertility. Female participants complete questionnaires every 8 weeks for 12 months or until they conceive. Incentives are used to encourage participation and reduce loss to follow-up. 50% of participants are randomized to receive a membership to FertilityFriend.com (FF)—an online web-based application designed for real-time charting of menses and fertility signs. Additional study aims were to assess the influence of FF on fertility and to validate self-reported date of last menstrual period (LMP). **Methods:** Log-binomial regression models were performed to assess predictors of Fertility Friend usage. Prevalence ratios (PR) and 95% confidence intervals (CI) were adjusted for age, time to pregnancy at study entry, education, smoking, race, parity, history of infertility, recruitment through Facebook, and use of other fertility apps. **Results:** Randomization to FF resulted in an even distribution of baseline characteristics across randomization groups. Of the 666 women randomized to receive FF, 317 (47.6%) reported any use of FF features. Younger and less educated women were less likely to use FF, whereas black women and regular/occasional smokers were more likely to use FF. Women who were recruited through Facebook had a decreased prevalence of use compared with women recruited through other methods (PR=0.73, CI=0.58, 0.91). Of FF users, 95% reported their FF and baseline questionnaire LMP dates within 1 day of each other (Pearson Correlation Coefficient (r)=0.99), indicating high accuracy of self-reported LMP data.

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**Name:** Patricia Martin  
**Practicum Site:** Dedham Board of Health  
**Location:** Dedham, MA United States  
**Title:** Dedham Board of Health Intern

**Introduction:** In 2013, Dedham Dispatch received 41 calls for apparent substance overdose incidents. Five were fatal and involved individuals ages 34-51. This prompted the creation of The Dedham Coalition for Drug and Alcohol Awareness in January 2014. At multiple meetings since the coalition's inception, residents have identified the issue of not knowing what resources were available when they or a loved one had a substance abuse problem. To combat this problem, the coalition decided to send out a mass mailing to educate the community about the resources available. **Methods:** The well-established substance abuse coalition in Weymouth, MA showed a tri-fold brochure that was mailed with their water bill at a collaborative monthly meeting among towns in Norfolk County. This tri-fold informed residents about substance abuse facts and local resources available. After the Dedham coalition discussed development and mailing of this type of communication material, they decided to send out a similar tri-fold that announced the creation of the coalition and included resources and information regarding drug abuse. A Community Health Needs Assessment (CHNA 18) grant for \$1,000 was applied for and obtained to fund the printing, folding, and insertion of 10,000 tri-fold brochures into Dedham's August sewer bill, which eliminated the cost of postage. **Results/Outcomes:** After receiving and reading the tri-fold, residents will be more knowledgeable about substance abuse, have more awareness of the resources available to them, and have the information to contact the coalition if they are interested in getting involved or using them as a resource.

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**Name:** Jeremy Meltzer  
**Practicum Site:** Boston University, Sargent College  
**Location:** Boston, MA United States  
**Title:** Research Assistant

**Introduction:** Researchers from the Sargent College Department of Health Sciences and the Slone Epidemiology Center are invited authors for a review article on health disparities and cancer epidemiology for the online journal *Frontiers in Epidemiology*. The article focuses on cancer mortality and incidence rates in the first decade of the 21st century as overall outcomes improve. However, certain sub-populations are experiencing significantly poorer outcomes than others. Disparity trends for all cancer sites combined, lung cancer, female breast cancer, colorectal cancer, and prostate cancer are described and the implications of the recently passed Patient Protection and Affordable Care Act are discussed. **Methods:** Preparation of the review article included a ten-year literature review (2004-2014), annotated bibliographies, use of the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program database to identify incidence and mortality trends, and numerous team discussions. The main figures used in the article are "disparity ratios", which illustrate the percent difference in incidence and mortality rates for different ethnic or racial groups. **Results/Outcomes:** The primary deliverable will be the final review article to be submitted to *Frontiers in Epidemiology*. Secondary deliverables include the disparity ratio figures, raw data taken from the SEER database, and annotated bibliographies. The SEER data show substantially higher overall cancer mortality for Black Americans compared to White Americans, and Americans with low socioeconomic status compared to Americans with high socioeconomic status. Reductions of cancer risk factors, increased early-detection methods, and improved therapies have resulted in more favorable cancer outcomes, but disparities still exist.

# EPIDEMIOLOGY

**Name:** Natalie Miller  
**Practicum Site:** Massachusetts Department of Public Health  
**Location:** Boston, MA United States  
**Title:** Medical Reserve Corps and Board of Health Intern

**Introduction:** The Topsfield Regional Medical Reserve Corps (TRMRC) was established by the Topsfield Board of Health in 2005 and includes Topsfield, Amesbury, Boxford, Georgetown, Ipswich, Merrimac, Middleton, Newbury, Newburyport, Rowley, and Salisbury. While TRMRC has a membership of approximately 250, unit activities have dwindled and they are not involved in local activities to the desired extent. Evaluating recruitment, retention, training, and deployment activities of MRC units within Massachusetts, a new approach was developed for TRMRC.

**Methods:** Email and in-person interviews were conducted with local MRC coordinators, including Mystic Valley and 4b. Their methods of recruitment, retention, and training were assessed. TRMRCs methods were evaluated to see where other tactics could be utilized to enhance or replace current tactics. An audit of the membership was planned. All members were emailed a survey regarding level of interest and level of commitment. The audit is currently in process. Lists of medical and allied health professionals for TRMRC communities were collated. Local fairs and festivals were also identified as possible recruitment areas.

**Results/Outcomes:** The lists of medical and allied health professionals hold the greatest promise of recruitment of medical personnel. An introductory letter will be mailed, inviting them to a recruitment event to be held in September. The audit will likely reveal a substantial portion of membership who no longer wish to be active, however, the recruitment methods identified should result in an influx of new members. In anticipation of that, a New Member Orientation PowerPoint was developed.

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**Name:** Dayna Neo  
**Practicum Site:** Harvard Medical School  
**Location:** Boston, MA United States  
**Title:** Postgraduate Research Fellow

**Introduction:** C-DISC (Clinical Data Interchange Standards Consortium) is a non-profit organization that was established to increase the efficiency of clinical studies. Clinical data typically comes from many sources in different formats generating a convoluted web of information that is difficult to organize and analyze. Through creating standards for attaining, exchanging, reporting, and analyzing clinical data, C-DISC strives to improve medical research to enhance patient care and safety. The main objective of this practicum was to implement the Tuberculosis C-DISC standards to a clinical trial of high-dose Rifampin in patients with TB (HIRIF).

**Methods:** I first organized the HIRIF group names into C-DISC domains. From there, I went through each HIRIF variable and mapped it to an equivalent C-DISC variable. For many of the HIRIF variables, more than one variable name existed. For other HIRIF variables, there were no equivalent C-DISC variables. This occurred when the HIRIF data structure conducted quality control measures that C-DISC does not require.

**Results/Outcomes:** Using the Tuberculosis C-DISC standard, I developed a template that allowed for the translation of variables from the HIRIF data structure to the C-DISC standards. For example, one of the HIRIF variables is diabetes mellitus. Since this is an exclusion criteria for the study, this variable is mapped to the "Inclusion/Exclusion Criteria" C-DISC domain (TI) and "IECAT – Exclusion" C-DISC variable. This was performed for all 7,397 variables.

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**Name:** Alexander O'Dell  
**Practicum Site:** Town of Winthrop  
**Location:** Winthrop, MA United States  
**Title:** An Examination of the Relationship Between Proximity to Logan International Airport and Cancer Rates

**Introduction:** In 2000, The Massachusetts Legislature called for a comprehensive health study to measure the impact that Logan Airport has on the surrounding communities. The results of the Logan Airport Health Study (LAHS) were released this past May (2014), but did not include information about cancer.

**Methods:** An ecologic analysis was conducted to examine whether proximity to Logan Airport was associated with increased cancer rates. For this analysis, 12 towns located within 5 miles of Logan were classified as having low, medium, or high levels of airport-related air pollution using information from the LAHS gathered in 2005. The Massachusetts cancer registry was used to estimate cancer rates for 20 different cancer types from 2003 – 2007, and Boston.com and Massport were used to ascertain information about income and airport traffic. Statistical analyses were done in SAS v.9.3.

**Results/Outcomes:** No differences between high exposure and low exposure towns were observed for rates of cancers believed to be related to air pollution; however, several cancers not believed to be related to air pollutants were found to occur less frequently in high exposure towns: breast cancer ( $p=0.014$ ), colon cancer ( $p=0.013$ ), prostate cancer ( $p=0.02$ ), and uterine cancer ( $p=0.033$ ). Notably, there was a statistically significant decline in airport traffic from 2005 to 2013, suggesting that exposure levels may have decreased over time. Overall, this analysis produced some interesting yet unexpected findings; further studies may be warranted.

**Name:** Godwin Osei-Poku  
**Practicum Site:** AIDS Action Committee  
**Location:** Boston, MA United States  
**Title:** Stabilization Advocate

**Introduction:** The CDC estimates that about 1.1 million people are living with HIV in the US. Of this number, only 25% have been successfully supported in navigating the entire HIV care continuum and have achieved viral suppression. The objective of the practicum is to access how non-profit organizations such as Aids Action Committee support persons with HIV in navigating the HIV care continuum.

**Methods:** As a stabilization advocate, my work was targeted at two levels of the HIV care continuum (Linkage to care and retention in care). I worked directly with clients, conducting assessments and linking them to appropriate services such as medical care, mental health, financial, legal, and housing. I provided intake, triage, case management and referral to appropriate services within AAC and externally. I also facilitated case coordination by communicating with other service providers and working as part of an integrated team of mental health clinicians, peer support advocates, and client advocates.

**Results/Outcomes:** The main outcome of the practicum was to gain a greater understanding of the barriers that persons with HIV face in accessing health care and to study the different interventions available to help clients tackle these barriers. This knowledge will inform future HIV research decisions and help in formulating appropriate policies to help persons living with HIV.

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**Name:** Kaylie Patrick  
**Practicum Site:** Boston University, Sargent College  
**Location:** Boston, MA United States  
**Title:** Evaluating the Impact of KickinNutrition.TV, a Multi-media Nutrition Education Curriculum for Middle School

**Introduction:** In the era of the obesity epidemic, innovative approaches are needed to reduce the risk factor of poor dietary habits among children. KickinNutrition.TV (KNTV) is a comprehensive digital nutrition curriculum developed with USDA funding by KidsCOOK Productions and public health nutrition researchers at Boston University.

**Methods:** The impact of KNTV was evaluated among 6th graders in three Massachusetts public school districts from March to June, 2014. Eight classroom teachers were assigned to teach the KNTV curriculum and four taught a traditional (non-digital) nutrition curriculum. Students in both groups received six weekly lessons and completed surveys reporting personal behaviors. Pre- and post-curriculum surveys assessed readiness to change and self-efficacy for several nutrition-related behaviors.

**Results/Outcomes:** Of approximately 920 students in 46 classrooms, 811 (88%) had complete surveys available for this analysis (526 KNTV, 285 comparison). Student demographics were comparable except for racial diversity (54% non-white vs. 71% non-white in KNTV and comparison classrooms, respectively). Positive shifts along the readiness to change continuum were observed for two behaviors of interest, and those shifts were only significant among students in KNTV classrooms. After the curriculum, those exposed to KNTV were more likely to eat breakfast every day and to eat vegetables every day than they were beforehand ( $p < .05$ ). Both groups gained self-efficacy for helping their families make healthy choices ( $p < .05$ ).

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**Name:** Nabeelah Rahmathullah  
**Practicum Site:** Minnesota Department of Health  
**Location:** St. Paul, MN United States  
**Title:** Epidemiology Student Worker

**Introduction:** According to the CDC, it is estimated that *C. difficile* is responsible for 337,000 infections and 14,000 deaths in the United States every year. This bacterial infection, characterized by diarrhea, can entail in serious intestinal conditions, namely pseudomembranous colitis and toxic megacolon. Minnesota, being one of the 10 U.S. surveillance sites for the CDC's Emerging Infections Program (EIP) *C. difficile* project, identifies the burden, trends over time, pathogenic strains and numbers associated with health-care, of CDIs. This project also provides infrastructure for studies to identify risk factors and to monitor the efficacy of prevention strategies.

**Methods:** For my practicum, I was involved with the Recurrent CDI Study, overseen by MDH epidemiologist, Dr. Stacy Holzbauer; a case-to-case comparison of CDIs, designed as a retrospective case-control study. Analyses summarizing characteristics of recurrent CDI cases, risk factors and antibiotics associated with recurrence will be conducted using SAS.

**Results/Outcomes:** I reviewed medical records on a healthcare database system and extracted data to fill out 74 paper case report forms for the matched controls identified through EIP CDI surveillance. I also provided the researchers with potential analytic questions and data needed for the study. Additionally, I assisted with the ongoing active surveillance, entering data from case report forms and the MDH Access database, into the CDC's online information system. I entered data from 420 forms (75% of the total number) from January to July 2014 into the database and enabled the team to come up to speed in their *C. difficile* surveillance efforts.

# EPIDEMIOLOGY

**Name:** Sujana Rajkarnikar

**Practicum Site:** Harvard University

**Location:** Cambridge, MA United States

**Title:** Identifying risk factors for self-injurious and suicidal behaviors in Harvard College students

**Introduction:** Suicidal and self-injurious behaviors are major public health concerns among young adults. Suicide is the second leading cause of death among college students. Moreover, 1-5% of young adults will attempt suicide and 12-38% will engage in nonsuicidal self-injury (NSSI) in their lifetime. Previous studies have identified a range of long-term risk factors for suicidal and self-injurious behaviors; however, little is known about the short-term or acute risk factors for these behaviors. The goal of this practicum was to examine short-term risk factors for suicidal and self-injurious behavior among Harvard College students. The objectives of the practicum were to assist with data cleaning and initial data analysis for this project.

**Methods:** 1) Conducted literature review of risk factors for suicidal and self-injurious behaviors in adolescents and adults. 2) Cleaned Harvard College Study data set, including electronic medical record and academic performance information, for initial data analysis.

**Results/Outcomes:** The data set includes 166 students (M age = 20.3 years; 66% female; 55% Caucasian) who attended Harvard from 2003 to 2014. Cases (n = 83) are students who engaged in suicidal or self-injurious behavior while attending Harvard. Controls (n = 83) were matched to cases on major sociodemographic variables but had no history of suicidal or self-injurious behavior. Among cases, 40 students attempted suicide and 53 engaged in NSSI. The ultimate goal of this project is to identify risk factors for self-injurious and suicidal behavior for Harvard students that may be used to inform intervention and prevention programs.

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**Name:** Susan Robinson

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

**Location:** Boston, MA United States

**Title:** Intern- Health Map

**Introduction:** West Nile Virus (WNV) is a mosquito-borne arbovirus that can cause serious neurological disease in people.

**Methods:** I worked with researchers from HealthMap – an outbreak surveillance system at Boston Children's Hospital that draws information from online sources in real time – to conduct an ecologic analysis exploring the potential impact of climate and other factors on the 2012 and 2013 WNV epidemic curves in Texas, and California WNV case counts from 2003-2013. Data for this analysis were obtained from the following: HealthMap (real-time case counts of WNV in Texas), Centers for Disease Control (yearly WNV case counts by state), National Oceanic Atmospheric Administration (climate and weather), and the California Department of Pesticide Regulation (pounds of pesticide active ingredient). Spearman correlation tests (SAS v. 9.3) were used to compare case counts and the Southern Oscillation Index, which is a standardized index that is based off of sea level differences (Texas), or average rainfall, average temperature, and pesticide usage (California).

**Results/Outcomes:** This analysis is currently underway. In the epidemic curves for Texas we see the majority of cases occurring for 2012 in August with a total of 841 cases and for 2013 in September with only 63 cases. We expect to see a correlation between negative Southern Oscillation Index, indicating warmer and wetter weather patterns, and increased cases of West Nile Virus in Texas and a negative correlation between pesticide use in California and WNV case counts in California.

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**Name:** Saritha Sankarankutty

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

**Location:** Boston, MA United States

**Title:** Intern- Health Map

**Introduction:** Health Map is an online outbreak surveillance system, under Boston Children's Hospital. It uses online sources for real time surveillance of diseases that are a cause of concern in the field of public health. It then brings together the data into the site's map to give a comprehensive look at the current state of major public health threats globally. This is accessible to the public at no cost at [www.healthmap.org](http://www.healthmap.org).

**Methods:** I worked primarily as an informatics intern, during my time at HealthMap. The objective of my project was to train the computer by improving the Bahasa dictionary (Bahasa is the official language of Indonesia), and to find whether news articles in the local language or news articles in English would give more information. This was achieved by curating the Bahasa feed, so that the system could better search, target and identify meaningful news articles from Google news and the ministries of health. An analysis was then done to identify which system provides more information.

**Results/Outcomes:** The Bahasa feed is now better organized and the system is able to identify articles more accurately. The data analysis is ongoing. From the preliminary results of the news articles that were curated, it was seen that the Bahasa feed captured more detailed information on diseases in Indonesia and Malaysia than the English feed.

**Name:** Matthew Scarpaci  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA United States  
**Title:** Smoking Cessation Study Intern

**Introduction:** Kick It For Good is an group randomized study of the effects of smoking cessation methods among individuals living in Boston public housing developments. The study explores whether trained residents of the developments can effectively improve usage rates of current smoking cessation programs and rates of smoking cessation among smokers. The majority of the study has been completed but the gathered data needs to be organized and synthesized in preparation for reporting the study findings. The current focus is on the analysis of the effect of interventions 3 months after the initiation of the study.

**Methods:** My primary responsibility has been working with datasets using SAS to compile final results of the study. Responsibilities have included (1) assembling tables of demographic data to determine if randomization of participants was effective in balancing their characteristics and, (2) performing an analysis of potential confounders by using directed acyclical graphs and generalized estimating equations to generate a final multivariate model for the study. In addition, I have attended weekly meetings with investigators to present the results of my analyses and contribute to its future direction. I have also written drafts of the statistical analysis section of a manuscript.

**Results/Outcomes:** The ultimate result of my analysis is the submission of a paper on smoking to a peer-reviewed journal over the coming year. As the analysis is not yet complete, there are no specific findings to report but preliminary results suggest that our interventions had a positive effect on smoking cessation success among participants.

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**Name:** Elizabeth Simpson  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA United States  
**Title:** Guided Review of Contextual Factors/Valued Activities Contributing to Healthy Aging (Topic TBD) Using the National Health and Aging Trends Study Data Set

**Introduction:** The Health and Disability Research Institute (HDRI) is an interdisciplinary research center at Boston University focusing on the study of disability outcomes. This project was part of a pilot study using publically available data from the National Health and Aging Trends Study (NHATS) to investigate contextual factors associated with participation in valued activities (leisure and daily) among community-dwelling older adults in four domains: 1) use of technology, 2) use of adaptive equipment, 3) environmental modifications, and 4) social/community networks.

**Methods:** A comprehensive literature review was conducted to understand how environmental modifications (domain 3) affect older adult participation in valued activities. Analysis of the literature yielded complete lists of contextual factors and valued activities (noting statistically significant items where possible) and findings were categorized by type of modification (eg, Structural to Home) and activity (eg, Cognitively Demanding) using a rubric identified earlier in the pilot study.

**Results/Outcomes:** Twenty-three articles were identified and full-text analyzed. Enumerated tables of (1) known barriers and facilitators to participation related to environmental modifications and (2) types of valued activities found in the literature were created. Identified barriers and facilitators included in the NHATS dataset will be analyzed to examine their associations with valued activities important to older adults. Results will contribute to the development of approaches to support healthy aging among community-dwelling older adults. This project found that a limited body of work exists to examine the association between contextual factors (specifically environmental modifications) and participation among older adults and is an area noted for future investigations.

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**Name:** Kerrin Tracy  
**Practicum Site:** Tufts Center for the Study of Drug Development  
**Location:** Boston, MA United States  
**Title:** Research Analyst

**Introduction:** Technology is changing rapidly with the potential to profoundly alter clinical research, yet there has been no robust assessment of technology solutions and standards since 2007. The Tufts Center for the Study of Drug Development, in partnership with the Clinical Data Interchange Standards Consortium (CDISC), conducted this study in order to assess current and anticipated use of eClinical technology solutions and data interchange standards in clinical research; to identify perceptions, concerns, and challenges; and to offer insight into the trends and future outlook of the global clinical research industry.

**Methods:** Data was collected from 556 industry representatives via Qualtrics. My responsibilities included: 1) creating a database, organizing and cleaning exported data 2) analyzing data using SAS 9.4 3) generating statistical reports from SAS containing frequency tables and survey demographics 4) producing a quantitative PowerPoint presentation using graphical displays to communicate findings.

**Results/Outcomes:** Our findings revealed lower rates of standards adoption than were anticipated, as well as high rates of uncertainty in response to current eClinical trial tool use by biopharmaceutical companies and CROs. We also found a large gap between perceived versus realized benefits of both tool integration and standards adoption, indicating a lack of satisfaction by those organizations that have implemented these technologies. Follow-up studies are being planned to better assess these trends and provide further explanation of our findings.

# EPIDEMIOLOGY

**Name:** Kathryn Tutunjian  
**Practicum Site:** Hockomock Area YMCA  
**Location:** Foxboro, MA United States  
**Title:** Prescription for a Healthy Lifestyle Program Intern

**Introduction:** The Hockomock Area YMCA coordinates a Prescription for a Healthy Lifestyle (PHL) initiative that encompasses several programs focusing on different chronic diseases. Members the community are enrolled in an appropriate program where they can develop or regain a healthy lifestyle that was hindered by a chronic disease diagnosis or prevent such diagnoses from occurring. Through the PHL programs, improvement in wellbeing and raising awareness to these chronic conditions will lower such occurrences in affected communities. As a PHL intern, my role was to work with the Livestrong cancer program to evaluate its effectiveness and examine participants' progress upon completion of the program. My work also extended into organization of data and outreach opportunities to the medical community.

**Methods:** Assessment data from the beginning and end of the programs were self-obtained by the participants in the healthy lifestyle programs, in addition to group-leader acquired physical evaluations. I assisted in collecting all of the participants' information and entering it into appropriated databases. I examined the data to determine if there was improvement of the participants' wellbeing and to what degree, so that the programs can be maximized

**Results/Outcomes:** Participants benefited from the program, both mentally and physically. The support gained through the experience is reported to help participants continue building on a healthy lifestyle that was lost with a cancer or related chronic disease diagnosis. Such success of the programs allows for their continuation and brings attention to these diseases.

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**Name:** Monica Wang  
**Practicum Site:** Biogen Idec  
**Location:** Cambridge, MA United States  
**Title:** Biogen Idec Epidemiology Practicum

**Introduction:** Psoriasis is a chronic, autoimmune skin and joint disease, characterized by scaling papules and plaques and associated with several comorbid conditions, most notably cardiovascular disease (CVD). Study objectives were to conduct a database study to determine the frequency of comorbid conditions in psoriasis patients compared with matched controls anytime in the database history, and in the 12 months prior to and 12 months post first psoriasis diagnosis, and to analyze specific cardiovascular co-morbidities in psoriasis patients post-diagnosis.

**Methods:** Subjects were derived from a US Claims Database (Clinformatics, 2004-2013), with psoriasis cases defined as having at least 2 ICD9 codes (696.0, 696.1, 696.2, 696.8). Two controls matched on age, gender, follow-up time, and insurance benefits were selected for each case. Comorbid frequencies, odds ratios, CVD incidence rates, and 95% confidence intervals were calculated.

**Results/Outcomes:** The mean age of study subjects was ~ 45 years, with 50% male. Mean time in the database was 35 months. The most common comorbid conditions in the twenty-four months surrounding the psoriasis diagnosis were respiratory infections, other skin disorders, lipid disorders, hypertension, and non-traumatic joint disorders. Psoriasis cases were moderately more likely than their matched controls to experience many comorbid conditions, though most differences were less than twofold. Psoriasis cases were 50% more likely than controls to have a heart disease diagnosis anytime in the history of the database. The cumulative incidence of any cardiovascular diagnosis twelve months post the psoriasis diagnosis among those with no CVD history was 9%.

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**Name:** Nathaniel Watts  
**Practicum Site:** Johns Hopkins Bloomberg School of Public Health  
**Location:** Baltimore, MD United States  
**Title:** Taenia solium Infection in Peru: A Community Based Study / research assistant

**Introduction:** Neurocysticercosis is a leading cause of seizures and epilepsy in most of the world and occurs when Taenia solium larval cysts infect the central nervous system. T. solium tapeworm infection is endemic in much of Peru, but there are scarce data on the prevalence in many rural highland communities where it is likely to be hyper-endemic. Peace Corps Volunteers (PCVs) live and work in these communities and can help facilitate public health research. The aim of this study was to utilize PCVs to estimate the prevalence of T. solium tapeworm infection in seven rural communities in northern Peru.

**Methods:** As part of a large-scale, community-based study using a non-random sampling frame, PCVs helped to facilitate the collection of stool samples (N = 2,328), which were analyzed by microscopy. PCR-REA was performed for species identification. Using these data, we calculated the prevalence (and 95% CI) of Taenia sp. and T. solium tapeworm infection.

**Results/Outcomes:** The overall prevalence of Taenia sp. egg positivity was 2.1% (49/2,328) (95% CI = 1.6 – 2.8%) with prevalence up to 4.3% (42/977) (95% CI = 3.1 – 5.8%) by community. All specimens tested by PCR-REA were T. solium. The overall prevalence of T. solium tapeworm infection was 1.5% (34/2,328) (95% CI = 1.0 – 2.0%). Prevalence up to 2.9% (28/977) (95% CI = 1.9 – 4.1%) by community was observed. This study reports high T. solium tapeworm prevalence and demonstrates that collaboration between researchers and PCVs can be an effective means to conducting community-based studies in rural Peru.

# GLOBAL HEALTH

**Name:** Rachel Allen  
**Practicum Site:** Brookline Health Department  
**Location:** Brookline, MA United States  
**Title:** Outbreak Investigation Epidemiology Intern

**Introduction:** The Brookline Health Department Outbreak Investigation Intern conducts surveillance, investigation and reporting on communicable diseases. I compiled and generated fiscal statistic for the Epidemiology Department using data and reports from Massachusetts Virtual Epidemiologist Network (MAVEN) and conducted a case study on public health implications of co-infection with hepatitis C and Tuberculosis at the local level.

**Methods:** As the epidemiology intern I obtained training in MAVEN to become proficient in monitoring reportable diseases. Literature review of management and prevalence of TB/Hep C co-infection was conducted on Google Scholar to inform statistics for the case study.

**Results/Outcomes:** The outcome of this practicum include becoming proficient in MAVEN, understanding the process in which diseases are reported, investigated, contained and how control measures are implemented at the local board of health level. The case study was presented to the Massachusetts Department of Public Health. The case study findings demonstrate the complexity in managing Hep C and TB co-morbidities in immigrant patients and the lack of existing data on the prevalence this co-morbidity.

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**Name:** Katherine Broecker  
**Practicum Site:** Alliance for the Prudent Use of Antibiotics  
**Location:** Boston, MA United States  
**Title:** Global Public Health Intern

**Introduction:** Founded in 1981 as a non-profit organization, APUA's mission is to maximize the effectiveness of antimicrobial treatment by promoting appropriate antimicrobial use and containing drug resistance. Globally, APUA is a respected resource to guide antimicrobial supply, treatment, and policy decisions. APUA provides consultations to industry, governments, and organizations seeking to improve antimicrobial supply, use and management decisions. The APUA local chapters serve as reliable resources for collection and dissemination of information and advocacy for antimicrobial management.

**Methods:** I provided project support to accomplish APUA's goals of improving global antibiotics access, use, and containment. Through social media and press releases, I increased awareness of the CDC's antibiotic stewardship campaigns. I communicated with APUA's international chapters and partners regarding developments in antibiotic research and policy, and completed deliverables of an unrestricted educational grant with Alere pharmaceuticals.

**Results/Outcomes:** I organized an international summit meeting of 12 key opinion leaders regarding the use of rapid diagnostic point of care tests and biomarkers such as CRP, developed and analyzed a survey of 150 primary care physicians regarding prescribing habits, submitted a manuscript to the Journal of Family Practice, and developed a PDF of educational materials. I published two newsletters on superbugs and antibiotic resistance genes. On-going outcomes include a four-stage webinar of hospital stewardship programs through an educational grant from BacterioScan and a showing of the documentary "Resistance" with a panel Q&A and sponsors Applegate and Panera at Coolidge Corner Theatre on Sept 25.

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**Name:** Caitlin Curnyn  
**Practicum Site:** Global Oncology (GO)  
**Location:** Boston, MA United States  
**Title:** Global Health Coordinator

**Introduction:** Cancer is now one of the leading causes of death worldwide, accounting for 8.2 million deaths in 2012. More than 60% of the world's annual new cases of cancer are found in Africa, Asia, and Central and South America. Global Oncology (GO) was founded in 2012 with the aim of improving cancer care in resource-poor settings. GO is an academic and community-based organization that strives to develop partnerships and launch innovative projects in global oncology.

**Methods:** My involvement with GO included acting as Global Health Coordinator for the Collaboration and Advising Portal (CAP) project. GO CAP initiated in early 2014 as a way to improve cancer outcomes in Malawi, Nepal, Mexico, and Vietnam. GO CAP connects consulting oncologists in Boston with treating providers abroad, pro bono, through a platform powered by Medting. When a treating provider uploaded a case onto the GO CAP platform I would ensure that all patient information was de-identified and connect them with the appropriate consulting physician based on the type of cancer presented. In addition, I helped create an implementation plan for the GO CAP project and material to reach out to additional providers.

**Results/Outcome:** Over the course of my practicum I was able to connect multiple consulting providers based out of Dana Farber and Mass General with treating providers. Consulting providers uploaded helpful commentary related to diagnoses and recommended treatments on difficult cases. Through the GO CAP project cancer patients in resource-sensitive areas were able to receive a higher standard of treatment.

# GLOBAL HEALTH

**Name:** Erin Degraw

**Practicum Site:** Massachusetts General Hospital

**Location:** Boston, MA United States

**Title:** Volunteer Program Coordinator for the Initiative to End Childhood Malnutrition

**Introduction:** The Initiative to End Child Malnutrition has been the leading organization combating malnutrition in Rukungiri District since 2009, culminating in the programs transition to Nyakibale Hospital and Rukungiri District Health Office in June 2014. As IECM closes, the initiative works to create a locally sustainable program for nutrition management throughout Rukungiri District by making Rukungiri District a pilot in Uganda for the decentralization of nutrition services to government health centers.

**Methods:** As a Program Coordinator for IECM I have been involved in many components of programing including managing and projecting budgets, procurement of drugs and supplies, staff supervision, training and education of hospital and district staff, and liaising between the District Health Offices and Ministry of Health. Specifically I organized a training of 25 district health workers to receive Nutrition Assessment Counseling and Support (NACS) to treat inpatients/outpatients at seven health facilities in Rukungiri District and secured a free supply of Ready to Use Therapeutic Foods and F100/F75 sachets for treatment of malnutrition.

**Results/Outcomes:** Since May of 2013, IECM made 152 site visits to health centers, screened 1272 children for malnutrition and treated 356 outpatients and 152 inpatients for moderate and severe malnutrition. We set up 8 health centers with the ability to provide nutrition services to the community. Each of the 8 health centers has a functional Outpatient site and 3 of the 8 have functional Inpatient sites that have cared for 72 patients since January 2014 and trained 140 village health teams to identify and refer malnutrition patients to treatment facilities.

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**Name:** Satvinder Dhaliwal

**Practicum Site:** International Rescue Committee

**Location:** Boston, MA United States

**Title:** Educating recent and expecting refugee mothers about reproductive health services

**Introduction:** The Center for Wellbeing aims to reduce health disparities in refugee and asylee communities in East Bay, California. This practicum focused on developing curriculum to support asylee and refugee women who are pregnant or seeking family planning resources.

**Methods:** Meetings with coordinators of public health nursing programs provided an understanding of public health nurses' and case managers' roles. This was compared with clients' feedback on existing services to identify prenatal topics that need greater emphasis. Three other IRC offices provided pre-postnatal curriculum that was successfully implemented to serve refugees in their communities. Enrollment assessments were discussed with a psychologist at the Center for Wellbeing in order to avoid triggering crises while identifying needs.

**Results/Outcomes:** A six session workshop (14 hours) for refugee and asylee women, including: pregnancy-related terms, nutrition and exercise tips, hospital tours and transportation options, stages of labor and delivery, postpartum nutrition tips, access to postpartum supplies, and mental health. Enrollment and prenatal assessments were developed and used to identify five women's mental health, physical health, and material needs. A postpartum assessment was developed to identify postpartum needs. IRC clients revealed that women do not feel confident making specific requests related to medical care, so curriculum provides scripts for making prenatal appointments and emergency phone calls. Interactive activities assist women in creating provider contact information cards and hospital packing lists. A reproductive health manual was drafted to outline a streamlined method of enrolling clients in educational workshops through IRC and home-visiting services through Alameda County.

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**Name:** Chiara Draghi

**Practicum Site:** CHoiCe Trust - South Africa

**Location:** Tzaneen, South Africa

**Title:** Measuring Child Wellness in Orphans and Vulnerable Children in South Africa – Quantifying the Unquantifiable

**Introduction:** CHoiCe Trust, a community based healthcare non-profit in South Africa, was started in 1997 to offer health education to rural farm workers. Now, they provide a myriad of health services and have reached over 22,000 households. I worked with the OVC team to evaluate a tool used to measure wellness in children, aiming to ensure the team was capturing useful data which would measure program success.

**Methods:** Through 8 shadowing experiences and 4 days of home visits I was able to observe the team conducting interviews and the tool questions answered. The tool I was evaluating had been used for two years prior to my arrival. The first year the tool was implemented, the OVC team captured an overall score and left comments explaining why that score was given. The second year the tool was used, they used Google Forms to capture more accurate answers to each sub-question and assign an overall score. I identified the most common reasons for assigning poor scores, which responses changed after intervention, and which questions fit into a program logic model.

**Results/Outcomes:** When I finished at CHoiCe, I conducted a training on program logic models. I introduced a modified tool using the same overall scores, but comprised of different questions which evaluated the program's impact on children. At the conclusion of the meeting, the OVC team scheduled a meeting with stakeholders to build logic models for each program and to re-evaluate their current tools.



# GLOBAL HEALTH

**Name:** Jennifer Engstrom  
**Practicum Site:** Lake of the Woods/Greenwoods Camp  
**Location:** Decatur, MI United States  
**Title:** Health Education Intern/Camp Nurse

**Introduction:** As part of the health care team at Greenwoods/Lake of the Woods, a privately owned camp providing education and outdoor learning to children aged 7-17 years, I helped promote and support American Association of Colleges of Nursing (AACN) guidelines for the prevention of communicable diseases. The goal of AACN guidelines are to promote population based prevention techniques, in this case, among children lacking in adult supervision. The purpose of this practicum was to help with the organization and management aspects of communicable disease prevention and to assess health education in the children at camp.

**Methods:** I worked with a team of seven nurses and began by assessing immunization records, verifying pre-arrival agreements with parents, promoting external control measures throughout camp, and screening campers upon arrival. Once campers had arrived, the health care team began discussing illness reducing strategies in group settings with managerial staff, counselors, and campers. To evaluate retained health knowledge among campers, I implemented an individual questionnaire. The activities performed, with the exception of the final questionnaire, were guidelines set forth by the AACN.

**Results/Outcomes:** Our results included the development and perpetuation of protocol for the control and prevention of communicable diseases, in a population almost entirely comprised of children with minimal adult supervision. By establishing a protocol, we were able to contain and prevent the spread of communicable disease in a less than ideal environment. The protocol established here can be used in future settings involving the health education of groups of children and the prevention of communicable disease in those children.

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**Name:** Ariel Falconer  
**Practicum Site:** Boston University School of Public Health  
**Location:** Addis Ababa, Ethiopia  
**Title:** Assessing Organizational Development in Ethiopian NGOs: MODE Study

**Introduction:** Bilateral donors have increasingly focused funding on capacity building and organizational development (OD) in developing countries. However, the question remains as to whether there is a connection between improvement in an organization's development and improved outcomes for the beneficiaries served by the organization. The MODE (Measuring Organizational Development Effectiveness) study examines the relationship between indicators of organizational development (e.g.; leadership, information technology, financial health) and a set of program outcomes for organizations serving orphans and vulnerable children. Forty four organizations are enrolled and have been evaluated annually for three years on key indicators of organizational development.

**Methods:** I collected data from organizations in Addis Ababa, Bahir Dar, Mekane Yesus, and Debre Tabour. Data collection was conducted using the MODE tool, which measures organizational development across 11 domains using 220 indicators, and staff surveys. I wrote personalized organization reports created with the data from the MODE tool and staff surveys, and an aggregate report will be created later this summer showing cohort trends in each OD domain.

**Results/Outcomes:** Analysis of the organizational trends over three years is still ongoing, although preliminary results suggest a statistically significant difference in OD scores from Year 1 to Year 3. Preliminary data are not showing strong correlation coefficients (less than 0.3) between OD scores and beneficiary outputs and outcomes. As results are finalized, the research team should be able to speak to the reliability of the MODE tool as a measure of organizational development and any relationship with beneficiary outcomes.

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**Name:** Sydney Ford  
**Practicum Site:** Konbit Sante, Cap-Haitien Health Partnership  
**Location:** Portland, ME United States  
**Title:** Intern

**Introduction:** Haiti has the highest maternal and infant mortality rates in the Western Hemisphere. In 2011, Portland, Maine based NGO, Konbit Sante, began a program to provide training, continued education, supplies, and supervision to traditional birth attendants (TBAs), who attend approximately half of the births nationally. This project recognizes the significant role that TBAs play during childbirth in Haiti, and ensures that they have the knowledge, skills, supplies, and linkages they need to save lives. The purpose of my practicum was to complete a process evaluation of this project.

**Methods:** During a three-week in-country practicum, I conducted a series of semi-structured in-depth interviews with program staff and TBAs in order to determine the program's impact on knowledge, quality of care at births attended by TBAs, and on maternal and child health outcomes in the Petit Ans district of Cap-Haitien. I also geo-located TBAs in order to determine the coverage areas in Petit Ans.

**Results/Outcomes:** Evaluation of the program revealed that it is not functioning as intended and is not meeting its objectives. The most crucial finding was that the roles and responsibilities of staff are not clear, thus leading to a breakdown of program management. A written report will inform program staff in their efforts to improve the program's implementation and guide future planning.

# GLOBAL HEALTH

**Name:** Lindsey Frenkel-Rorden  
**Practicum Site:** Doctors Without Borders/Medecins Sans Frontieres  
**Location:** New York, NY United States  
**Title:** Pharmaceutical Access Intern

**Introduction:** Médecins Sans Frontières (MSF)/Doctors Without Borders is an international humanitarian aid organization that provides medical assistance to vulnerable populations in emergencies. As part of their chartered mission to provide quality medical care, MSF strives to improve capacity to treat, as well as improve access to first-rate medicines. MSF has a long history of advocating for the availability and affordability of critical medicines in South Africa. The purpose of this practicum was to examine the current access landscape of key drugs in South Africa as a tool to advocate and push for better access to affordable medicines via IP reform.

**Methods:** I worked with the MSF Access Campaign on their “Fix the Patents Laws” project, which aims to reform the national patent laws in order to put patients before patent-holders. I supported the campaign by developing evidence to convince stakeholders to test the use of international intellectual property flexibilities to overcome patent barriers on key drugs. I researched the following for 5 key drugs: Current burden of disease, patent landscape, clinical efficacy, national and international medicine pricings, and barriers to access. I liaised with various civil society groups to verify content and obtain campaign buy-in. Research was used to author medicine case studies, including policy recommendations.

**Results/Outcomes:** At the conclusion of the practicum, the medicine case studies will be used by MSF within their advocacy strategies, as a tool for regional IP training, for internal briefings, and as evidence for potential future litigation.

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**Name:** Mary Ellen Galante  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA United States  
**Title:** The Breastfeeding Center Intern

**Introduction:** The Breastfeeding Center at Boston Medical Center is engaged in hospital policy change, obesity prevention, and American Indian/Alaska Native breastfeeding promotion and support. As an intern, I assisted the Director and her staff in advancing the Baby-Friendly Hospital Initiative (BFHI), which promotes optimal maternity care for all women, increasing breastfeeding initiation, duration, and exclusivity. The BFHI recognizes and awards birthing facilities that successfully implement the ‘The Ten Steps to Successful Breastfeeding’.

**Methods:** I compiled survey data from 6 hospitals in Virginia, Texas, Kansas, Oklahoma, and New Mexico, on the pathway to being designated BabyFriendly™. The results highlighted the site improvements needed to meet the standards required for designation. At each hospital and associated outpatient setting, surveys were administered to a convenience sample of: prenatal patients, postpartum patients, nurses, physicians and other provider staff, as well as IBCLCs (board certified lactation consultants) who work in labor and delivery, postpartum and/or the nursery. Questions assessed breastfeeding knowledge, skills, and training, care practices such as skin-to-skin and rooming in, and breastfeeding support post discharge.

**Results/Outcomes:** There was a wide variation in the results showing different levels of BabyFriendly™ preparation. Most needed to improve their prenatal education initiatives, as well as their staff training. Physicians were particularly weak in their knowledge of how to assist women with some basic breastfeeding skills. Many physicians and nurses were unaware of the definitive resources for medication related breastfeeding questions.

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**Name:** Ashley Grant  
**Practicum Site:** AMOS Health and Hope  
**Location:** Managua, Nicaragua  
**Title:** Global Health/Women's Empowerment and Nutrition Intern

**Introduction:** Malnutrition and anemia are persistent health issues worldwide. The nutritional status of a child is affected by various factors like food availability, quality and portions, the manner in which the caregiver provides, and disease. The purpose of the internship is to support AMOS' objective to understand the economic and nutritional influences that prohibit children from leading healthy lives. Projects utilize Community-Based Participatory Research (CBPR) principles and are aimed at women to identify economic and nutritional constraints, and develop intervention strategies.

**Methods:** The main activities of the program are 1) research and literature reviews, 2) conduct health stations for children under 5 in collaboration with local health committees and government officials, 3) analyze data from the health stations to identify malnutrition and anemia prevalence and nutritional trends, 4) present data findings to the local health committee and encourage formation of an action plan 5) Focus group discussions, Photovoice, and crafts with local women, and 6) an independent project at the student and organization's discretion.

**Results/Outcomes:** The CBPR approach promotes community participation, trust between partners, improving intervention strategy and design, and solving community health issues. Integrating education and social action can potentially improve health statuses by identifying malnutrition and anemia and its correlates. The information obtained will continue to support understanding between women's empowerment, food security, child feeding practices and nutritional status. My independent project is an mHealth feasibility analysis that will provide AMOS with potential low-cost technological solutions to improve point-of-service data collection, real-time results, and accurate information transfer.

**Name:** Peter Hynes

**Practicum Site:** MAMADO (Maji Na Maendeleo Dodoma [Water and Development Dodoma in Swahili])

**Location:** Dodoma, Tanzania

**Title:** Mobilizing Rural Tanzanian Villages to Create Water and Sanitation Infrastructures

**Introduction:** Scarce water and monetary resources make it difficult for villages in Dodoma to prioritize improved water and sanitation. MAMADO is a Tanzanian NGO that works with other local NGO's on internationally funded projects to train communities on the importance of hygiene, and to give technical assistance for the creation of water and sanitation facilities. MAMADO plays a leading role in community mobilization, demand creation and behavior change, paying special attention to the poor and disabled.

**Methods:** I attended 5 trainings to learn the techniques MAMADO uses (CLUES, CLTS, SWASH, and HCES). We visited 4 local villages to talk to the elders about challenges they were facing and to set up meetings of the entire community to agree on project timelines and priorities. School WASH programs were also implemented by training teachers to form youth sanitation clubs to take the hygiene message to students and parents. I also taught MAMADO colleagues QuickBooks and PSPP (a free version of SPSS), as well as introduced CPro and Excel.

**Results/Outcomes:** The pace of projects in Tanzania is slow and scheduled community meetings often change at the last minute. Nevertheless, investment in community ownership is imperative for sustained enthusiasm over the duration of the 3+ year projects. Talking to village elders in the opening stages of the project for the 4 villages will lay the ground work for slow but steady change. MAMADO's strengthened organizational capacity will help them track water and sanitation improvements, and report these findings back to key donors and stakeholders.

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**Name:** Allison Leemann

**Practicum Site:** Society of Emergency Medicine in India

**Location:** Trivandrum, India

**Title:** Impact on Patient Outcomes from Emergency Medicine Residencies in India

**Introduction:** As part of the research collaboration between Boston University and the Society of Emergency Medicine of India, I worked as a member of the Emergency Medicine in India study team to determine the current patient caseload in Indian Emergency Departments and the impact on patient outcomes from the initiation of Emergency Medicine residency programs. This is a retrospective chart review that collected patient demographic information, patient complaints, diagnoses, and outcomes, and physician performance indicators such as procedures, diagnostic testing, and consultations.

**Methods:** I worked with the Principle Investigator 1) to develop the study's data collection tool; 2) to extract appropriate data from the electronic medical record and paper records at study sites; 3) to generate tabular and graphic displays of patient outcomes throughout the data collection process and relay pertinent information to the study team in real-time; 4) to generate resources for future researchers if the study is repeated or expanded; and 5) to codify raw data and assist the study team with statistical analysis and manuscript development.

**Results/Outcomes:** In total, 2653 records were extracted using the data collection tool at the two study sites. Data and the graphic and tabular displays were used to present interim findings to the Chairman of the Kerala Institute of Medical Sciences and the Executive Director of the National Board of Examiners. These presentations generated support for the continued expansion and improvement of Emergency Medicine in India.

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**Name:** Christine Lenihan

**Practicum Site:** Boston University Center for Global Health and Development

**Location:** Boston, MA United States

**Title:** Measuring Organizational Development and Effectiveness for HVC in Ethiopia

**Introduction:** The Ethiopia Organizational Development Study assesses organizational development of NGOs in Ethiopia working with highly vulnerable children (HVC) using the Measuring Organizational Development and Effectiveness (MODE) tool. The three year study measured organizations level of development, changes over time, and if organizational development impacts an organization's effectiveness.

**Methods:** As one of 8 research assistants, I spent 9 weeks in Ethiopia conducting organizational assessments using the MODE tool. It includes three parts: 1) organizational profile, 2) interview and document review, 3) staff/volunteer survey. In teams of two, we completed organizational profiles, conducted key-informant interviews and document reviews, as well as implemented staff and volunteer surveys. The information was analyzed to produce scores for eleven domains of organizational development. We provided the scores, rationale, comparison with previous years, and recommendations in our reports for each organization.

**Results/Outcomes:** My partner and I conducted 14 assessments. Overall data analysis is ongoing, but a statistically significant improvement in overall organizational development scores was observed. The overall score, however, has shown no relationship with outcomes. Further analysis will determine if individual domains have a relationship to the organizations' beneficiaries' outcomes.

# GLOBAL HEALTH

**Name:** Margaret North

**Practicum Site:** Massachusetts General Hospital

**Location:** Boston, MA United States

**Title:** From Malnutrition to Malnutrition: How International Funding Briefly Fed a District

**Introduction:** The Ugandan Demographic and Health Survey (2011) reported 42% of children in the Southwest region (inclusive of Rukungiri District) to be malnourished. Since 2009, the Initiative to End Childhood Malnutrition (IECM) has been the only organization treating malnutrition in Rukungiri District. IECM is a collaboration between The Division of Global Health and Human Rights at Massachusetts General Hospital and Nyakibale Hospital. Starting in December 2013, IECM transitioned the project to Nyakibale Hospital and Rukungiri District.

**Methods:** My duties as Program Coordinator from May 2013 to May 2014 consisted of running all inpatient and outpatient services for IECM. Major daily tasks included: reporting and ordering supplies of F100 and F75 (high-energy milk) and Ready-to-use Therapeutic Food (RUTF); coordinating trainings; managing clinical care; hiring, payroll, and disciplining outreach staff; liaising with government officials and NGOs; and strategic planning.

**Results/Outcomes:** Quantitative results during the height of IECM's programming included, on average each month: treating 48 outpatients and 18 inpatients; visiting 21 sites; screening 212 children; and distributing 6,953 sachets of RUTF. Intensive financial support from IECM during this time period included: a vehicle, salaries, inpatient fees, and infant formula. After December 2013, there was a sharp decrease in external funding, followed by a decrease in services provided by as much as 50% to 60%. While the quality and continuity of services has been impacted, the hope is that trainings, technical support, and provision of nutrition supplements will continue to decrease rates of malnutrition in Rukungiri District.

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**Name:** Elizabeth Porter

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

**Location:** Boston, MA United States

**Title:** Evaluating the Capacity of Civil Society Organizations to Improve the Health of OVC in Ethiopia

**Introduction:** The Evaluating the Capacity of Civil Society Organizations (CSOs) to Improve Health of Orphans and Vulnerable Children (OVC) in Ethiopia Project is a mixed method study housed within Boston University's Center for Global Health and Development. The project utilizes the Measuring Organizational Development and Effectiveness (MODE) tool to assess the organizational capacity of CSOs working with OVCs throughout Ethiopia.

**Methods:** For the 3rd year of the study, I utilized the MODE tool to examine 11 domains within each CSO and compared results longitudinally over the three-year period. As a member of the research team, I travelled to Ethiopia to conduct in-depth interviews with CSO staff utilizing a newly developed mobile-health application. I also administered surveys, which I then entered into CSPro, to gather information on staff perspectives on their work environment.

**Results/Outcomes:** Each CSO received a report which I wrote summarizing the information collected from the interviews and surveys. The report tracked any changes made over the three-year period, and it included recommendations for improving practices. The knowledge gained from the assessments gave CSOs insight into areas of success and areas in need of improvement. The project's work not only provided CSOs with a holistic understanding of their organizational capacity, but also provided a better picture of the CSO landscape in Ethiopia.

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**Name:** Elizabeth Ragan

**Practicum Site:** Johns Hopkins Bloomberg School of Public Health

**Location:** Baltimore, MD United States

**Title:** Verbal autopsy data quality assessment and algorithm validation

**Introduction:** Obtaining accurate mortality data by cause in low- to middle-income countries (LMICs) remains a primary challenge in global health. The Population Health Metrics Research Consortium (PHMRC) gold standard verbal autopsy validation study began in 2005 to validate verbal autopsy methods against a set of well-defined gold standard deaths for which each had a companion verbal autopsy. Verbal autopsies with gold standard diagnoses were collected on over 12,000 deaths at six sites in four countries (India, Philippines, Tanzania, and Mexico). The objective of this practicum was to prepare two datasets, one for children (<age 5) and one for neonates, for analysis of expert algorithms and to obtain initial verbal autopsy algorithm results.

**Methods:** The child dataset (2064 decedents, 229 variables) and the neonatal dataset (2631 decedents, 253 variables) were systematically cleaned and prepared for analysis. Efforts were largely to account and correct for differing coding and data-entry methods across study sites. The verbal autopsy questionnaire was used to reconcile values based on the associated skip pattern. Following this, the Child Health Epidemiology Reference Group (CHERG) Expert Algorithm was validated against the dataset to provide initial results. Analyses included sensitivity, specificity and cause-specific mortality fractions.

**Results/Outcomes:** The result was two cleaned datasets upon which initial algorithm validation analyses were conducted. Continued expert algorithm validation will be conducted with the datasets.

**Name:** Meryn Robinson  
**Practicum Site:** Boston University Center for Global Health and Development  
**Location:** Boston, MA United States  
**Title:** Ethiopia Data Collection Team Member

**Introduction:** The purpose of this practicum was to add to the body of knowledge exploring the relationship between the capacity of organizations and their ability to improve the health outcomes of their beneficiary populations, and to the knowledge about measuring the capacity of organizations. Between 2012 and 2014, 60 NGOs in Ethiopia were enrolled in the study and over the course of three assessments their organizational development was measured using the MODE Tool across eleven different organizational domains.

**Methods:** Between May and July 2014, our data collection team conducted 60 assessments with the enrolled NGOs using an electronic version of the MODE tool via an app on tablets. We also conducted staff surveys and input their results into CSPRO. The data from the app and CSPRO was analyzed and incorporated in the reports our team composed for each organization. In the reports we included the results from the assessments as well as analysis and recommendations for future improvements in the 11 domains that are included in the assessments. In this way our team was able to collect data to contribute to the purpose of the study while also communicating meaningful results to the organizations.

**Results/Outcomes:** The data generated from the assessments our data collection team conducted adds to the body of data from the previous two assessments, and these assessments offer opportunities to link outcome data with organizational capacity assessments over time, as well as to analyze linkages between organizational aspects that may predict the performance outcomes.

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**Name:** Emily Rodil  
**Practicum Site:** Brookline-Quezalguaque Sister City Project, Inc.  
**Location:** Quezalguaque, Nicaragua  
**Title:** Brookline Sister City Project in Quezalguaque, Nicaragua

**Introduction:** As part of a team of students assembled by the Brookline-Sister City Organization, I assisted in a number of different projects within the town of Quezalguaque, Nicaragua. These projects included a survey on perceptions of Chronic Kidney Disease of unknown origin (CKDu) and peritoneal dialysis, a pharmaceutical study on use of nephrotoxic and medicinal drugs in the community, water sampling tests from sources throughout the town, and reproductive and sexual health education among primary and secondary school students. The purpose of this practicum was to learn more about peoples' opinions and knowledge of CKDu and peritoneal dialysis, and their use of pharmaceuticals, as well as to engage with students on sexual health education.

**Methods:** With the help of community leaders and two local guides, we distributed the CKDu and pharmaceutical studies to over 250 citizens of Quezalguaque. We also distributed the pharmaceutical surveys to about 15 pharmacies and local shops to learn more about nephrotoxic drug distribution. Furthermore, we created and taught a 3-part series of sexual health education classes to primary and secondary school students.

**Results/Outcomes:** We saw a marked improvement in sexual health knowledge after analyzing the baseline and post-sexual education quizzes that we created and distributed to measure the effectiveness of the curriculum. The descriptive results of the CKDu, peritoneal dialysis, and pharmaceutical surveys are pending and will be used as a springboard for future studies done by CKD specialists in León, as well as the future student groups that go to Quezalguaque.

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**Name:** Sindhu Saba  
**Practicum Site:** Sneha Charitable Trust  
**Location:** Bangalore, India  
**Title:** Evaluating Sneha Charitable Trust's HIV Care Homes

**Introduction:** Sneha Charitable Trust (SCT) is an international faith based organization dedicated to providing quality healthcare and support to orphaned and vulnerable children living with HIV in India. SCT has two care homes: one called Sneha Care Home (SCH) for younger children and another called Snehagram for adolescents. At SCH, I created a guide defining the key responsibilities and roles of everyone regarding the hygiene program. I evaluated the current hygiene program and provided the necessary recommendations for any gaps observed. Additionally at Snehagram, I critically reviewed their program to see what type of environment can be replicated in other HIV care homes to reduce any internalized stigma.

**Methods:** While constructing the guide, I performed a web search on W.A.S.H. practices. I observed Sneha Care Home's current hygiene practices and interviewed staff members regarding their different roles in the hygiene program. Additionally, through the use of journal articles and online resources, I evaluated the negative impact of HIV stigma and created a reflection paper consisting of my observations and interactions with the children at Snehagram.

**Results/Outcomes:** After reviewing Sneha Care Home's hygiene system, I made the following recommendations: getting the entire Sneha Care staff such as teachers and the clinical nurse involved in the monitoring of the child's hygiene, provision of soap for hand washing, and the implementation of regular hygiene education classes for children and staff. Additionally at Snehagram, I found that the challenging yet supportive environment created by staff is the driving factor in diminishing internalized stigma.

# GLOBAL HEALTH

**Name:** Laura Singer  
**Practicum Site:** Center for Disaster and Humanitarian Assistance Medicine  
**Location:** Rockville, MD United States  
**Title:** Research/Administrative Assistant

**Introduction:** The mission of the Center for Disaster and Humanitarian Assistance Medicine (CDHAM) is to help achieve regional and global stability through health care diplomacy. It assists in disaster response and in humanitarian assistance missions by providing program development, education and training, and research methodology. The practicum project involved a supporting role within the Center's Cooperative Biological Engagement Program (CBEP) and was centered on researching infectious disease pathogens of significant relevance and concern to partnering nations and the United States.

**Methods:** (1) My specific research explored the current public health response to an escalating health crisis in the Middle East, i.e. polio re-emergence in Syria and its neighboring refugee host nations (Iraq, Turkey, Lebanon and Jordan). Additional projects included: (2) ongoing development of partner country gap analyses in regards to infectious disease prevalence and associated usable country resources and (3) weekly "brown bag" discussions on issues surrounding global health engagement. Opportunities for regular collaboration with subject matter experts provided for consistent and valuable contributions to my research on constantly evolving issues.

**Results/Outcomes:** The primary practicum site deliverable was a white paper outlining polio and factors surrounding its re emergence as a once nearly-eradicated disease, as well as identification of subsequent individual observations on implemented public health response measures.

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**Name:** Hannah Webb  
**Practicum Site:** Brookline-Quezalguaque Sister City Project, Inc.  
**Location:** Brookline, MA United States  
**Title:** Investigating Chronic Kidney Disease of Uncertain Etiology and Reducing Rates of Teenage Pregnancy in Rural Nicaragua

**Introduction:** In Nicaragua, the prevalence of chronic kidney disease of uncertain etiology (CKDu) has been estimated to be 17.9% to 21.1% and a reported 28% of women aged 20-24 gave birth before age 18. Our research team designed and implemented surveys to assess knowledge, attitudes and practices regarding CKDu, nephrotoxic medication use, and peritoneal dialysis throughout Quezalguaque. We also led sexual health classes in three schools.

**Methods:** We worked with two physicians and a Nicaraguan researcher to: 1) review literature on CKDu; 2) design and pilot the qualitative survey; 3) design and implement the quantitative survey with over 200 participants; 4) enter and analyze data; and 5) report findings to stakeholders. We also: 1) reviewed literature on regional sexual health issues; 2) met with local experts; 3) adapted and implemented sexual health curriculum from Community Health Educators and Peer Health Exchange with over 250 students; and 4) administered a pre and post-test survey.

**Results/Outcomes:** We encountered concerning use of nephrotoxic medications/plants and low levels of knowledge regarding CKDu and its treatment. We discovered little knowledge of sexually transmitted infections and contraception use. Data was shared with local experts. A report with our final analyses and recommendations will be given to Brookline Sister City, local leaders and health centers.

# HEALTH LAW, BIOETHICS & HUMAN RIGHTS

**Name:** Veronique Hionis  
**Practicum Site:** Boston University School of Medicine  
**Location:** Boston, MA United States  
**Title:** Forensic Medical Evaluation Group Coordinator

**Introduction:** The Forensic Medical Evaluation Group at Boston Medical Center provides medical documentation of torture or ill-treatment to asylum-seekers and others who are alleging abuse, female genital mutilation, and/or torture. During a four-hour clinic each week, the group offers evaluation and documentation of physical and psychological evidence of torture and abuse in a supportive and collaborative environment, working closely with immigration attorneys. Asylum seekers undergo a comprehensive evaluation utilizing methods outlined in the Istanbul Protocol, the international standard for the investigation and documentation of torture.

**Methods:** As an intern for FMEG, I coordinated with refugee patients, lawyers, physicians, clinic staff. During clinic hours, I observed forensic medical evaluations of asylum-seeking patients; participated in collaborative forensic assessments and case presentations; created a medical information release form for the asylum-seeking patients to sign; and attended didactic sessions on medical forensic topics, among other tasks. I conducted an extensive literature review to determine the health care needs of Iraqi resettled in the U.S.

**Results/Outcomes:** This innovative program is dedicated to improving public health by working to further prevent future torture or abuse. Working with FMEG has provided me with experience in refugee health assessments, forensic medical evaluations and documentation, and program management. My literature review is now being used to write a paper on best practices for treating Iraqi Refugee patients. I am preparing a scholarly article to submit for publication.

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**Name:** Katherine Jackson  
**Practicum Site:** Maryland Department of Health and Mental Hygiene  
**Location:** Catonsville, MD United States  
**Title:** Prescription Drug Monitoring Program / Overdose Prevention Team

**Introduction:** Behavioral Health Administration (BHA) within the Maryland Department of Health and Mental Hygiene administers the Prescription Drug Monitoring Program (PDMP), designed as a tool primarily for assisting healthcare providers in appropriate prescribing of controlled dangerous substances (CDS) to patients. PDMP is fully integrated with the state-wide Health Information Exchange (HIE), and along with other data sources, is utilized by programs addressing overdose prevention.

**Methods:** I worked on PDMP projects for the Overdose Prevention Team. My main role focused on the implementation of recent legislation authorizing PDMP to analyze data to identify potential misuse and abuse of CDS and send "unsolicited reports" to those who prescribed or dispensed CDS drugs to identified patients. I researched unsolicited reporting regulations / protocols in other states, developing a report summarizing my findings and a presentation for the PDMP Advisory Board. Based on my research, I drafted regulations for the PDMP unsolicited reporting policy and made recommendations for activities allowed under the new legislation. Finally, I assisted with a capacity assessment of the PDMP for unsolicited reporting and collaborative data sharing.

**Results/Outcomes:** My research and reports will inform the implementation process of an important program for addressing prescription drug misuse, currently a high-profile topic in Maryland. PDMP will be able to leverage the experience of other states as well as its own HIE and data infrastructure to provide clinically-useful notifications to CDS prescribers. I gained crucial insight into the intricacies of successfully implementing policy within a state health department.





# HEALTH POLICY & MANAGEMENT

**Name:** Shamole Ahmed  
**Practicum Site:** Detroit Medical Center  
**Location:** Detroit, MI United States  
**Title:** Administrative Intern (Operations)

**Introduction:** The Cardiovascular Institute (CVI) as a part of the Detroit Medical Center is an integrated comprehensive regional academic health care delivery system that is dedicated to revolutionizing cardiovascular care. Working with the CVI team, the practicum was focused on assisting with the grand opening of the new Heart Hospital as well as having exposure to and understanding hospital operations.

**Methods:** Worked closely with the Chief Operating Officer/Director of Cardiac Operations for CVI at DMC and gained a better understanding of the day-to-day operations at a hospital. Attended various administrative, medical, marketing, construction, operational review, finance, and executive meetings and completed tasks in preparation for those meetings and follow up tasks derived from the meetings. Responsibilities included completing administrative projects assigned. Some examples of projects were that operations documents were created, Cath labs were audited, observations of the hospital were made for management purposes, coordination of installation of services, and assisted in increasing employee satisfaction. Detailed tours were given to physicians, employees, and the general public of the new facilities.

**Results/Outcomes:** The grand opening of the new Heart Hospital was a success and the first few days from an operations standpoint went smoothly. The transition from the old facilities to the new one was efficient. New processes such as bedside registration and Cath and EP lab working together went well. Several departments made progress on metrics they were measuring that needed improvement. A better understanding of hospital management from an operations perspective was achieved.

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**Name:** Catherine Anne Amutan  
**Practicum Site:** Boston Veterans' Affairs Healthcare System  
**Location:** West Roxbury, MA United States  
**Title:** Student Trainee: Improving Access and Wait Times at VA Boston Sleep Clinics

**Introduction:** The VA Boston Healthcare System is comprised of three main campuses: West Roxbury (WX), Jamaica Plain (JP), and Brockton (BR). Across campuses and clinical services, patient access to appropriate and timely services is highly variable. The primary focus of my practicum was to improve the scheduling of consult visits in order to decrease wait-time for appointments at the WX and BR Sleep Clinics.

**Methods:** In collaboration with Systems Redesign, an in-house quality improvement group, I worked with the Facility Consult Committee and various stakeholders to help encourage "buy in" from clinical services. I then developed a process map to understand the current system for scheduling consult visits and identify inefficiencies in the process. To further support the process map and create a foundation for recommendations, I conducted in-person interviews at the West Roxbury and Brockton campuses as well as phone interviews of clinicians and staff members. Moreover, I coordinated with stakeholders to implement solution(s) for a more efficient process of scheduling consult visits at the Sleep Clinics.

**Results/Outcomes:** Based on our analysis, we recommended submitting a resource request for a Registered Polysomnographic Technologist (RPSGT), who could schedule patients, score sleep tests, as well as conduct basic consult review. In addition, we suggested that Sleep Clinic staff members work additional hours in order to improve patient scheduling.

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**Name:** Sally Bendiks  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA United States  
**Title:** Improving the Follow-Up Process and Program Evaluation of the Jump Rope Clinic in Boston Medical Center's Pediatric Department

**Introduction:** The bWell Center located in Boston Medical Center's Pediatric Department is a health resource center, providing services and materials to pediatric patients and their families, with the goal of improved health and wellness through education and simple lifestyle interventions. The Jump Rope Clinic (JRC) at bWell is a 12-week lifestyle intervention program aimed at increasing physical activity in children. JRC teaches children how to jump rope, provides them with a jump rope, and helps them set goals.

**Methods:** The internship focused on working with the bWell Project Manager to improve the follow-up process of patients referred to the Jump Rope Clinic. This included the redesign of the follow-up encounter form and making all 2-, 6- and 12-week follow-up calls. JRC patient materials were updated and a new JRC brochure was created. Monthly statistical reports on registration and follow-up were created for presentation at monthly staff meetings.

**Results/Outcomes:** Since implementation of the new follow-up process, we have seen the number of successful follow-up attempts increase with fewer participants being lost to follow-up. The next goal is to begin scheduling 12-week follow-up appointments for all patients who have been referred to Jump Rope Clinic. From these appointments, we will be able to measure improvement in the number of jumps in a 30 second timeframe from the baseline number of jumps and we can compare physiological measures of health such as waist-to-height ratio from the time of baseline to the completion of the 12-week program.

# HEALTH POLICY & MANAGEMENT

**Name:** Waqaas Bhutta

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

**Location:** Boston, MA United States

**Title:** Sports Concussion Intern

**Introduction:** Sports Concussions are an important Public Health Concern. A 2009 survey by MDPH revealed that 18% of middle and high school students reported concussion related symptoms. In 2010 MDPH issued a regulation requiring all public middle and high schools (grades 6-12) and non-public schools that are members of the Massachusetts Interscholastic Athletics Association (MIAA) to develop policies to manage sports concussions and submit annual data to MDPH. The purpose of the practicum was to improve electronic record keeping, analysis of data and updating sports concussion literature for schools.

**Methods:** The practicum involved conversion of previously submitted school forms to an Access database which would analyze past and future data. This process involved interaction with epidemiologists and statisticians to determine the optimum structure of the database. For updating sports concussion literature I utilized a rating scale based on 17 factors to determine the best policies for inclusion in the "Headstrong" manual To be distributed to schools in 2015.

**Results/Outcomes:** The database will allow for data collection from schools till 2020. MDPH staff will be able to analyze the data according to their needs and determine a variety of factors such as compliance rates and schools with highest number of concussions. Schools will also benefit from the policies in the upcoming "Headstrong" manual to establish or improve their policies and concussion management plans.

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**Name:** Hayley Browdy

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

**Location:** Boston, MA United States

**Title:** Intern at the Ashland Board of Health

**Introduction:** Since the 2000's e-cigarettes and flavored cartridges have seen exponential growth in purchase and use throughout the country. Due to this increased popularity, the FDA has proposed rules to regulate these products as tobacco, although these regulations are still under review. With this period of review comes a level of uncertainty regarding how large of a health impact these products will continue to have and what should be done to curb use. The goal of this project is to understand the debate, as well as what has been done elsewhere, to identify if a regulation is beneficial and necessary to the town of Ashland.

**Methods:** In order to understand the situation, comprehensive research was conducted using policy briefs, news articles, and information from a Boston-based lawyer. The related information was compiled into a document and sorted into categories. This was then discussed with the Health Director and Board of Health.

**Results/Outcomes:** Through the survey of materials on e-cigarettes and the question of whether or not they can be used as a cessation device or have many of the same carcinogenic effects of a regular cigarette, what was understood is that there is much ambiguity but a reason to take protective preemptive measures. Although these e-cigarettes are tobacco free, they are not nicotine free leading to probable addiction and the possibility of harmful carcinogens depending on what the e-cigarette cartridges contain. They pose a wide amount of health risks that should be addressed on the federal, state and local levels.

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**Name:** Maria Nuria Caniguer Vilá

**Practicum Site:** Genzyme Corporation

**Location:** Cambridge, MA United States

**Title:** Intern at the Global Medical Affairs department (Multiple Sclerosis Business Unit)

**Introduction:** Genzyme is a leading biotech company largely dedicated to improving the lives of multiple sclerosis (MS) patients worldwide. Evidence shows that specialized MS nurses are essential in the healthcare team caring for these patients. However, education and organization of MS nurses vary across regions and settings, and their role in Latin America (LATAM) required further understanding. As part of a broader project, the specific objectives of this practicum were to conduct a preliminary assessment of the current MS nursing landscape in LATAM, and to provide recommendations that address the issues identified.

**Methods:** A needs assessment was conducted through qualitative interviews to nurses working with MS patients in four key LATAM markets (Argentina, Brazil, Chile and Mexico). Tasks included (1) performing research to develop the interview content, (2) designing the interview questions and a short demographic survey, (3) conducting the interviews, (4) analyzing the results to inform a broader survey design, and (5) providing preliminary recommendations for the future.

**Results/Outcomes:** The four nurses interviewed (one in each country) revealed differences across LATAM regarding the current role of MS nurses, the availability of learning and training resources, and the opportunity to interact with one another. Further work to validate their answers is required. However, recommendations regarding nurse education and organization should be considered when developing a program to leverage the role of MS nurses in LATAM. This is important for the MS community because, as new MS treatments emerge, the role of the MS nurse will become more challenging.

# HEALTH POLICY & MANAGEMENT

**Name:** Haechung Chung  
**Practicum Site:** Tufts Medical Center  
**Location:** Boston, MA United States  
**Title:** Summer Intern

**Introduction:** The Center for the Evaluation of Value and Risk in Health (CEVR) belongs to the Institute for Clinical Research and Health Policy Studies at Tufts Medical Center. CEVR aims to 'analyze the benefits, risks, and costs of strategies to improve health and health care and to communicate those findings to clinicians and policy makers.' To meet its mission, CEVR maintains Cost Effectiveness Analysis (CEA) Registry which is an internationally recognized comprehensive database of cost-effectiveness analyses articles published in peer-reviewed journals. The registry is updated annually and the objective of my internship was to support updating CEA registry for studies published in 2013.

**Methods:** As a summer intern, I reviewed over 80 cost-effectiveness analyses articles published in medical journals. Within the review process, I extracted methods, ratios, and weights used in each cost-utility study. All forms were completed using Microsoft Access. Within the methods form, information such as intervention type, perspective, time horizon, and discount rate was collected. Ratios form collected QALY (quantify health gains) and sensitivity analysis related data. Lastly, weights form collected utility used to derive QALYs. After my own review, I periodically met with either veterans or fellow intern reviewers, who read the same article, to reach a consensus to decide what information should be entered into the database.

**Results/Outcomes:** The CEA registry will now contain consensus articles that I reviewed over the summer. These articles will contribute to enhancing policy makers' understanding of the value of health care interventions.

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**Name:** Timothy Cleary  
**Practicum Site:** Partners HealthCare  
**Location:** Boston, MA United States  
**Title:** Corporate Revenue Integrity Intern

**Introduction:** Partners Healthcare is the largest healthcare system in the state of Massachusetts, owning several hospitals in the Boston area. I worked in the Revenue Cycle Operations department, which has many functions, but in summary, it financially tracks what happens once a patient account is open until when a patient account is closed. My particular team, the Charge Capture team, is responsible for maintaining proper coding methods and ensuring that system workflows are working as expected.

**Methods:** I worked on several projects with the charge capture team which include: 1.) Ensuring a smooth transition from legacy systems to Epic, 2.) building out physician tabs which streamlines physician charge input and 3.) an alternative coding analysis. Project number 3 consisted of conducting an internal audit of payer particular codes dependant on patient procedure.

**Results/Outcomes:** Project 1.) This was largely successful as I was able to develop a document which pinpointed problems by location, department and CPT code used. We were able to save revenue and successfully turn off legacy systems within a two week time frame. Project 2.) I was able to create a document that mapped each new Epic department with its appropriate legacy department, which resulted in every physician across the 96 ambulatory departments to receive the correct tabs. Project 3.) Lastly, after conducting an internal audit on alternate codes, I was able to identify what codes needed to be considered for pricing justification based on the inputs, variance and type of insurance.

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**Name:** Elizabeth Davis  
**Practicum Site:** Dorchester House Multi-Service Center  
**Location:** Boston, MA United States  
**Title:** Strategies to help patients sustain behavior change

**Introduction:** Dorchester House Multi-Service Center is a Federally Qualified Health Center in Dorchester whose mission is to help the community achieve the highest levels of health, well-being, and quality of life. Many patients have made healthy behavior changes through intensive programs like the high-risk diabetes group. However, these positive changes often disappear when the patient leaves the intensive stage of the intervention. Goal of the research and suggest recommendation for Dorchester House to improve practices that support patients in sustaining healthy behavior changes after they graduate from the intensive high-risk diabetes intervention.

**Methods:** Observed practices to identify how patients are currently being engaged and supported in behavior change, and interviewed staff to understand current practices and challenges in supporting behavior change. Conducted a literature review of behavior change and diabetes that focused on effective practices for making behavior change sustainable after an intensive intervention. Compile research and observations into recommendations for practice changes and presented them to clinical staff.

**Results/Outcomes:** The final deliverables for this project were a literature review including recommendations and best practices for encouraging patients to sustain behavior change. In addition, concrete recommendations were provided to improve long term results for the high-risk diabetes intervention and better support of patients which were presented to clinical staff. The research has provided the high-risk diabetes team with evidence and recommendations to strengthen long-term health behavior change for patients struggling with type 2 diabetes.

# HEALTH POLICY & MANAGEMENT

**Name:** Jeannie Do

**Practicum Site:** CHNA 20, Blue Hills Community Health Alliance

**Location:** Quincy, MA United States

**Title:** Boards of Health Collaboration Project

**Introduction:** CHNA 20, represents 13 towns south of Boston and strives to improve the overall health of local residents through increased coordination and delivery of services and the mobilization of community resources. During my practicum, I helped develop the Boards of Health Collaboration Project. The goals were to strengthen the capacity and increase collaboration between of Boards of Health (BoH) to address shared needs related to chronic disease and wellness.

**Methods:** Working closely with the CHNA 20 Community Health Specialist, we developed a project plan for the Boards of Health Collaboration Project. We divided the 13 towns into 4 groups, considering demographics and health trends, and conducted focus groups to identify a shared community health need. My activities included identifying appropriate contacts for Chairs of BoH and Public Health Nurses, creating a focus group guide, co-facilitating focus groups, and providing support for each group's program development.

**Results/Outcomes:** We were able to connect with 12 of the 13 towns for this project. An immediate outcome included the strengthened relationships among BoHs since it was the first meeting of its kind for some leaders. At the end of this practicum, we will have drafted a RFA for each group to apply for funds. By the end of this project, each group would have their own collaborative project idea and TA support for program development. Each group will potentially have funds from CHNA 20 to implement the project, address a community health need, and continue to share resources after the project ends.

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**Name:** Deepa Ganesh

**Practicum Site:** Beth Israel Deaconess Medical Center

**Location:** Boston, MA United States

**Title:** To understand Patient-Centered rounding process to build high-quality care through improved teamwork

**Introduction:** Farr 7, an internal medicine unit at Beth Israel Deaconess Medical Center, is unique in that it understands and tests the 'pilot' process of patient-centered bedside rounding. Unlike traditional rounding, this patient-centered model involves the coordination of the patient nurse, attending physician, the resident, and 2 sub-interns. The data that was captured was then compared with the data from traditional rounding process. Working with a small quality improvement team, I focused my practicum on understanding how the pilot project utilizes lean methods to improve patient quality of care and at the same time reduce wastes and inefficiencies i.e. time of ordering/signing medication, completing patient summary, and the frequency of pages/phone calls during rounding.

**Methods:** As a quality improvement intern, I worked directly with the Farr 7 staff to improve rounding efficiency and overall patient experience. My tasks included: (1) direct observation of both the patient-centered and traditional rounding process; (2) data collection/entry on the rounding process including workflow interruption; (3) identification of challenges that exist in the pilot process and a means to standardize it; and (4) conducting interviews to understand patient experience of the pilot process.

**Results/Outcomes:** The results show that in the pilot process: (1) there is a 15% decrease in the distribution of time spent rounding on each patient with average time at 16.22 minutes and 19.07 minutes respectfully (2) 55% increase in the time spent with the patient in the room with average time at 11.42 minutes and 5.15 minutes respectfully (3) an increase in patient satisfaction.

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**Name:** Ammar Haffar

**Practicum Site:** Charleston Area Medical Center Women and Children's Hospital

**Location:** Charleston, WV United States

**Title:** Improving Compliance and Understanding of the Asthma Home Management Plan

**Introduction:** Since the initiation of the Children's Asthma Care core measures, hospitals have struggled to achieve 90% rate of compliance with the asthma Home Management Plan (HMP). An appropriate and practical asthma HMP is a very important step in the care of asthma in children. The lack of such a plan leads to increased ER visits, readmissions, and avoidable costs as well as instability in the health of patients. The Women's and Children's Hospital pediatric department started a Quality Improvement project in 2012 with the aim of increasing compliance of physicians to the asthma HMP. Our goal is to determine the areas that the medical team is deficient in, so we can achieve progress towards our goal of 100% compliance.

**Methods:** We analyzed patient charts from the past 6 months to look at the asthma HMP documents and their completion. We identified the most common omissions from these plans and interviewed patients for their feedback. We also examined the percentage of readmissions and whether they show a trend with respect to progress in the implementation of asthma HMPs

**Results/Outcomes:** After analyzing the patient data we found that 61.5% of the asthma HMPs were complete in the past 6 months. We combined the data from past cycles into a U-chart to document progress since our 39% baseline. The guardians we were able to reach remarked that the asthma HMP has helped them manage their child's care more effectively. Only 10% of patients were readmitted within this period.

# HEALTH POLICY & MANAGEMENT

**Name:** Brittany Hudson  
**Practicum Site:** Mercy Medical Center  
**Location:** Fort Smith, AR United States  
**Title:** Intern

**Introduction:** The Human Resource Department is responsible for the overall administration and management of the human resource function in concert with the mission and standards of Mercy Medical Center. The ultimate purpose of the department is to assist the hospital leaders in identifying and recruiting/retaining an adequate number and mix of competent staff to meet the needs of the patients served. Though many steps are involved throughout the process, the project objective was to hire as many staff and nurses as possible. Mercy is expanding and the new facilities needed to be fully staffed.

**Methods:** In order to provide the department managers of the hospital with highly qualified and skilled applicants; I reviewed applications, screened applicants, verified information, interviewed applicants and made decisions on whether or not to send them to the department manager for further interviewing. If they did not meet my approval, their process would go no further and they would be sent a rejection letter. I was also responsible for all marketing activities leading up to a hiring event to be held in September. My duties included working with various media outlets to spread the word of open positions.

**Results/Outcomes:** The number of weekly applicants steadily increased as well as the number of interviewers hired. More applications have been viewed daily and more interview appointments were met throughout the day. Nurses were more willing to relocate with guaranteed job security. And former employees were returning. Department managers received quality candidates to interview so less time was wasted on unqualified individuals.

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**Name:** Madeleine Kuhn  
**Practicum Site:** Health Policy Commission  
**Location:** Boston, MA United States  
**Title:** System Performance and Strategic Investment Intern

**Introduction:** While at the HPC I focused on the Registration of Provider Organizations (RPO) Program project. This program is meant to increase transparency in the healthcare market by mapping out how different healthcare providers interact within the healthcare market. In order to successfully implement this project, my team was tasked with creating a platform to collect specific information regarding who each provider organization owns, negotiates, represents, or otherwise act on behalf of in establishing contracts for when paying for Health Care Services with Carriers or Third Party Administrators.

**Methods:** In order to implement the RPO project I collaborated in the designing of an internal website for organizing the information collected from provider organizations. Secondly, I participated in creating a registration flowchart to visualize how the specific organizations identified in the regulation would register depending on how they interact with other registering organizations. Lastly, I helped design protocols to layout the steps for each process in the RPO system.

**Results/Outcomes:** The goal of the internal website was to help the team easily sort each application, flag missing information from each provider and help the team analyze the information to see how provider organizations interact with each other. The flowchart project helped HPC determine how each unique organization would register and what materials they would need to submit to be considered a compliant Provider Organization. The protocols were created to ensure that each process of the system from reviewing an application to answering a Provider Organization's question were uniform.

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**Name:** Sarah Matousek  
**Practicum Site:** Elder Services of the Merrimack Valley  
**Location:** Lawrence, MA United States  
**Title:** Community Care Transitions Program Intern

**Introduction:** The Community-based Care Transitions Program (CCTP) was created by the Affordable Care Act to improve the transition from the hospital to other care sites and reduce readmissions for Medicare recipients. The program includes a team that identifies program candidates in the hospital, visits patients at home after discharge, and makes calls to check in. These interactions aim to identify problems that may result in a readmission, such as medication discrepancies or lack of social services. Since the program began, a significant reduction in hospital readmission rates has been shown for this population. The purpose of the practicum was to analyze data from the CCTP program and identify disease diagnoses associated with frequent admissions.

**Methods:** The CCTP database included all hospital admissions for clients in the program from February 2012 – February 2013. A separate database included client diagnostic information. Because the database included over 7,000 admissions for 5,000 patients, pivot charts were used to assess several parameters, such as number of admissions per client and hospital-specific statistics. Based on this information, 147 clients with four or more admissions in the past year were further analyzed for disease diagnosis.

**Results/Outcomes:** The results of the study indicated that 147 clients were responsible for over 800 hospital admissions. Nearly 70% of these patients had a diagnosis of hypertension and 50% had heart failure. The majority had three or more comorbid conditions. Seven diagnoses were common in this population, indicating that clients with these illnesses may require more careful follow-up after discharge.

# HEALTH POLICY & MANAGEMENT

**Name:** Marissa Mihos

**Practicum Site:** BAMSI

**Location:** Brockton, MA United States

**Title:** Self Designed Practicum - Non Profit Industry Overview and Quality Management Consultant

**Introduction:** This self-designed practicum served as an introduction to the non-profit industry while mainly focusing on Quality Management and how to compute various metrics and present the findings to the executive team.

**Methods:** Working with the VP of Quality Management, I am mainly responsible for completing tasks related to the CARF accreditation. Responsibilities include generating and analyzing satisfaction survey results from all of BAMSI's service areas, reaching out to Program Directors if there is an issue with their surveys, using Access to pull data necessary to compute quality metrics such as Person Served Attendance rates and Rate of Program Objective Completion, acting as editor for the annual Quality Management Report, and working with Finance and Operations team to retrieve and analyze necessary data. Other responsibilities unrelated to Quality Management, include interviewing members of the executive team to gain a baseline understanding of the nonprofit industry and conducting a SWOT analysis in a BAMSI Residential Home.

**Results/Outcomes:** It is important to have the quality metrics presented to the executive team in a timely manner as all departments of the organization play a role in the quality outcomes. By having a completed Quality Management Report, the executive team can plan the best course of action to address areas in which the organization is falling behind. The CARF accreditation process is important to a human services organization like BAMSI. It is a symbol of the organizations efforts to improve efficiency, fiscal health and service delivery.

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**Name:** Dimple Mirchandani

**Practicum Site:** RGI Informatics, LLC

**Location:** Boston, MA United States

**Title:** Summer Intern at RGI Informatics, LLC

**Introduction:** RGI Informatics, LLC helps clinicians to review big healthcare data analytics with an interface to boost hospital performance, expedite reports, assist in cutting-edge medical research, and track patient progress. The Veteran's Health Administration began contracting with RGI's Healthcare Analytics Solution with 18 of the VA's 21 regional networks. The VA uses the RGI web platform to analyze ICU and OR patient data. As an intern, I provide the RGI team access to the VA's healthcare data in order to enhance integrated patient care, reduce medical errors, trace risks and outcomes, and improve coordination of care.

**Methods:** I manage the new hire employment and the government regulatory process for security clearance for employees. I also assist the accounting department to record expenses, inventory, reimbursements, and create reports. I contribute to strategic planning across departments by assisting in events such as the company conference, company dinner, and client meetings. I am able to network with senior management and contribute to the company's overall mission and vision to transform healthcare. Further, I participate in business development meetings and efficiently manage the flow of information across all channels within the company.

**Results/Outcomes:** I understand the importance of qualitative and quantitative data, providing patient care, complying with governmental policies, and collaborating on accounting, finance, and business development reports. By working at RGI, I am able to help deliver better care and drive better results for patients and healthcare leaders through innovative information technology analytics solutions.

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**Name:** Mark Nazal

**Practicum Site:** Massachusetts General Hospital

**Location:** Boston, MA United States

**Title:** Administrative Intern - Staffing Optimization of Central Sterile Processing & Supply (CSPS) Department

**Introduction:** Massachusetts General Hospital (MGH) is the original and largest teaching hospital of the Harvard Medical School. MGH has been delivering standard-setting, world-class medical care, research, and education since 1811. CSPS is the backbone that allows MGH to perform 37,000 surgical operations and attend to 1.6 million patient visits. CSPS is responsible for cleaning, sterilizing, organizing, packaging, and distributing instrumentation and materials for the 70 operating rooms and 73 procedural clinics. The department employs 200+ staff and is a multifaceted 24/7 operation.

**Methods:** One of the projects I was tasked with as an Administrative Intern was developing an advanced, dynamic staffing model to pinpoint opportunities to make workforce levels and deployment congruent with the system workload. Initially, we conducted informational interviews with 30+ staff members to learn more about challenges and opportunities. The next step was creating a detailed organizational chart of the 200+ staff across multiple role groups and functions. We proceeded by combining current-state staffing information with the organizational chart to construct a detailed model of the staff levels per hour for each role group. Finally, we compared workload levels to the staffing model, culminating in implementation advisement of multi-phased staff scheduling modifications to achieve higher efficiency.

**Results/Outcomes:** I developed a strategic, high-impact staffing program which will lead to a higher performing CSPS. The implementation advisement was very positively received by both Perioperative and CSPS leadership. I will closely monitor program implementation to ensure prospective results. Overall, I developed competencies in hospital administration, leadership, and change management.

# HEALTH POLICY & MANAGEMENT

**Name:** Jennifer Ondreyka  
**Practicum Site:** University of Michigan Medical School  
**Location:** Ann Arbor, MI United States  
**Title:** Administrative Intern

**Introduction:** As an administrative intern at the University of Michigan Medical School (UMMS), I worked alongside leadership on various projects including medical education reform, quality improvement, and risk management. UMMS was recently awarded an AMA grant to transform medical student education to be more responsive to the needs of a rapidly changing health care landscape. In order to deliver effective care, physicians must now consider the broader picture of systems of care and systems-based practice, not only the needs of the individual patient. As part of my practicum, I worked with the Curriculum Strategic Planning group to incorporate systems-thinking competencies into the curriculum at UMMS.

**Methods:** For overall project guidance I helped to create an A3 and Gantt chart. As part of my analysis, I conducted a literature review and interviewed various stakeholders in medical education at UMMS to obtain the “Voice of the Customer” and assess the gaps in the current curriculum.

**Results/Outcomes:** Gained buy-in from stakeholders by involving them in curriculum strategic planning decisions and also primed them for “systems-thinking” implementation. Interviews revealed no formal systems-thinking training in curriculum. Responses will help shape the “Vision of the Graduate” and systems-thinking competencies to be included in the new curriculum. This will better prepare physicians to be involved in interdisciplinary management teams concerned with quality improvement.

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**Name:** Glendaly Pena Soto  
**Practicum Site:** Lynn Community Health Center  
**Location:** Lynn, MA United States  
**Title:** Quality Improvement Intern

**Introduction:** The LCHC is a non-profit, multicultural, community health center. They are recognized as a leader in developing new initiatives that result in high-impact, low cost health care. Their mission is to provide comprehensive health care to everyone in the community, regardless of ability to pay. In January 2014, the City of Lynn was awarded a grant through the Prevention and Wellness Trust Fund (PWTF). This Trust supports community-based partnerships including municipalities, healthcare systems, businesses, regional planning organizations, and schools.

**Methods:** In partnership with The City of Lynn and other organizations, the LCHC identified a high-need population in Lynn and have selected health conditions that align with the needs of their community. The partnership selected all four of the Prevention and Wellness Trust’s priority health conditions: tobacco use, hypertension, pediatric asthma, and elderly falls. My role was to assist in creating processes and strategies to reduce rates of the state’s most costly preventable health conditions, reduce health disparities, increase healthy behaviors, increase the adoption of workplace-based wellness programs, and develop a stronger evidence-base of effective prevention programs. Along with the PWTF Initiative, they were also working on other initiatives which had numerous amounts of core quality measures (CQM) in common as the PWTF. A crosswalk was created to illustrate the similar CQM’s.

**Results/Outcomes:** The LCHC along with other community partners launched strong policy-oriented initiatives and implement clinical and community based interventions. The intervention strategies are currently ongoing and are estimated for implementation in fall 2014.

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**Name:** Michael Phillips  
**Practicum Site:** Center for Medicare & Medicaid Services  
**Location:** Boston, MA United States  
**Title:** Summer Pathways Internship at the Centers for Medicare and Medicaid Services

**Introduction:** The Office of the CMS Regional Administrator for Regions I & II is tasked with the promotion of Medicare, Medicaid and Health Care Marketplace related programs and policies through the six New England States (Region I), and New York, New Jersey, Puerto Rico and the U.S. Virgin Islands (Region II). To assist these efforts, I worked directly with CMS administrators in the Boston Regional Office to compile media contacts and construct briefing books that are used as a reference point for public outreach and education programs.

**Methods:** Using aggregate data provided by CMS, I constructed Medicare enrollment reports for New England (CMS Region I) stratified by Part (A, B, C & D), state and county. Further, I compiled state-level Affordable Care Act data to create brief summaries, highlighting Health Insurance Marketplace enrollment, policies, and financial grants. The data was collated and stored electronically with other state-specific information to be used for future outreach and education events. Media lists for CMS Region II were assembled using publically available contact information for Newspapers, TV news outlets, and radio stations.

**Results/Outcomes:** The briefing books have enabled the Regional Administrator’s external affairs team to better prepare for outreach and education events. The state-specific data and enrollment reports are detailed, but concise, and can be used guide conversation and highlight areas of focus at public outreach and education events.

# HEALTH POLICY & MANAGEMENT

**Name:** Elizabeth Reidy  
**Practicum Site:** Massachusetts Health Policy Commission  
**Location:** Boston, MA United States  
**Title:** Intern, System Performance and Strategic Investment

**Introduction:** The Massachusetts Health Policy Commission (HPC) is an independent state agency that monitors the reform of the health care delivery and payment systems in Massachusetts and develops health policy to reduce overall cost growth while improving the quality of patient care. M.G.L. c. 6D § 11 directs HPC to develop and administer a registration program for certain Provider Organizations to submit information on their organizational and operational structure and governance. These new requirements reflect the changing nature of the healthcare landscape both in Massachusetts and nationally. As care is increasingly provided through large systems, there is need for increased insight into these provider organizations. The Registration of Provider Organizations Program (RPO) creates the reporting structure and a first-in-the-nation provider database necessary to capture ongoing changes in the health care market. It is designed to increase transparency of provider structure and performance.

**Methods:** 1.) Development and release of key program documents, including a Data Submission Manual and an Informational Memo; 2.) Draft language for the RPO website and other stakeholder communication; 3.) Development of presentations and trainings for stakeholder groups; 4.) Development of protocols to direct ongoing program operations; and 5.) Creation of diagrams and flowcharts to assist in communicating program rules.

**Results/Outcomes:** The RPO program is ongoing and data collected will be used to inform policy development. The deliverables listed above support program principles, including the development of a streamlined process that prioritizes administrative simplification and balancing the importance of collecting data elements with the potential burden to Provider Organizations.

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**Name:** Melinda Rossi  
**Practicum Site:** Health Care for All  
**Location:** Boston, MA United States  
**Title:** Health Policy Intern

**Introduction:** Health Care For All (HCFA) is the leading Massachusetts consumer health care advocacy organization. HCFA organizes and coordinates multiple campaigns designed to influence State House action on budget items or legislation. Their campaigns expand access to quality, affordable health care with a focus on health reform implementation, system delivery reform, oral health, children's health, quality and cost, MassHealth, private health coverage, and prescription drug policies.

**Methods:** The practicum included writing a recommendation paper on integrating oral health into Accountable Care Organizations (ACOs). ACO policies from other states, particularly Medicaid ACOs, were analyzed to see what they have done to incorporate oral health in ACOs. Based on these findings, recommendations were drafted for Massachusetts on why and how to integrate oral health in the states' developing Massachusetts ACO certification program.

**Results/Outcomes:** While commercial ACOs are generally not regulated by the state and Medicare ACOs do not cover dental benefits, there are good examples of oral health integration in Medicaid ACOs. Out of 9 states with Medicaid ACOs, 5 required some oral health provisions. These ranged from full integration, where ACOs are responsible for providing and paying for all dental services, to ACOs only encouraged to partner with dentists. Based on lessons from other states, recommendations were written on how to integrate oral health into the new Massachusetts ACO certification program. These recommendations will help HCFA further their advocacy work on oral health - to expand access, improve quality and raise awareness on the importance of oral health.

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**Name:** Katherine Sullivan  
**Practicum Site:** Boston University, Sargent College  
**Location:** Boston, MA United States  
**Title:** Data Management Assistant

**Introduction:** The primary outcome of the Boost study is to determine an effective approach to enhance exercise adherence. Routine strength training is important in this population. Building strong muscles protects the joints as well as potentially helping with weight loss; pain and disability are reduced. The Boost study is a randomized clinical trial to determine if an automated telephone counseling system (TLC) improves adherence to strength training for people with knee osteoarthritis. A secondary outcome is to document the precision of the various instruments used to measure disease progression.

**Methods:** The primary outcome of the study is that TLC improves motivation to exercise. The outcome is measured by several standardized instruments (WOMAC, OA CAT, and PROMIS) resulting in numerical data. Clinical visits of participants and TLC provided opportunities for data collection. Data collected from the visits and TLC were merged into one data set and were cleaned. A data dictionary was created listing and defining all variables. Summary statistics were calculated using statistical analysis tools available in Excel and JMP.

**Results/Outcomes:** Processing of data will be used to draw conclusions regarding the use of TLC and the sensitivity of the instruments used to assess pain and disability in the population of adults with knee osteoarthritis. The implications of TLC, if it is found to motivate patients, is that it can be a useful tool to assist with adherence to exercise, since it can reach a broad patient panel for low cost. In addition, choosing a sensitive measurement instrument will provide important information about disease progression will reduce cost.



# MATERNAL & CHILD HEALTH

**Name:** Marcela Abufhele Milad

**Practicum Site:** Boston Medical Center

**Location:** Boston, MA United States

**Title:** Research Assistant for the RCT: Reducing Disparities in Timely Autism Diagnosis through Family Navigation

**Introduction:** Reducing Disparities in Timely Autism Diagnosis through Family Navigation is a pilot randomized controlled trial (RCT), aiming to assess a novel application of the Patient Navigation principle to support families of low-income and minority children navigate the complex network of autism services by helping families ensure a timely autism diagnosis, when the prognosis of a child may be significantly impacted. As part of the research team, I conducted all data analysis of the main process and outcome measures and reported study results.

**Methods:** In agreement with the Principal Investigator (PI), I conducted several tasks: (1) extracted data from 86 eligible subjects that were not enrolled, (2) performed statistical analysis of that sample in order to obtain empirical estimates of process parameters to help inform a full-scale RCT, (3) conducted the statistical analysis of the RCT's main outcomes and, (4) summarized study results in a manuscript. Statistical analyses were performed using SAS® 9.3 software.

**Results/Outcomes:** First, I reported descriptive statistics of process parameters required for a subsequent study, including: demographic characteristics, timeliness and completion of diagnostic process and proportion who completed the process. Second, I reported the main outcome results of the RCT including randomization results and statistical analysis of the differences between study arms regarding all outcome measures: completion of diagnostic process, time-to-diagnosis, parental stress, and satisfaction with the process as well as correlation over time of each outcome at baseline and follow-up. Last, I submitted a draft manuscript of the RCT results for publication on a medical journal.

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**Name:** Justine Achille

**Practicum Site:** Boston Medical Center

**Location:** Boston, MA United States

**Title:** Adolescent Resource Center Internship

**Introduction:** Boston Medical Center sought to expand upon their current pediatric wellness center (The bWell Center) in an effort to provide comprehensive wellness and health education materials for their adolescent patients. Adolescents have unique health needs that revolve around their physical and emotional developmental changes as well as their newfound autonomy and individuality. The goal of this practicum was to create the foundation for an Adolescent Resource Center (ARC) within the Adolescent Clinic at Boston Medical Center.

**Methods:** First, Adolescent Team providers were gathered and informally interviewed to determine their needs and vision for the ARC. Second, adolescent patients were surveyed to determine the type of information they would like to access in the future ARC. Next, an extensive internet search was conducted to identify local and on-line resources appropriate for the adolescent patients. Finally, a search of scientific literature was conducted to further investigate the needs and desires of adolescents concerning the communication of health information.

**Results/Outcomes:** The completion of this practicum has led to the development of: 1) a database of adolescent survey responses concerning teen health interests and concerns; 2) an Adolescent Resource Binder of local and internet resources on health topics including (but not limited to) nutrition, alcohol/drug recovery, employment opportunities, and violence recovery; 3) a collection of multi-media visual resources including PSAs and infographics for future display in waiting room; 4) a proposal for the future direction of the ARC and how it can meet the needs of adolescents.

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**Name:** Lameya Ahmed

**Practicum Site:** Muslim American Society (Islamic Society of Boston Cultural Center)

**Location:** Roxbury, MA United States

**Title:** Deen14 Youth Director at the Islamic Society of Boston Cultural Center

**Introduction:** As one of the most diverse Islamic Centers in the United States, the Islamic Society of Boston Cultural Center is a mosque and cultural center that serves the spiritual, emotional and social needs of over 2,000 people weekly. The Deen14 Program is an initiative by the ISBCC to create a safe space for American Muslim teenagers in the greater Boston area. American Muslim teenagers face stigmatization for their faith in addition to being a special high risk population for mental, physical, and psychological health issues as teenagers. Deen14 is a dynamic youth program that aims to empower the youth by engaging them in fun and exciting social, educational and spiritual activities. All activities, including focused religious discussions, youth retreats, creativity workshops, and community service activities seek to promote positive role modeling and community building.

**Methods:** As Youth Director I worked closely with the ISBCC staff and volunteers to design, execute, and evaluate Deen14 events from May through August. In addition to program management, volunteer coordination, I facilitated strategic planning meetings to ensure long term development and sustainability of the Deen14 program.

**Results/Outcomes:** During my time as Youth Director I coordinated volunteer efforts to design and execute an entire month of Ramadan events as a part of ISBCC Hungry Hearts programming, which develops resilience and the self-confidence to negotiate stigma. I also worked with the Deen14 leadership team to build the ground work to strengthen and sustain the ISBCC youth support program so it will continue throughout the year beyond Ramadan.

# MATERNAL & CHILD HEALTH

**Name:** Ariela Braverman Bronstein

**Practicum Site:** Infant and Adolescent Cancer Prevention Agency

**Location:** Mexico City, Mexico

**Title:** Consultant at the Infant and Adolescent Cancer Prevention National Center in Mexico.

**Introduction:** The mortality rate of childhood cancer in Mexico is 5 per 100,000 children and 75% of the cases are diagnosed in late stages of the disease. In 2008 the Ministry of Health in Mexico created the National Council for Childhood Cancer Prevention and Treatment as a branch of the National Health Center for the Child and Adolescent, and they are responsible to develop and implement the National Program for Childhood Cancer Early Detection and Treatment. The purpose of this practicum was to perform an external evaluation of the program's design and develop an evaluation and process-monitoring plan for the program

**Methods:** First I reviewed the program and its alignment with federal and state regulations and objectives specifically on childhood cancer. Then using the data from the National Institute of Epidemiology I made a descriptive analysis of the target population by calculating mortality rates and death frequencies due to cancer by health insurance and sex. With the published information about the program's impact since 2008, and talking to other people involved in the project I developed an evaluation and process-monitoring plan for the program and recommended some changes in the implementation.

**Results/Outcomes:** An evaluation and process-monitoring plan was established to keep track of the program's progress and make decisions about future changes. Some of the other recommendations will be presented to other authorities of the program.

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**Name:** Anna Briccetti

**Practicum Site:** Planned Parenthood League of Massachusetts

**Location:** Boston, MA United States

**Title:** Leading the Counseling and Referral Hotline Training

**Introduction:** The Counseling and Referral Hotline at Planned Parenthood League of Massachusetts is a confidential hotline staffed by volunteers who can answer questions about birth control, pregnancy options, sexually transmitted infections, and general reproductive health. The hotline also aims to destigmatize abortion by explaining procedures and listening to people's concerns. Each year new volunteers are recruited, interviewed and trained to join the hotline. The training is a 42 hour comprehensive sexual education course. This year I helped to lead the training which had not been updated since 2009. The curriculum lacked information on the latest types of emergency contraception options and effectiveness, and lacked in depth human papillomavirus and herpes simplex virus facts and talking points.

**Methods:** A large portion of my work was to update the training to include more relevant and accurate information and integrate this information into the curriculum. I went through past documents handed out for each subject and updated each one. Most of these documents came from resources such as Planned Parenthood, CDC, and Guttmacher Institute. I also contacted several partner organizations (Adoptions with Love, Eastern Massachusetts Abortion Fund, Judicial Bypass Lawyers) to come in as guest speakers.

**Results/Outcomes:** By the end of July, all volunteers will be fully trained and answering calls. The new curriculum was taught to eight new volunteers and the updated information was distributed to all current volunteers (approximately 60 people). With the most up-to-date reproductive health information the hotline will help improve Planned Parenthood's patient satisfaction.

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**Name:** Rachel Brown

**Practicum Site:** Firefly Yoga International

**Location:** Boston, MA United States

**Title:** Program Assistant

**Introduction:** Trauma-informed yoga is a style of yoga that is designed to help survivors of trauma reconnect with their bodies and assist with the healing process. Firefly Yoga International (FYI) is a new non-profit organization that will be piloting trauma-informed yoga programs in fall 2014 in the Boston metro area and El Dorado County, CA. FYI's programs are designed for survivors of sexual and domestic violence, and people living with HIV and other STIs.

**Methods:** My main priorities were fundraising, research, and material development. I compiled information on corporate sponsorships, grant opportunities, and potential partner sites; expanded the FYI literature review; researched social service agencies in Boston and Central California and compiled the information into resource binders for FYI teachers; and conducted targeted research in preparation for outreach visits to potential partner sites in Minnesota.

**Results/Outcomes:** FYI will be conducting pilot programs in Massachusetts and California beginning in the fall. The organization expects to expand to a third state, Minnesota, in 2015, as well as expand their population focus to include veterans.

# MATERNAL & CHILD HEALTH

**Name:** Stephanie Curreri  
**Practicum Site:** Dana Farber Cancer Institute  
**Location:** Boston, MA United States  
**Title:** Research Assistant

**Introduction:** The Sexual Health Program at the Dana-Farber Cancer Institute provides services for those coping with the effects of cancer diagnosis and treatment. The Program offers education and counseling about the ways in which cancer may affect sexuality and sexual health for men, women, individuals, and couples. The clinicians working with the Sexual Health Program include a psychologist, gynecologist, urologist, adult endocrinologist, reproductive endocrinologist, and fertility expert.

**Methods:** As a Research Assistant for the Sexual Health Program, I conducted research on the effects of specific cancer diagnoses and treatments on sexuality and assisted in developing various educational tools for clinicians to use when counseling patients with regards to their sexual health. I also assisted in developing a lengthy questionnaire for all new patients in the Sexual Health Program.

**Results/Outcomes:** The educational tools and materials developed as part of this Practicum will be used in a clinical setting to counsel patients specifically with regards to erectile dysfunction and vaginal dryness following cancer treatment. The questionnaire will be used in an IRB-approved study to track demographic and symptomatic data of all new patients in the Sexual Health Program. These tools will be used to more efficiently streamline patients' sexual health care and, eventually, to more directly incorporate medical oncologists at the Dana-Farber Cancer Institute in the sexual health care of patients receiving cancer treatment.

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**Name:** Kelley Devlin  
**Practicum Site:** Massachusetts Breastfeeding Coalition  
**Location:** Weston, MA United States  
**Title:** Communications and Market Research Intern

**Introduction:** The Massachusetts Breastfeeding Coalition is a non-profit organization whose mission is "to improve public health by transforming our culture: making breastfeeding the norm through education, advocacy, and collaboration." I worked alongside a team of volunteers within the Coalition (including mothers, doctors, lactation consultants, public health practitioners and students) to help design a print media campaign with the goal of increasing the consistently low rates of breastfeeding among non-immigrant African American women.

**Methods:** Prior to beginning the design phase of the ad campaign, I helped perform a literature review on breastfeeding attitudes in our target population. The team used this information to decide on effective images and messages to use in the ads and I participated in group brainstorming sessions to help plan the first round of ads. I designed an online survey that was shared over social media to get feedback to improve our images and messages for the second round of ads.

**Results/Outcomes:** The team used the information gained from the online survey to plan a second photo shoot and design a second set of ads. I will test these ads in another online survey and we will choose the most well-received ads as our final products. The Massachusetts Breastfeeding Coalition hopes to promote these ads to be used in breastfeeding promotion campaigns nationally.

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**Name:** Samantha Fox  
**Practicum Site:** Boston Area Rape Crisis Center  
**Location:** Boston, MA United States  
**Title:** Youth Programs Intern

**Introduction:** The Boston Area Rape Crisis Center (BARCC) is a non-profit organization working to end sexual violence through healing and social change. The purpose of this practicum was to assist in the preparatory research and preliminary implementation of the new Youth Access to Support and Services (YASS) grant from the Attorney General's Office. This grant funded the expansion of BARCC's youth services in order to better support young survivors' mental health and prevent the sequela of adverse outcomes stemming from sexual trauma.

**Methods:** I am working with the Youth Programs division to: 1. Increase youth accessibility at RCCs 2. Develop curriculum for youth serving organization trainings and for a new Youth Advisory Board 3. Conduct a needs assessment for the BARCC Hotline staff's ability to support youth callers 4. Facilitate sexual violence prevention workshops for young people in Boston.

**Results/Outcomes:** Upon implementation of the YASS grant, my work will have contributed to the structure and curriculum of the Youth Advisory Board, the creation of a more youth friendly environment and youth accessible services at BARCC, and the spread of sexual violence prevention knowledge among young people aged 14-21 in the greater Boston area. Throughout its grant life, YASS will promote healing, mental health stability, and resiliency for young survivors of sexual violence, and it will empower youth to create a culture of sexual violence prevention moving forward.

# MATERNAL & CHILD HEALTH

**Name:** Alexander Friedman  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA United States  
**Title:** Research Assistant - Project LAUNCH

**Introduction:** Project LAUNCH (Linking Actions for Unmet Needs in Children's Health) is a multisite component of the Partnership for Early Childhood Mental Health, sponsored by the BPHC (Boston Public Health Commission) and SAMHSA (Substance Abuse and Mental Health Services Association). The purpose of LAUNCH is to increase high-risk families' access to developmental screenings and services for their young children aged zero to eight. In addition to providing these families with developmental assessments, LAUNCH also aims to expand the use of family-centered and culturally relevant wellness practices in early childhood settings.

**Methods:** I constructed a comprehensive database to record LAUNCH sample characteristics and intervention outcomes from multiple smaller databases. I also helped LAUNCH's Family Partner (FP) by administering and analyzing developmental screenings, as well by working with families to secure their child's concrete needs, such as clothing or furniture. Additionally, I utilized the "Maintenance" component of the RE-AIM framework by preparing the LAUNCH site for the end of the funding, which includes communicating with families about future steps they should take, securing old files, and reducing the degree to which new families are brought into the study.

**Results/Outcomes:** At the conclusion of this practicum, I will have completed all developmental assessments for LAUNCH families, helped the FP prepare all LAUNCH families for the Project's conclusion, prepared the Project's raw data for dissemination to other researchers through BPHC and SAMHSA, and destroyed sensitive information per protocol. From this, I have learned the importance of putting families first when promoting wellness in a clinical setting.

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**Name:** Ashley Gavin  
**Practicum Site:** Department of Public Health and Sustainable Development  
**Location:** Bucaramanga, Colombia  
**Title:** Intern at the Department of Public Health and Sustainable Development

**Introduction:** In Bucaramanga nearly 20 out of every 100 births are to women under 20 years of age. The purpose of this practicum was to investigate causes and factors contributing to the high teen pregnancy rate. The first step was a pilot survey of teen mothers conducted in May 2014 by the Sexual and Reproductive Health team.

**Methods:** I created a database and analyzed the pilot survey findings and prepared a report for the Secretary of Health. Based on the findings, a review of the literature, and information gathered in focus groups run by a local university I designed a more extensive survey. The survey questions correspond to known risk factors associated with teen pregnancy to assess a selected portion of the teen population. Surveys were collected from over 500 adolescents ages 11 to 19 in schools and health clinics around the city.

**Results/Outcomes:** Once all the surveys have been collected by mid-August, I will analyze the results and prepare a report for the Secretary of Health. The report will be used while developing interventions aimed at reducing the rate of teen pregnancy.

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**Name:** Amanda Houser  
**Practicum Site:** The Small Things, Inc.  
**Location:** East Haven, CT United States  
**Title:** Outreach Intern

**Introduction:** As an outreach intern for The Small Things, Inc. (TST), a non-profit organization that provides support, education, and care to the children, staff, and volunteers at Nkoaranga Orphanage as well as the surrounding community, I developed and implemented the No More Orphans (NMO) outreach program. The goal of No More Orphans is to reduce the number of maternal deaths in childbirth due to postpartum hemorrhage through the use of Misoprostol. The purpose of this project is to provide educational training to local traditional birthing attendants regarding the dispensary and use of Misoprostol during deliveries that take place outside the hospital.

**Methods:** With guidance from TST board members and the assistance of a fellow intern, I worked 1.) to identify stake holders and key informants in the surrounding Nkoaranga community; 2.) to adapt a training manual to be used to educate traditional birth attendants on appropriate Misoprostol use and administration; 3.) to create a pre and post-test survey used to collect background information and measure knowledge retention; 4.) to develop a reporting system to prevent the misuse and abuse of Misoprostol; and 5.) to train traditional birth attendants and distribute Misoprostol.

**Results/Outcomes:** With help from Nkoaranga Hospital's palliative care team and community health workers, training manuals were used to educate traditional birth attendants on the dispensary and administration of Misoprostol. Results from the pre and post-test survey as well as the reporting system can be used to monitor Misoprostol use, collect birthing information, and evaluate knowledge retention over time.

# MATERNAL & CHILD HEALTH

**Name:** Sara Jaffer  
**Practicum Site:** Dana Farber Cancer Institute  
**Location:** Boston, MA United States  
**Title:** Research Intern in Hematology/Oncology Department

**Introduction:** For oncology patients, venous access is critical for the delivery of chemotherapy drugs. Currently, most patients at the Children's Cancer Hospital Egypt (CCHE) are receiving peripherally inserted IV's that produce a high rate of complications, and require more visits from patients to get new IVs regularly. Central Venous Lines (CVL), inserted under the skin, do not need to be changed often, are less painful and carry less risks.

**Methods:** I conducted a comprehensive literature review on the types, risks and benefits of CVL, and on CVL care bundles that are currently used in the U.S.; planned for and led phone calls with team members in Egypt; wrote and edited our project proposal for Dana Farber Cancer Institute (DFCI); created a checklist for my team's trip to Egypt; and contributed to the development of a facilitator training guide for the Nurse Director.

**Results/Outcomes:** In addition to the literature review, I made recommendations for CVL care bundles that can be utilized in Egypt; a completed proposal was submitted at DFCI; a data collection checklist was created for the Nurse Director. The team is meeting in Egypt in September of this year. We are hoping to see a significant change in nursing practice and CVL use over the next year. This will result in lower infection, pain and complication rates among pediatric cancer patients at CCHE.

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**Name:** Mya Myint Zu Kyaw  
**Practicum Site:** Breast Feeding Coalition of Oregon  
**Location:** Portland, OR United States  
**Title:** Intern at Breast feeding coalition of Oregon

**Introduction:** The group of Asian/ Pacific Islander women has the lowest breast-feeding rates in Oregon. A bridge between the needs and the available supports for breastfeeding is essential to improve breast-feeding among this community. Asian/ Pacific Islander Breastfeeding Coalition of Oregon is dedicated to build and link community partners to support, promote and protect breastfeeding. As an intern at this organization, my main task is to coordinate with community stakeholders and organizations for community needs assessment, capacity building and fund raising.

**Methods:** To explore the community's needs, I did detailed research on local resources and compiled them to design needs assessment survey. Collaborating with WIC, I conducted in-depth interviews with important stakeholders. Community outreach work was done with the support of the Immigrants and Refugee Community Organization. Additionally, I developed a health education pamphlet to increase awareness about breastfeeding. For fund raising, I prepared a grant application to the State Government.

**Results/Outcomes:** Surveys are still being collected via online and community organizations. In-depth interviews data have been analyzed. Findings from interviews and surveys will be translated into recommendations for ways to improve support for breastfeeding. Health education pamphlets are being distributed through community outreach programs at Immigrants and Refugee Community Organization. The grant application was submitted to the Office of Health Equity, Oregon State.

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**Name:** Latoya Lashley  
**Practicum Site:** Boston Public Health Commission  
**Location:** Boston, MA United States  
**Title:** Intern for Boston Public Health Commission's Connecting Families to Schools program

**Introduction:** Connecting Families to Schools (CFS) is a public health home visiting program that works with families of students in grades K-8 with chronic absenteeism to improve school attendance and increase the likelihood of academic success. Working in partnership with Boston Public Schools, the home visiting team partners with families to identify and address the medical and/or social barriers for school attendance.

**Methods:** I worked with the CFS public health nurse and social workers to connect one of their clients to resources most suited to the family's needs as well as identify and compile other resources that will be useful for future clients. I conducted a literature review about absenteeism and its impact on education and health. I then developed a presentation for parents based on these findings.

**Results/Outcomes:** CFS intends to develop workshops that will present parents with information about absenteeism and its influence on education and health. By partnering with local organizations that serve parents, CFS intends to reach a population that has not necessarily been referred to CFS via Boston Public Schools. The resources I compiled as well as the presentation I developed will be available to disseminate to parents in these workshops.

# MATERNAL & CHILD HEALTH

**Name:** Katherine Pellino

**Practicum Site:** Wisconsin Public Health Research Network/University of Wisconsin School of Nursing

**Location:** Madison, WI United States

**Title:** Translating Evidence into Practice in Public Health

**Introduction:** Public health practice-based research networks are organizations that encourage evidence-based practice to improve programs, systems, and outcomes in communities nationwide. In Wisconsin, the Wisconsin Public Health Research Network (WPHRN) achieves this goal by forging connections between public health practitioners in the field and researchers in academic institutions to better align research priorities and facilitate evidence-based practice.

**Methods:** The Translating Evidence to Public Health (TEP-PH) internship was instituted to improve dissemination of WPHRN-supported research and improve its reach in the public health community. The practicum focused on three main deliverables: 1) writing an issue brief for the Future of Teaching in Public Health (FOT) Study, a cross-sectional survey sent to local health departments (LHDs) about their academic partnerships; 2) providing support for the Cross Jurisdictional Shared Services Arrangement (CJSSA) Study, an interview-based study about shared service arrangements between local health departments; 3) conducting member recruitment for WPHRN via outreach letters and newsletters.

**Results/Outcomes:** The FOT brief will be published on several websites and sent to WPHRN members. The study elucidated the need for additional resources to maintain important LHD-academic partnerships in Wisconsin. Data collection for the CJSSA study is ongoing. Results will provide valuable information to LHDs about the characteristics of successful shared service arrangements and the benefits of sharing services with other organizations. Finally, the WPHRN expects that outreach letters sent to deans, student services representatives, and public health researchers around the state will provide additional sources of research to network membership and thereby expand the network's capabilities.

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**Name:** Melissa Pouch

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

**Location:** Boston, MA United States

**Title:** Intern-The Center on the Social and Emotional Foundations for Early Learning (CSEFEL)

**Introduction:** The Massachusetts Department of Public Health (MDPH) is a governmental agency of the Commonwealth of Massachusetts encompassing several bureaus that serve to improve public health. The Department of Infancy, Pregnancy and Early Childhood, within the Bureau of Family Health and Nutrition, has partnered with The Center on the Social and Emotional Foundations for Early Learning (CSEFEL) to promote the social emotional development and school readiness of young children birth to age 5. Specifically, the partnership was intended to build the skills of infant and early childhood practitioners to nurture young children's social-emotional development, address risk factors and respond to challenging behaviors.

**Methods:** Under supervision of MDPH's Early Childhood Mental Health Specialist, I was responsible for assisting with key projects relating to CSEFEL, including: 1) collecting and evaluating implementation site data to evaluate the impact and effectiveness of using the CSEFEL Pyramid Model approach on program quality, educator practices, and child outcomes; 2) conducting data analyses of site data for presentation to state agency stakeholders; and 3) assisting in organizing a statewide summit for early childhood program and policy leaders on the MA Pyramid Model Initiative.

**Results/Outcomes:** Findings will be used to improve CSEFEL implementation strategies and potentially launch program wide roll-out in additional sites throughout Massachusetts.

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**Name:** Teslote Eyob Tadesse

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

**Location:** Boston, MA United States

**Title:** Research Assistant/ Data Collector

**Introduction:** The Boston University Center for Global Health and Development (CGHD) conducts a longitudinal study with over 50 NGO's in Ethiopia assessing the organizational capacity to serve highly vulnerable children. I spent 9 weeks in Ethiopia (Addis Ababa and Bahir Dar) using the 11-pronged Measuring Organizational Development and Effectiveness (MODE) tool, which was developed by CGHD, to assess NGO's. The purpose of this practicum was to collect the third and final round of data and identify the link between organizational capacity and child health outcome.

**Methods:** Each NGO assessment consisted of three stages 1) Organizational Profile 2) Staff Surveys and 3) interview using MODE. For data collection Commcare was used and for data analysis CSPro. Each NGO received a detailed report highlighting the strength and weakness areas of the organization, with specific recommendations for improvements.

**Results/Outcomes:** The BUSPH team that was in Ethiopia assessed all assigned organizations and wrote and submitted reports to each NGO, completing the final round of data collection. From the analysis, I was also to see that most NGO's made improvements and the sections on Management of Information and Financial Security and Fundraising seems to be a challenge for most NGOs.

# MATERNAL & CHILD HEALTH

**Name:** Charlotte-Rose Vieira

**Practicum Site:** Homes for Families

**Location:** Boston, MA United States

**Title:** System Analyst

**Introduction:** Homes for Families (HFF) is an advocacy organization committed to ending family homelessness in Massachusetts. The organization educates stakeholders, advocates for effective systems to respond to family homelessness, and defines permanent, emergency, and community-based solutions. The primary role of the Systems Analyst included assisting in the development and implementation of a statewide survey and data/information collection project regarding the Emergency Assistance System and the demographics, backgrounds, and viewpoints of the families it serves. Information was collected through surveys, focus groups, and a statewide convening.

**Methods:** Responsibilities and key methods included a) a comprehensive review of the Emergency Assistance System and existing data sources, b) development of survey, sampling strategy, and policy tools, c) survey administration, focus group planning, and data collection, and d) logistics and material development for annual statewide convening.

**Results/Outcomes:** The results of the survey and data collection project will be used to inform policy recommendations and practice models for the incoming gubernatorial administration. Deliverables will include a report from the 2014 statewide convening, as well as policy tools and an overall report of survey findings.





# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Kristin Battis

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

**Location:** Boston, MA United States

**Title:** State alcohol policy environment and youth alcohol-impaired driving outcomes

**Introduction:** In 2011, motor vehicle crashes were the leading cause of unintentional injury death among 13-to 19-year-olds in the U.S. In 2012, 32% of 15-to 20-year-old drivers who were killed in fatal crashes had a BAC level of 0.01 g/dL or higher. The purpose of this practicum was to assist in a BUSPH study (Co-PI: Professors Xuan and Naimi) to understand the relationship between the state alcohol policy environment and youth drinking and driving-related outcomes.

**Methods:** Practicum activities included: 1) conduct a literature review on alcohol policies in the U.S. and youth alcohol-impaired driving outcomes; and 2) compute odds ratios and confidence intervals for the Alcohol Policy Scale (APS) score and individual-level youth self-reported alcohol-impaired driving and riding with an alcohol-impaired driver from the CDC's state-level YRBS datasets.

**Results/Outcomes:** For a 10 percentage point increase in the APS score, the associated odds of any past 30-day alcohol-impaired driving or riding with an alcohol-impaired driver among youth is reduced by about 11% (OR: 0.89; 95% CI: 0.87, 0.92). The associated odds of this outcome is reduced by 12% among non-Hispanic White youth and 15% among Hispanic youth. These findings suggest the alcohol policy environment is protective for youth alcohol-impaired driving outcomes. Additional analyses will compute associations of age-targeted policies and policy focus with youth alcohol-impaired driving outcomes to determine if policy subgroups are independently associated with these outcomes.

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**Name:** Esther Boama-Nyarko

**Practicum Site:** Worcester Division of Public Health

**Location:** Worcester, MA United States

**Title:** Graduate Intern at Worcester Division of Public health

**Introduction:** Worcester's Division of Public Health (WDPH) has set out to accomplish accreditation of a Central Massachusetts Regional Public Health Alliance (CMRPHA) with six other neighboring municipalities, along with implementation of initiatives identified as priorities by its most recent community health assessment. A time motion analysis will assess cost effectiveness of this regionalized public health model, and make recommendations for cost sustainability moving forward. The purpose of this practicum was to assist in this process.

**Methods:** Practicum activities included participation on the Financial Analysis internship team and accreditation coordinator to: 1) complete a fee comparison of the CMRPHA towns; 2) create a survey to gather information about the fees charged and the definition of services rendered from the clerks in the alliance towns.; 3) organize data in the daily activity reports; and 4) complete descriptive statistics for the tasks that were organized from the daily activity reports.

**Results/Outcomes:** With the current information gathered in the time motion analysis, it is evident that none of the participating towns have a schedule to review their fee structure. Preliminary data also suggest variation in the types of services for which fees are charged and the amounts charged. This detail suggests that the fees charged for a specific service may not be sufficient to cover the actual cost.

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**Name:** Sinead Christensen

**Practicum Site:** Yoga by Numbers, Inc.

**Location:** Cambridge, MA United States

**Title:** Social Enterprise and Public Health Pilot Intern

**Introduction:** Yoga by Numbers, Inc. is a social enterprise that strives to increase access to yoga for all populations who may face obstacles in participating due to cost, body image, age, chronic illness, or other physical challenges. Their mission is to increase access to yoga so that more people can benefit from the physical activity, overall wellness, and healthy lifestyle practices associated with practicing. The purpose of this practicum was to build a population-specific pilot curriculum and evaluation tool for the Yoga by Numbers Foundation to be implemented in Fall 2014 at junior high schools in the greater Boston area.

**Methods:** Practicum activities included: 1) Developing the curriculum for the pilot series for 6th-8th grade students. This included devising the class modules and the "meaning off the mat" activities. 2) Creating supplemental materials to accompany the classes, including booklets with pictures and explanations of poses and modules. 3) Constructing survey tools to be administered to teachers and students to assess the impact and effectiveness of the pilot. Also, constructing a template evaluation tool for future class series.

**Results/Outcomes:** Intended long-term outcomes of this pilot curriculum are to benefit the adolescents' overall health and well being, including stress reduction, decreasing symptoms of anxiety and depression, improving self esteem, and encouraging healthy coping strategies. Projected short-term outcomes are for students to participate in a different form of physical activity at school and to be able to apply what they have learned in the modules to their lives.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Laura Dellostritto

**Practicum Site:** The Fenway Institute (Fenway Community Health) and the Massachusetts Commission on LGBTQ Youth

**Location:** Boston, MA United States

**Title:** Geomapping Initiative to Reduce Health Disparities among LGBTQ Youth

**Introduction:** Data from the 2011 Massachusetts Youth Health Survey and Youth Risk Behavior Survey reveal that sexual minority youth are more likely to engage in substance abuse and disproportionately experience suicidal ideation, dating violence, sexually transmitted infections, and homelessness compared to heterosexual peers. In response to these data, The Fenway Institute and Massachusetts Commission on LGBTQ Youth developed the Geomapping Initiative, which seeks to create a map-based tool of resources for LGBTQ youth and allies to improve service accessibility and reduce health disparities. This purpose of this practicum was to develop an LGBTQ competency assessment and evaluate responses to determine resource inclusion.

**Methods:** Activities included 1) identifying existing assessment models for this community, 2) creation of a 10 question LGBTQ-specific component within a larger survey of organizational structure, 3) distribution of survey to organizations identified in LGBTQ resource guides, 4) selection of primary outcome measure (percentage of competency questions answered satisfactorily) and resource inclusion criteria (score of  $\geq 77\%$  on the competency section including affirmative answers to specific questions), and 5) notification of results with personalized recommendations for improvement and free competency resources.

**Results/Outcomes:** Of 171 email solicitations, the response rate was 46% and the survey completion rate was 37%. Of the 63 organizations surveyed, 90% met LGB competency criteria and 78% met criteria for transgender competency. The data can be analyzed for trends in responses to each question to focus potential policy efforts. Additionally, the web-based tool in development could have funding implications if population mapping illustrates unmet need in specific geographic areas.

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**Name:** Brittany Edgar

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

**Location:** Boston, MA United States

**Title:** Research Assistant

**Introduction:** Although pornography use is prevalent among U.S. youth, few studies have examined the effects of youth pornography exposure on psychosexual development and negative health behaviors. The impact on economically disadvantaged, urban adolescents has received even less attention. As pornography becomes increasingly violent and degrading, new research must explore how exposure to hard-core pornography influences youth sexuality and risk behaviors. The XXX Study aims to investigate frequency and reasons for pornography usage, its perceived influence on sexual behaviors, and associations with drug, alcohol or non-condom-use among a sample of 80 adolescents.

**Methods:** My role as one of the team research assistants was to approach, screen and enroll eligible 16- and 17-year-old subjects who presented to the pediatric emergency department at Boston Medical Center, which serves a low-income population. Recruited subjects completed a 20-30 minute quantitative survey to assess pornography exposure, sexual activities, substance use and dating violence victimization.

**Results/Outcomes:** Data from this study will help public health professionals ameliorate quantitative assessment tools that can provide insight into the impact of pornography on adolescent health, and promote development of interventions to mitigate potential harm of exposure. Preliminary analysis based on the first 50 surveys indicated that 58% of youth reported having seen something in porn they subsequently tried out in real life, and males ranked pornography the highest when asked to rank a number of items in terms of where they learned the most about sex. Study results can be used to determine how to address pornography exposure in sex education programs.

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**Name:** Jacqueline Ewuoso

**Practicum Site:** Cambridge Health Alliance

**Location:** Cambridge, MA United States

**Title:** Community Health Educator/Screeners

**Introduction:** The Volunteer Health Advisor program (VHA), is a community based volunteer program under the Cambridge Health Alliance (CHA). The VHA provides health education, promotion and outreach to the culturally diverse and underserve communities in Cambridge and Somerville. Some of the work of the VHA includes providing multi-linguistic health education and health screenings and connecting people to health care. The VHA also works together with faith-based organizations among others, to improve the overall health of communities.

**Methods:** My work at the CHA included: 1) Conducting health screenings at sites where large numbers of low income community members reside. Screenings include glucose, and blood pressure and BMI; 2) Providing health education related to nutrition, hypertension, heart disease and overall health, at health fairs and farmers markets; 3) Assisted in developing and administering pre and post surveys to assess the impact of a Community Supported Agriculture (CSA) in Malden MA, on participants' fruit and vegetables consumption; 4) Performing online research in order to help the CHA increase their outreach to African American communities as well as better tailor their program to African American populations.

**Results/Outcomes:** The main outcome of the practicum was to gain a greater understanding of the barriers that persons with HIV face in accessing health care and to study the different interventions available to help clients tackle these barriers. This knowledge will inform future HIV research decisions and help in formulating appropriate policies to help persons living with HIV.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Kate Festa  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA United States  
**Title:** Program Assistant, Department of Family Medicine

**Introduction:** The purpose of this practicum project was to establish a recruitment and retention plan for an upcoming study at the Boston Medical Center Program for Integrative Medicine and Healthcare Disparities called PRIMIER. The patient population at BMC has traditionally been hard to recruit and maintain in research studies, particularly when there are few incentives guiding their participation such as in the PRIMIER study. My goal was to evaluate the options for recruiting participants within the integrative medicine clinic and create concrete recruitment and retention plans.

**Methods:** My primary task was to create a policies and procedures manual for PRIMIER. Activities included: review the study protocol to determine the scope of the study; 2) evaluate the existing structure of the integrative medicine clinic through a site visit and meetings with physicians and staff. This helped to establish the feasibility of recruitment within the clinic as well as to better understand some of the barriers to recruiting within the patient population; and 3) use the information to create a detailed manual of policies and procedures for use when recruitment for PRIMIER begins in September.

**Results/Outcomes:** A policies and procedures manual was created. It contains essential information necessary for recruiting and maintaining participants within the study and will assist new research assistants or coordinators easily understand and implement the procedures for the study.

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**Name:** Anna Gribble  
**Practicum Site:** Massachusetts State House  
**Location:** Boston, MA United States  
**Title:** Research Analyst Intern at the Joint Committee on Public Health

**Introduction:** The Massachusetts Joint Committee on Public Health is responsible for all public health related bills filed in MA. The Committee considers any legislation related to public health endeavors, such as environmental health, food safety, disease surveillance, and prevention while also tackling health care delivery issues, including determination of need, health IT, and scope of practice, among others. The Committee is responsible for monitoring the activities of the Department of Public Health, as well as serving as the legislative liaison between the Department and the General Court. The purpose of this practicum was to assist the Committee in data collection and interpretation.

**Methods:** Activities included: 1) reports on relevant events in and around the State House; 2) draft memos on current public health issues such as the increase in prescription drug costs and gun violence legislation; 3) draft a policy brief on Massachusetts' health care quality measurement activities, focusing on the Statewide Quality Advisory Committee (SQAC), established by Chapter 224. The research for the brief will entail conducting a literature review, meeting with experts on this topic in MA, and reviewing the work of the SQAC.

**Results/Outcomes:** The brief on quality measures will include a forecast of the development of quality measures along with potential challenges to successful implementation. It is imperative for the Committee responsible for public health legislation to be informed of the current status of public health efforts across the state in order to develop effective policy changes that will improve the access, quality and cost of our healthcare system.

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**Name:** Marisa Gruenwald  
**Practicum Site:** Cambridge Health Alliance  
**Location:** Cambridge, MA United States  
**Title:** Yoga Program Coordinator

**Introduction:** The Cambridge Health Alliance (CHA) provides a broad range of clinical and public health services to over 100,000 individuals of diverse backgrounds and levels of risk. A recent need assessment and the availability of funding provides the opportunity to enhance mind and body wellness of patients and employees through the provision of a clinical yoga program. The purpose of this practicum was to assist in the development of this initiative.

**Methods:** Activities Included: 1) conduct an extensive literature review to identify successful existing models of yoga programs and alternative therapy to build a foundation for the program; 2) consider alternative program designs in order to create a successful program for the CHA community, 3) develop an implementation plan and protocol for the new program; and 4) market and advertise the initiative to intended participants.

**Results/Outcomes:** Pilot implementation reveals that employees whom already practice yoga are more receptive to attend a yoga class. Participants report that access to yoga in the workplace reduces sedentary behavior and a benefit to their mental health. Future improvement and implementation of the program will build on the lessons learned during the pilot.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Alexandra Heinz  
**Practicum Site:** Boston Medical Center  
**Location:** Boston, MA United States  
**Title:** Family Planning Intern

**Introduction:** The Adolescent Center of Boston Medical Center is a busy ambulatory care clinic serving over three thousand patients annually. As a safety net hospital, BMC works to ensure access to necessary healthcare services for some of society's most vulnerable populations. Within the center, rates of teen pregnancy and sexually transmitted disease are high. These health outcomes are largely preventable and can lead to myriad negative consequences, thereby constituting a significant public health issue.

**Methods:** Practicum activities included: 1) promoting healthy sexual behaviors with the goal of preventing unwanted pregnancy, STD infection, and supporting healthy teen relationships, 2) delivering age-appropriate and culturally sensitive birth control options counseling, 3) providing confidential pregnancy testing, pregnancy options counseling and referrals, 4) providing confidential STD testing, counseling and treatment.

**Results/Outcomes:** This practicum presented the perfect fusion of the social work and public health fields. I was able to utilize my clinical counseling skills and reproductive health training to increase patient connectedness within the clinic, improve health outcomes for high-risk patients, and expand BMC organizational capacity to meet the needs of complex adolescents.

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**Name:** Richard Kintu  
**Practicum Site:** Last Mile Health  
**Location:** Boston, MA United States  
**Title:** Curriculum Assistant for Last Mile Health

**Introduction:** Last Mile Health (LMH) is an organization based in Boston and Liberia that strengthens the community healthcare system by building the capacity of the Frontline Health Workers (FHWs) to deliver care to remote Liberian villages. Frontline Health Workers (FHWs) are recruited, trained, equipped with tools, and provided with the needed supervision to perform and deliver primary care -- tackling the top five diseases that kill women and children in underserved villages. The FHWs make periodic visits to villages to provide basic health education, identify sick children, distribute essential medicines and make referrals to the health facilities. Last Mile Health works in partnership with the Liberian Ministry of Health & Social Welfare. The purpose of this practicum was to create, revise and improve training materials for LMH's Frontline Health Workers.

**Methods:** Practicum activities included: 1) Revise Well-Child training cards and facilitator's notes by incorporating feedback from the field team, content revisions and addition of images. 2) Produce final copies of Integrated Community Case Management (ICCM) flipbooks, 3) Update flipbooks and training cards by adding the "Ask, Praise, Advise, Check Understanding" framework. 4) Develop pre-test and post-test training evaluation questionnaires.

**Results/Outcomes:** Training curricular and flipbooks developed to be used in training Frontline Health Workers (FHWs) in Liberia. The long term outcome is increased capacity of FHWs to deliver quality primary health care services in their communities.

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**Name:** Jamie Klufts  
**Practicum Site:** Massachusetts Public Health Association  
**Location:** Boston, MA United States  
**Title:** Communications Intern

**Introduction:** MPHA is a statewide organization that works with other organizations, politicians, communities, and activists to advocate for and influence policies that protect and promote the health and wellbeing of all Massachusetts residents. In order to disseminate information and call activists to action, MPHA utilizes many communicative tools. Social media, email, and blogging are crucial ways to bring people together, educate, and provide advocacy opportunities. The purpose of this practicum was to assist with these communication efforts and to contribute to the MPHA website and redesign.

**Methods:** Activities included: 1) Production of the monthly newsletter (assign article authors, set deadlines, edit pieces, craft the newsletter, and schedule distribution). The newsletter informs members and partners about what MPHA is doing, shares the successes of others, provides advocacy opportunities, and more; 2) Research alternative ways to improve the current website and implement changes and using that information to inform a website re-design process; 3) Prepare communications related to the October meeting.

**Results/Outcomes:** An improved website will lead to better access and utilization. Other communication materials help to bring light to MPHA's objectives and help reinforce current partner relationships with MPHA and foster new ones.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Claire Lindsay  
**Practicum Site:** Breathe California  
**Location:** Daly City, CA United States  
**Title:** Public Health Research Intern

**Introduction:** Breathe California Golden Gate Public Health Partnership (BCGGPHP) serves nine surrounding counties advancing public health by advocating for clean air to prevent lung disease. Strategies include grassroots education, advocacy, and delivery of community services. The purpose of this practicum is to assess the lung health of these counties and offer recommendations for future action and strategic health promotion/protection strategies in these counties.

**Methods:** Practicum activities included: 1) review epidemiological data and assessments of current health concerns in each county; 2) describe population characteristics including access to services, living conditions for specific neighborhoods and readiness for engagement with BCGGPHP; 3) identify current programs and advocacy efforts offered by BCGGPHP; 4) compile of a comprehensive list of lung health related resources; and 5) prepare a formal report and presentation which suggested next steps for strategic planning.

**Results/Outcomes:** Assessment finding from three counties (Del Norte County, Humboldt, and San Francisco) will guide partnership development with asthma coalitions, tobacco free organizations, and other local and county health advocacy networks. Outreach will occur to populations with the highest need for services. The final reports will be used by BCGGPHP for strategic planning and partnership strengthening over the next three years.

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**Name:** Christine Lundquist  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA United States  
**Title:** Dating Violence Research

**Introduction:** Dating violence studies sometimes raise concerns for the Institutional Review Boards (IRBs) reviewing them due to the possibility of risk for the participants. The purpose of this project is to determine whether dating violence studies are dangerous for adolescents to participate in because, for example, their confidentiality is broken or their abusive partner retaliates.

**Methods:** Activities included: 1) a thorough literature review using PubMed and PsycINFO for dating violence studies using primary data collection within the last 10 years, 2) compiling a list of the principal investigators on those studies, 3) creating an online survey for researchers to report the types of adverse events their participants experienced, if any, 4) distributing the survey to the list of principal investigators, and 5) analyzing the data to determine the prevalence of adverse events experienced due to study participation.

**Results/Outcomes:** Data from this study will help dating violence researchers to submit new projects to their IRBs with evidence supporting the low risk of danger due to participating in such research. Preliminary analysis based on the first 17 surveys indicates that no researchers observed serious adverse events among their participants due to study participation. Study results can be used by researchers to facilitate IRB approval of future dating violence studies.

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**Name:** Yamrot Negussie  
**Practicum Site:** Boston Public Health Commission  
**Location:** Boston, MA United States  
**Title:** Start Strong Initiative Intern

**Introduction:** The Start Strong Initiative, sponsored by the Boston Public Health Commission, is a teen dating violence prevention program, which promotes healthy relationships through health education and youth empowerment. It equips high-school aged peer leaders with the tools to support safe and healthy relationships and to challenge norms that perpetuate dating violence. The purpose of this practicum is to assist program staff in the design, operations and implementation of the Start Strong peer leadership program.

**Methods:** Activities included preparing and facilitating workshops on the following topics: peer leadership, media literacy, gender roles, healthy relationships and intimate partner violence among teens. The workshop curriculum covers the content that Start Strong peer leaders will teach to their peers throughout the greater Boston area during the academic year. The practicum also involved managing operations and outreach for the Start Strong annual youth summit.

**Results/Outcomes:** At the completion of the program, each peer leader is well equipped to navigate the subject of teen dating violence and in turn, to educate and empower other youth. The idea of diffusion is especially applicable here, where peer leaders will use their agency to spread the knowledge and tools that they have acquired over the summer. These initial steps contribute to the process of changing attitudes, behaviors and environmental factors that contribute to a culture of dating violence.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Elora Orazio  
**Practicum Site:** Metamovements  
**Location:** Boston, MA United States  
**Title:** Public Health Programming Coordinator

**Introduction:** Metamovements, a local nonprofit organization, has the mission to create health promotion programming that is designed to reach communities less likely to access traditional public health programs although much in need for public health services. This is accomplished by bringing the community together to dance in a fun and safe environment every Monday. Other events are scheduled based on funding from outside sources and requests for programming. The purpose of this practicum was to contribute to their “summer of health” programming.

**Methods:** Practicum activities included: 1) managing and training youth interns; 2) developing community outreach strategies: flash mobs, social media campaigns, fliers; 3) engaging Boston and Cambridge communities: dance, music, healthy snacks, children’s area, surveys; and 4) encouraging a supportive community among individuals who attended Metamovements, thus enabling them to take ownership over the success of Salsa in the Park.

**Results/Outcomes:** Increased attendance of target populations and therefore their knowledge about the health benefits of dance, created tangible marketing materials that engage the community and increased the sense of ownership and community for the people who have attended Salsa in the Park.

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**Name:** Bhumika Parikh  
**Practicum Site:** Boston University School of Public Health  
**Location:** Boston, MA United States  
**Title:** Research Assistant

**Introduction:** As children become more involved in urban gardening, their exposure to soil contaminants must be reduced to gain benefits of gardening and consuming locally grown produce. Current knowledge about children’s exposure to soil contaminants is based on data concerning contact with non-garden soils. Purpose of this practicum is to assess children’s exposure to urban garden soils in Greater Boston area through developing and conducting a survey. Data collected will be used to guide public policy to maximize health benefits of personal and community gardening in urban settings in the future.

**Methods:** Based on literature review concerning children’s exposure to soils and effects of soil contaminants such as lead, a short survey was developed. After completing and receiving certification in NIH human subjects training, the survey was administered to key informants, including avid gardeners and public health professionals, for feedback. Multiple revisions later, potential participants provided by key informants were contacted via email or phone describing the importance of this assessment. The survey was administered by phone to interested parents and program coordinators involved in urban gardening with children. Responses were entered into an online version of the survey for further analysis.

**Results/Outcomes:** 14 of 41 contacts, third of which were parents, were willing to be interviewed. Participants provided data regarding children’s garden soils exposure for 1,507 children in 46 gardens across twenty neighborhoods of Boston. 12 of 14 participants were interested in learning results of the assessment for knowledge to practice safer gardening behaviors.

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**Name:** Chana Rosenbaum  
**Practicum Site:** Massachusetts College of Art and Design  
**Location:** Boston, MA United States  
**Title:** Graduate Health and Wellness Intern

**Introduction:** The Massachusetts College of Art and Design (MassArt), an independent public college, offers free short-term psychotherapy, evaluations, referrals, and other services to its students, as well as campus-wide programming for students through the Counseling and Wellness Center. Schools receiving federal funding are required to take necessary steps to prevent sexual assaults on campus and respond appropriately if they occur. It is intended that this new, interactive program and marketing campaign will lead to improved campus safety at MassArt. The purpose of this practicum was to educate MassArt undergraduate students about consent and safer sex practices, and to increase MassArt’s marketing and programming efforts. The overall purpose is to improve students’ knowledge about safer sex practices and consent, and increase the number of students engaging in safer sex and practicing healthier communication with regards to gaining consent before engaging in any sexual act.

**Methods:** Practicum activities included: 1) identifying roles that various school departments will assume in this process; 2) creating and distributing surveys to current students to determine types of programs they would attend and best methods to promote programs; 3) developing objectives and a logic model for the program; 4) developing an evaluation tool for program participants; and 5) using social media to promote the program by constructing a hashtag along with a photo campaign and moss graffiti.

**Results/Outcomes:** The program development is complete and I will implement the program in the fall in coordination with students and other staff and interns.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Kelly Royce  
**Practicum Site:** Medford Board of Health  
**Location:** Medford, MA United States  
**Title:** Local Public Health Intern

**Introduction:** Hoarding is a serious public health concern due to the many safety and health hazards it creates, such as spread of vermin and mold related illnesses and risk of physical harm from fires or falls. The Medford Board of Health has documented a steady increase of hoarding cases that consume much time and resources. As a Massachusetts Department of Public Health Local Health Internship participant, I worked with the Medford Board of Health and multiple city agencies to contribute to a unified, standard response to compulsive hoarding.

**Methods:** Practicum activities included: 1) examine past and current hoarding cases to determine the extent of the problem; 2) research data collection methods and best practices used by other hoarding task forces; 3) draft data collection and assessment tools to be used for responders to future hoarding cases; 4) identify task force partners and invite them to an initial collaborative meeting to begin discussing a better approach to hoarding cases.

**Results/Outcomes:** This project has revealed deficiencies in Medford's hoarding response, facilitated communication between crucial stakeholders and identified strategies for a more effective protocol. Moving forward, this project will focus on holding more taskforce meetings, refining data collection methods, coordinating case management, creating a case tracking database, compiling resource guides, and providing hoarding response trainings for Medford personnel.

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**Name:** Whitney Salamone  
**Practicum Site:** Education Development Center  
**Location:** Newton, MA United States  
**Title:** Massachusetts Technical Assistance Partnership for Prevention (MasTAPP) Summer Intern

**Introduction:** The goal of MasTAPP is to provide assistance, build capacity, and offer resources to community programs focused on substance abuse prevention. The purpose of this practicum was to assist in technical assistance efforts that provide community grantees with information related to prevention and to plan meetings/conferences for their benefit.

**Methods:** Activities included: 1) contribute updated resources and upcoming events to the MasTAPP website; 2) write grantee success story vignettes in order to share the successes of coalitions throughout Massachusetts; 3) plan The Massachusetts Opioid Abuse Prevention Collaborative and Partnership Success grantee meeting; 4) organize a statewide conference for BSAS Grantees; 5) produce written descriptions of videos used for the Massachusetts Collaborative for Action, Leadership, and Learning (MassCALL 2) Video Project; and 6) assist implementation of the Strategic Planning Framework (SPF) trainings.

**Results/Outcomes:** The MasTAPP website has been updated with resources/events for grantees and community members. Two grantee success stories will be published in the MasTAPP e-newsletter. The Massachusetts Opioid Abuse Prevention Collaborative and Partnership Success grantee meeting was held in July. The statewide conference for BSAS Grantees has been planned to take place at the EDC on October 30th, 2014; attendees and presenters are in the process of being confirmed. MassCALL 2 video descriptions have been written and will be posted to the project website. SPF training will be held for Boston Public Health Commission in September.

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**Name:** Nicholas Shaffer  
**Practicum Site:** Harvard School of Public Health  
**Location:** Boston, MA United States  
**Title:** Research Assistant

**Introduction:** Research indicates that comfortable and safe environments motivate individuals to bicycle and that low-income populations do not regularly bicycle. The purpose of this practicum is to assist in a HSPH obesity reduction study (PI - Dr. Anne Lusk) that identifies factors (perceptions, beliefs and intentions to utilize a proposed newer and safer bicycle environment: a local cycle track) that influence bicycling among residents of Roxbury. While cycle tracks are the safest and most preferred facility, currently only five short cycle tracks exist in the Boston area. This research is the first U.S. study in which minority residents' biking activities and bike-relevant information is collected and questions are asked of the respondents about cycle tracks.

**Methods:** Data collection activities include: (1) mailed surveys were sent out to 1,153 households; (2) intercept surveys were conducted with bicyclists on Malcolm X Boulevard; and (3) bicycle counts were carried out. This practicum also involved comprehensive literature reviews related to the benefits of cycle tracks.

**Results/Outcomes:** Based on hypothesized neighborhood resident preferences, study results will bolster the case to increase the number of safe bicycle environments in neighborhoods with low bicycle use rather than only in communities in which large numbers of individuals are biking. The data also serves as important baseline data that will be compared with post data collected after construction of the cycle track.

# SOCIAL & BEHAVIORAL SCIENCES

**Name:** Allyson Shifley

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

**Location:** Boston, MA United States

**Title:** Tick-borne Disease Health Education Intern

**Introduction:** In 2013, 5,665 confirmed and probable cases of Lyme disease were reported to the Massachusetts Department of Public Health (MDPH) - Division of Epidemiology and Immunization, an increase of 12% from 2012. Certain populations, such as children under age 10, outdoor workers, and the elderly have higher risk of tick-borne diseases. The purpose of this practicum was to assist the MDPH to develop a tool kit for Local Boards of Health (LBOH) to increase awareness and education of tick-borne diseases in order to reduce the burden of tick-borne diseases (Lyme disease, Babesiosis, and Human Granulocytic Anaplasmosis) on the Massachusetts population, and specifically those at greater risk.

**Methods:** Activities included: 1) utilize results from the May 2014 MDPH tick-borne disease needs assessment survey to inform the direction and focus of tick-borne disease information and its dissemination tailored to different audiences: public health nurses, the elderly, children, and a general audience, which allows for further audience specific alterations; 2) conduct a thorough literature and resource review; 3) create audience-specific PowerPoint presentations; and 4) develop age appropriate traveling learning booths with an array of prevention educational materials (story board, fact and work sheets, mounted specimens, etc).

**Results/Outcomes:** The educational materials will be widely displayed and distributed to increase statewide awareness and education and contribute to the reduction of tick-borne diseases.

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**Name:** Christine Zakhour

**Practicum Site:** Boston University, Sargent College

**Location:** Boston, MA United States

**Title:** "Impact and SWOT Analysis of a Multi-media Nutrition Curriculum in Middle School"

**Introduction:** The national focus on the childhood obesity epidemic demands innovations in health education to effectively engage and educate students to foster healthy habits. KickinNutrition.TV (KNTV) is a new, multi-media nutrition education curriculum being evaluated in Boston-area public schools to understand its impact on youth behaviors and the opportunities and obstacles that affect its implementation.

**Methods:** 246 sixth grade students in an urban school district were exposed to KNTV and completed surveys before, during, and after the 6-lesson curriculum to assess nutrition knowledge, personal behaviors, and self-efficacy. A focus group involving eight students provided additional insight about KNTV from participant perspectives, further informing a SWOT analysis.

**Results/Outcomes:** Data from 233 students (95%) with complete surveys showed similar scores on nutrition knowledge pre and post-intervention with no significant change ( $p=0.35$ ). At program conclusion, a larger proportion of students reported confidence in their ability to cook a meal for their family (60%, compared to 51% at baseline;  $p<0.01$ ). Overall, nutrition knowledge was relatively low with average scores below 70% on a 10-question quiz. Combined with a low prevalence of healthy habits, these observations indicate the need for more nutrition education among middle-school age students. Focus group discussions provided evidence that the full dose of our intervention was not delivered as intended, but that students were enthusiastic about learning more about nutrition, physical activity, and recipes for cooking at home with their families. Findings from this study will influence curriculum enhancements and will guide implementation of KNTV in schools moving forward.



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